



Safety Data Sheet

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SECTION 1: Identification

1.1. Product identifier

3M(TM) ONE STEP CLEANER WAX PN 39006, PN 38998

Product Identification Numbers

LB-K100-0368-2, 60-4550-3284-1, 60-4550-3363-3, 60-4550-3397-1, 60-4550-5291-4, 60-4550-5292-2, 60-4550-6571-8

1.2. Recommended use and restrictions on use

Recommended use

Automotive, REMOVES OXIDATION AND OTHER IMPERFECTIONS FROM AUTOMOTIVE PAINTED SURFACE

1.3. Supplier's details

MANUFACTURER:	3M
DIVISION:	Automotive Aftermarket
ADDRESS:	3M Center, St. Paul, MN 55144-1000, USA
Telephone:	1-888-3M HELPS (1-888-364-3577)

1.4. Emergency telephone number

1-800-364-3577 or (651) 737-6501 (24 hours)

SECTION 2: Hazard identification

The label elements below were prepared in accordance with OSHA Hazard Communication Standard, 29 CFR 1910.1200. This information may be different from the actual product label information for labels regulated by other agencies.

2.1. Hazard classification

Not classified as hazardous according to OSHA Hazard Communication Standard, 29 CFR 1910.1200.

2.2. Label elements

Signal word

Not applicable.

Symbols

Not applicable.

Pictograms

Not applicable.

2.3. Hazards not otherwise classified

None.

3% of the mixture consists of ingredients of unknown acute oral toxicity.

3% of the mixture consists of ingredients of unknown acute dermal toxicity.

SECTION 3: Composition/information on ingredients

Ingredient	C.A.S. No.	% by Wt
Water	7732-18-5	60 - 80 Trade Secret *
Hydrotreated Light Petroleum Distillates	64742-47-8	7 - 13 Trade Secret *
Ceramic Materials and Wares, Chemicals	66402-68-4	5 - 10 Trade Secret *
Amino Alkyl Polysiloxane	Trade Secret*	1 - 5 Trade Secret *
Poly(dimethylsiloxane)	63148-62-9	0.5 - 1.5 Trade Secret *

*The specific chemical identity and/or exact percentage (concentration) of this composition has been withheld as a trade secret.

SECTION 4: First aid measures**4.1. Description of first aid measures****Inhalation:**

Remove person to fresh air. If you feel unwell, get medical attention.

Skin Contact:

Wash with soap and water. If signs/symptoms develop, get medical attention.

Eye Contact:

Flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. If signs/symptoms persist, get medical attention.

If Swallowed:

Rinse mouth. If you feel unwell, get medical attention.

4.2. Most important symptoms and effects, both acute and delayed

See Section 11.1. Information on toxicological effects.

4.3. Indication of any immediate medical attention and special treatment required

Not applicable

SECTION 5: Fire-fighting measures**5.1. Suitable extinguishing media**

In case of fire: Use a fire fighting agent suitable for ordinary combustible material such as water or foam to extinguish.

5.2. Special hazards arising from the substance or mixture

None inherent in this product.

Hazardous Decomposition or By-Products**Substance**

Carbon monoxide

Carbon dioxide

Condition

During Combustion

During Combustion

5.3. Special protective actions for fire-fighters

No special protective actions for fire-fighters are anticipated.

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures**

Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Warning! A motor could be an ignition source and could cause flammable gases or vapors in the spill area to burn or explode.

6.2. Environmental precautions

Avoid release to the environment. For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water.

6.3. Methods and material for containment and cleaning up

Contain spill. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue with detergent and water. Seal the container. Dispose of collected material as soon as possible.

SECTION 7: Handling and storage**7.1. Precautions for safe handling**

Do not use in a confined area with minimal air exchange. Keep out of reach of children. Avoid breathing dust/fume/gas/mist/vapors/spray. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.)

7.2. Conditions for safe storage including any incompatibilities

Keep container tightly closed. Keep from freezing. Store away from acids. Store away from oxidizing agents.

SECTION 8: Exposure controls/personal protection**8.1. Control parameters****Occupational exposure limits**

Ingredient	C.A.S. No.	Agency	Limit type	Additional Comments
Hydrotreated Light Petroleum Distillates	64742-47-8	CMRG	TWA:165 ppm	
Kerosine (petroleum)	64742-47-8	ACGIH	TWA(as total hydrocarbon vapor, non-aerosol):200 mg/m3	Skin Notation, A3: Confirmed animal carcin.

ACGIH : American Conference of Governmental Industrial Hygienists

AIHA : American Industrial Hygiene Association

CMRG : Chemical Manufacturer's Recommended Guidelines

OSHA : United States Department of Labor - Occupational Safety and Health Administration

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

CEIL: Ceiling

8.2. Exposure controls**8.2.1. Engineering controls**

Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure

Limits and/or control dust/fume/gas/mist/vapors/spray. If ventilation is not adequate, use respiratory protection equipment.

8.2.2. Personal protective equipment (PPE)

Eye/face protection

Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended:

Safety Glasses with side shields

Skin/hand protection

Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing.

Gloves made from the following material(s) are recommended: Neoprene
Nitrile Rubber

Respiratory protection

An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:

Half facepiece or full facepiece air-purifying respirator suitable for organic vapors and particulates

For questions about suitability for a specific application, consult with your respirator manufacturer.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

General Physical Form:	Liquid
Odor, Color, Grade:	Solvent odor, White color
Odor threshold	<i>No Data Available</i>
pH	7.5 - 8.5
Melting point	<i>No Data Available</i>
Boiling Point	100 °C
Flash Point	> 212 °F [<i>Test Method:</i> Closed Cup]
Evaporation rate	<i>No Data Available</i>
Flammability (solid, gas)	Not Applicable
Flammable Limits(LEL)	<i>No Data Available</i>
Flammable Limits(UEL)	<i>No Data Available</i>
Vapor Pressure	18 mmHg [@ 20 °C]
Vapor Density	<i>No Data Available</i>
Density	1.05 - 1.1 g/ml
Specific Gravity	1.05 - 1.1 [<i>Ref Std:</i> WATER=1]
Solubility in Water	Appreciable
Solubility- non-water	<i>No Data Available</i>
Partition coefficient: n-octanol/ water	<i>No Data Available</i>
Autoignition temperature	<i>No Data Available</i>
Decomposition temperature	<i>No Data Available</i>
Viscosity	18,000 - 28,000 centipoise
Hazardous Air Pollutants	0.007 % weight [<i>Test Method:</i> Calculated]
Volatile Organic Compounds	0.2 % weight [<i>Test Method:</i> calculated per CARB title 2]
Volatile Organic Compounds	114 g/l [<i>Test Method:</i> calculated SCAQMD rule 443.1]

Percent volatile
VOC Less H₂O & Exempt Solvents

87.3 %
671 g/l [*Test Method:* calculated SCAQMD rule 443.1]

SECTION 10: Stability and reactivity

10.1. Reactivity

This material may be reactive with certain agents under certain conditions - see the remaining headings in this section.

10.2. Chemical stability

Stable.

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid

None known.

10.5. Incompatible materials

Strong acids

Strong oxidizing agents

10.6. Hazardous decomposition products

<u>Substance</u>	<u>Condition</u>
None known.	

Refer to section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labeling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

11.1. Information on Toxicological effects

Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

Inhalation:

Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Skin Contact:

Mild Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, and dryness.

Eye Contact:

Contact with the eyes during product use is not expected to result in significant irritation.

Ingestion:

Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

Toxicological Data

If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

Acute Toxicity

Name	Route	Species	Value
Overall product	Dermal		No data available; calculated ATE > 5,000 mg/kg
Overall product	Ingestion		No data available; calculated ATE > 5,000 mg/kg
Hydrotreated Light Petroleum Distillates	Dermal	Rabbit	LD50 > 3,160 mg/kg
Hydrotreated Light Petroleum Distillates	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 3.0 mg/l
Hydrotreated Light Petroleum Distillates	Ingestion	Rat	LD50 > 5,000 mg/kg
Ceramic Materials and Wares, Chemicals	Dermal		LD50 estimated to be > 5,000 mg/kg
Ceramic Materials and Wares, Chemicals	Ingestion		LD50 estimated to be 2,000 - 5,000 mg/kg
Poly(dimethylsiloxane)	Dermal	Rabbit	LD50 > 19,400 mg/kg
Poly(dimethylsiloxane)	Ingestion	Rat	LD50 > 17,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Hydrotreated Light Petroleum Distillates	Rabbit	Mild irritant
Ceramic Materials and Wares, Chemicals	Rabbit	No significant irritation
Poly(dimethylsiloxane)	Rabbit	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
Hydrotreated Light Petroleum Distillates	Rabbit	Mild irritant
Ceramic Materials and Wares, Chemicals	Rabbit	Mild irritant
Poly(dimethylsiloxane)	Rabbit	No significant irritation

Skin Sensitization

Name	Species	Value
Hydrotreated Light Petroleum Distillates	Guinea pig	Not sensitizing

Respiratory Sensitization

Name	Species	Value
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Germ Cell Mutagenicity

Name	Route	Value
Hydrotreated Light Petroleum Distillates	In Vitro	Not mutagenic
Ceramic Materials and Wares, Chemicals	In Vitro	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
Hydrotreated Light Petroleum Distillates	Dermal	Mouse	Some positive data exist, but the data are not sufficient for classification
Ceramic Materials and Wares, Chemicals	Inhalation	Multiple animal species	Some positive data exist, but the data are not sufficient for classification

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test Result	Exposure Duration
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Target Organ(s)**Specific Target Organ Toxicity - single exposure**

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Hydrotreated Light Petroleum Distillates	Inhalation	central nervous system depression	May cause drowsiness or dizziness		NOAEL Not available	
Hydrotreated Light Petroleum Distillates	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Ceramic Materials and Wares, Chemicals	Inhalation	pulmonary fibrosis	Some positive data exist, but the data are not sufficient for classification	Multiple animal species	NOAEL not available	
Ceramic Materials and Wares, Chemicals	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL not available	occupational exposure

Aspiration Hazard

Name	Value
Hydrotreated Light Petroleum Distillates	Aspiration hazard

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

SECTION 12: Ecological information**Ecotoxicological information**

Please contact the address or phone number listed on the first page of the SDS for additional ecotoxicological information on this material and/or its components.

Chemical fate information

Please contact the address or phone number listed on the first page of the SDS for additional chemical fate information on this material and/or its components.

SECTION 13: Disposal considerations**13.1. Disposal methods**

Dispose of contents/ container in accordance with the local/regional/national/international regulations.

Dispose of waste product in a permitted industrial waste facility. As a disposal alternative, incinerate in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. Empty and clean product containers may be disposed as non-hazardous waste. Consult your specific regulations and service providers to determine available options and requirements.

SECTION 14: Transport Information

For Transport Information, please visit <http://3M.com/Transportinfo> or call 1-800-364-3577 or 651-737-6501.

SECTION 15: Regulatory information

15.1. US Federal Regulations

Contact 3M for more information.

311/312 Hazard Categories:

Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No Immediate Hazard - Yes Delayed Hazard - No

15.2. State Regulations

Contact 3M for more information.

15.3. Chemical Inventories

The components of this product are in compliance with the chemical notification requirements of TSCA.

Contact 3M for more information.

15.4. International Regulations

Contact 3M for more information.

This SDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: Other information

NFPA Hazard Classification

Health: 1 Flammability: 1 Instability: 0 Special Hazards: None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

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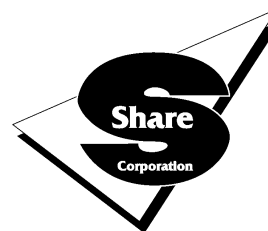
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MATERIAL SAFETY DATA SHEET

Share Corporation
P.O. Box 245013
Milwaukee, WI 53224



GENERAL INFORMATION NUMBER: 414-355-4000
EMERGENCY TELEPHONE NUMBER: (800) 776-7192
CHEMTREC: (800) 424-9300

REVISION DATE: February 16, 2011
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I - Product Identification

Rubber In A Can

PRODUCT CODE: 8002

CHEMICAL FORMULATION: Pressurized rubber coating.

NFPA HAZARD IDENTIFICATION SYSTEM: HEALTH: 2

FLAMMABILITY: 3

REACTIVITY: 0

HAZARD RATING: 4 - Extreme; 3 - High; 2 - Moderate; 1 - Slight; 0 - Insignificant

II - Hazardous Ingredients

Values reported as TWA unless noted.

SUBSTANCE	APPROX	OSHA	ACGIH	EPA 40 CFR:			CAS #
	%	PEL	TLV	302	355	372	
Calcium carbonate	30.0-40.0	15 mg/m ³	10 mg/m ³	N	N	N	1317-65-3
Toluene	10.0-20.0	200 ppm	20 ppm	Y	N	Y	108-88-3
Methyl acetate	10.0-20.0	200 ppm	200 ppm	N	N	N	79-20-9
Propane/Isobutane/n-Butane	1.0-10.0	800 ppm	1000 ppm	N	N	N	68476-86-8
2-Propanone	1.0-10.0	1000 ppm	500 ppm	Y	N	N	67-64-1
1,2-Benzenedicarboxylic, dibutyl ester	1.0-10.0	5 mg/m ³	5 mg/m ³	Y	N	Y	84-74-2

Key: PEL: Permissible Exposure Limit TLV: Threshold Limit Value C: Ceiling level STEL: Short Term Exposure Limit
N/A: Not Applicable N/D: Not Determined N/E: Not Established Y: Yes N: No
302: CERCLA List of Hazardous Substances and Reportable Quantities (40 CFR 302.4).
355: SARA TITLE III / List of Extremely Hazardous Substances for Emergency Planning and Notification (40 CFR 355).
372: SARA TITLE III / List of Toxic Chemicals subject to Release Reporting (Community Right to Know) (40 CFR 372).

III - Physical Data

BOILING POINT (°F): -23 to 645

VAPOR PRESSURE (psig): N/D

VAPOR DENSITY (AIR = 1): > 1.0

SOLUBILITY IN WATER: Negligible

APPEARANCE AND ODOR: Black liquid; solvent odor.

SPECIFIC GRAVITY (WATER = 1): 1.0024

VOC CONTENT (% by weight): 37.32

EVAPORATION RATE (Butyl Acetate = 1): < 1.0

pH: N/A

IV - Fire and Explosion Hazard Data

FLASH POINT (°F): -156

(TEST METHOD): Closed Cup

NFPA 30B Rating: 2

FLAMMABLE LIMITS IN AIR (VOLUME %)

UPPER: 16.0 LOWER: 1.2

FLAME EXTENSION: N/D

EXTINGUISHING MEDIA: Foam, carbon dioxide, dry chemical and water fog.

SPECIAL FIRE FIGHTING PROCEDURES: Containers can build up pressure if exposed to heat (fire). As in any fire, wear self-contained breathing apparatus pressure-demand (MSHA/NIOSH approved or equivalent) and full protective gear. Water runoff can cause environmental damage. Dike and collect water used to fight fire. Keep containers and surroundings cool with water spray. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

UNUSUAL FIRE AND EXPLOSION HAZARD: Vapors may form explosive mixture with air. Vapors can travel to a source of ignition and flash back. Flammable Liquid. Can release vapors that form explosive mixtures at temperatures at or above the flashpoint. "Empty" JI containers retain product residue (liquid and/or vapor) and can be dangerous. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION; THEY MAY EXPLODE AND CAUSE INJURY OR DEATH. Contents under pressure. Containers may explode if exposed to high temperatures.

V - Reactivity Data

STABILITY: Stable

INCOMPATIBILITY: Oxygen and strong oxidizing agents such as chlorates, nitrates, peroxides, etc.

CONDITIONS TO AVOID: All sources of ignition, welding arcs, and open flames and high temperatures. Keep product away from temperatures in excess of 120°F (49°C). Do not crush, puncture or incinerate container. Do not expose to direct sunlight or store where temperatures could exceed 120°F.

HAZARDOUS DECOMPOSITION PRODUCTS: Thermal decomposition may produce oxides of carbon.

HAZARDOUS POLYMERIZATION: Will not occur.

VI - Health Hazard Data

ROUTES OF ENTRY **INHALATION:** X **EYE CONTACT:** X **SKIN CONTACT:** X **INGESTION:** X

INGREDIENTS THAT ARE CONSIDERED BY OSHA, NTP, IARC TO BE SUSPECTED HUMAN CARCINOGENS: None

EFFECTS OF OVEREXPOSURE

IF IN EYES: Causes moderate to severe eye irritation, redness, and pain

IF ON SKIN: Causes skin irritation. Prolonged or repeated contact can result in defatting and drying of the skin which may result in skin irritation and dermatitis (rash). May be absorbed through the skin in harmful amounts and may produce systemic toxicity.

IF SWALLOWED: Not considered to be a hazard encountered in normal industrial use. This material may be harmful or fatal if swallowed. Irritating to mouth, throat and stomach. Aspiration hazard. Depression of the central nervous system can occur.

IF INHALED: Prolonged inhalation may be harmful. Inhaling large quantities of mist or vapors may cause some irritation to nose, throat, lungs. High doses may cause central nervous system depression. May cause damage liver, lungs, and kidneys.

EMERGENCY AND FIRST AID PROCEDURES

IF IN EYES: Flush under eyes and eyelids with plenty of cool water for at least 15 minutes. If irritation persists, obtain medical attention.

IF ON SKIN: Remove contaminated clothing. Wash with soap and water. If irritation persists, obtain medical attention.

IF SWALLOWED: Do not induce vomiting. Obtain medical attention.

IF INHALED: Remove person to fresh air and provide oxygen if breathing is difficult. If breathing has stopped, administer artificial respiration. Obtain medical attention.

VII - Spill or Leak Protection

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: Remove all sources of ignition and ventilate area. Soak up spilled material with inert absorbent material and place in a properly labeled closed container.

WASTE DISPOSAL METHOD: Consult local environmental authorities. Dispose of empty cans in non-incinerated trash only.

VIII - Special Protection Information

RESPIRATORY PROTECTION: None required if good ventilation is maintained. If recommended exposure limits are exceeded wear a NIOSH approved respirator, following manufacturer's recommendations.

VENTILATION

LOCAL: Recommended

MECHANICAL: Not required

PROTECTIVE GLOVES: Chemical resistant

EYE PROTECTION: Safety glasses.

OTHER PROTECTIVE EQUIPMENT: Protective clothing.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Store in a cool, dry place away from heat or open flame. Keep container tightly closed when not in use.

OTHER PRECAUTIONS: Keep out of reach of children. Do not puncture or incinerate cans.

IX - Transportation Information

DOT ID NUMBER: None

DOT PROPER SHIPPING NAME: Consumer Commodity

DOT CLASS: ORM-D

DOT PACKING GROUP: None

The shipping information listed above applies only to non-bulk (< 119 gallons) containers of this product. This product may have more than one proper shipping name depending on packaging, product properties, & mode of shipment. If any alteration of packaging, product, or mode of transportation is further intended, different shipping names and labeling may apply.

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Preparers Technical Dept.

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MATERIAL SAFETY DATA SHEET

B-100 BUTYL RUBBER SEALANT

Section One

PRODUCT INFORMATION

Manufacturer's Name: ADCO Products, Inc. Business Phone No: 1-517-764-0334
 Manufacturer's Address: 4401 Page Ave., P.O. Box 457 Emergency Phone No: 1-800-424-9300
 Michigan Center, MI 49254 (CHEMTREC)
 Product Name: **B-100 Butyl Rubber Sealant**
 Proper Shipping Name: Adhesive, containing flammable liquid, 3, UN1133, PG III

Section Two

HAZARDOUS INGREDIENTS INFORMATION

Chemical Name	CAS #	% by Weight	ACGIH TLV	OSHA PEL
Aliphatic Hydrocarbon Solvent	8052-41-3	10%-20%	100 ppm	500 ppm

Section Three

PHYSICAL AND CHEMICAL DATA

Appearance & Odor: Paste available in various colors with aliphatic hydrocarbon odor
 Physical State: Paste Boiling Point: 352°F
 Specific Gravity (water = 1): 1.32 Evaporation Rate (n-butyl acetate = 1): 0.12
 Percent Volatiles: 10-20 Solubility in Water: 0.5%
 Vapor Pressure: 5 mm Hg @ 78°F, 26°C Vapor Density (air = 1): 5.0
 Percent Solids (by weight): 80-90 Melting Point: NA
 VOC Content: 248 grams/liter = 2.07 lbs/gallon

Section Four

FIRE & EXPLOSION HAZARD DATA

Flash Point: 106°F Method Used: Estimate based on the flash point of the most volatile component.

Flammable Limits: LEL: 0.5 UEL: 6.0

Proper Extinguishing Media: Foam, dry chemical or carbon dioxide. Water may be ineffective, but water should be used to keep fire-exposed containers cool.

Recommended Firefighting Procedures: Treat as a class "B" fire. Limit firefighting to those trained to do so. If a leak or spill has ignited, use water spray to disperse the vapors and to protect the men attempting to stop the leak. Minimize breathing gases, vapor, fumes or decomposition products. Use supplied-air breathing equipment for enclosed or confined spaces or as otherwise needed.

Unusual Fire & Explosion Hazards: Vapors are heavier than air and may travel along the ground and be ignited by ignition sources distant from the handling point. Residue in "empty" containers may be explosive if exposed to an ignition source. To prevent fire or explosion from static accumulation and discharge, effectively ground the product transfer system.

Section Five**HEALTH HAZARD DATA**

Medical Conditions Aggravated by Exposure: Pre-existing eye, skin and pulmonary disorders may be aggravated by exposure to this product.

Primary Route of Entry:	Skin absorption	Yes
	Inhalation	Yes
	Ingestion	Yes
	Eye contact	Yes

Signs and Symptoms of Exposure:

Skin contact: Can cause redness, irritation, defatting, and dermatitis.

Inhalation: Prolonged inhalation of vapors may cause irritation of the respiratory tract. Intentional misuse by deliberately concentrating and inhaling vapor may be harmful or fatal.

Ingestion: Can cause gastrointestinal irritation, nausea, vomiting, and diarrhea.

Eye contact: Can cause severe irritation, redness, tearing, blurred vision.

Emergency and First Aid Procedures:

On skin: Wash with soap and water. Get medical attention if irritation persists.

Inhaled: Remove affected person to fresh air, give oxygen or artificial respiration as necessary to assist breathing. Get medical attention.

Ingested: Do not induce vomiting. Get medical attention.

In eyes: Flush with large amounts of water, frequently flushing under the lids. Seek medical attention.

Acute Effects of Overexposure: Irritation, redness

Chronic Effects:(include all potential carcinogens present @ .1% or greater): None known

Carcinogenicity: NTP? No IARC Monographs? No OSHA regulated? No

Section Six**REACTIVITY DATA**

Stability: Stable

Conditions to Avoid: None known

Hazardous Decomposition Products: In the event of partial combustion, fumes, smoke, carbon monoxide, aldehydes and other decomposition products may be released.

Hazardous Polymerization: Will not occur

Incompatibility: None known

Section Seven**PRECAUTIONS FOR SAFE HANDLING AND USE**

Ventilation: General exhaust as needed to keep TLV below recommended levels if engineering or administrative controls are not adequate.

Personal Protective Equipment:

Respirator: For large spills or entry into enclosed small spaces with inadequate ventilation, a pressure demand, self-contained breathing apparatus is recommended. If engineering or administrative controls are not adequate to maintain solvent TLV below recommended levels, an appropriate respirator should be used in conjunction with a respirator use and fit training program.

Gloves: Buna-N, if needed

Eye Protection: Safety glasses with side shields if needed.

Other Protective Clothing/Articles: To prevent repeated or prolonged skin contact, wear impervious clothing and boots if contact is likely.

Work/Hygienic Practices: Minimize breathing vapor. Avoid prolonged or repeated contact with the skin. Remove contaminated clothing and launder before reuse. Cleanse skin thoroughly after contact, before work breaks and meals and at the end of the workday. Product is readily removed from the skin with waterless hand cleaners followed by washing thoroughly with soap and water.

Steps To Be Taken in Case Material is Released or Spilled: Eliminate all ignition sources. Control the source of the spill if it is safe to do so. Ventilate enclosed areas to prevent vapor accumulation. Restrict access by unauthorized personnel. Absorb spilled product with vermiculite or other absorbent material. Shovel or scoop into a sealable container for disposal.

Waste Disposal Method: If this product becomes a waste, it is considered a hazardous waste due to its ignitability. Dispose of in accordance with local, state and federal environmental and waste regulations.

Storage and Handling Procedures: Do not store or handle near an ignition source. Keep containers closed. Effectively ground the product transfer system to prevent fire or explosion from static discharge. Empty containers may contain residual product. Do not reuse containers unless properly reconditioned.

Section Eight**REGULATORY INFORMATION**

All components are included in the EPA Toxic Substance Control Act (TSCA) Chemical Substance Inventory.

If this product becomes a waste, it meets the criteria of a hazardous waste as defined under RCRA 40CFR261: Ignitability

Hazardous Materials Identification System (HMIS):

Health Hazard Rating: 1 CAUTION Irritation or minor reversible injury possible

Flammability Hazard Rating: 2 CAUTION Material must be moderately heated before ignition will occur.

Reactivity Hazard Rating: 0 Normally stable and will not react with water

Personal Protective Equipment: B Safety glasses and gloves

EPA SARA Title III hazard class (40CFR370): Acute Health Hazard
Chronic Health Hazard
Fire Hazard

EPA SARA Title III Section 313 (40CFR372): There are no listed toxic chemicals present in quantities greater than the *de minimis* level.

EPA SARA Title III (40CFR355): There are no components present in this product at a level which would require reporting.

California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986):

This product contains no listed substances, which the State of California has found to cause cancer, birth defects, or other reproductive harm, in a form which would require a warning under the statute.

Date of Preparation: May 24, 2007

Revision: 13 Supersedes MSDS Dated: March 19, 2004

THIS INFORMATION RELATES TO THE SPECIFIC MATERIAL DESIGNATED AND MAY NOT BE VALID FOR SUCH MATERIAL USED IN COMBINATION WITH ANY OTHER MATERIALS OR IN ANY PROCESS. SUCH INFORMATION IS TO THE BEST OF OUR KNOWLEDGE AND BELIEF ACCURATE AND RELIABLE AS OF THE DATE COMPILED. HOWEVER, NO REPRESENTATION, WARRANTY OR GUARANTEE IS MADE AS TO ITS ACCURACY, RELIABILITY OR COMPLETENESS. IT IS THE USER'S RESPONSIBILITY TO SATISFY HIMSELF AS TO THE SUITABILITY AND COMPLETENESS OF SUCH INFORMATION FOR HIS OWN PARTICULAR USE. WE DO NOT ACCEPT LIABILITY FOR ANY LOSS OR DAMAGE THAT MAY OCCUR FROM THE USE OF THIS INFORMATION NOR DO WE OFFER WARRANTY AGAINST PATENT INFRINGEMENT.

MATERIAL SAFETY DATA SHEET

PRODUCT NAME: ROOFSEAL MASTIC WET/DRY ROOF CEMENT (RSM)

EMERGENCY PHONE: 1-800-424-9300					VII - PRECAUTIONS FOR SAFE HANDLING AND USE	
May be used to comply with OSHA'S Hazard Communications Standard (HSC) 29 CFR 1910, 1200. Standard must be consulted for specific requirements. This product contains no substances subject to SARA TITLE III and 40 CRF.			HMIS SYMBOLS		STEPS TO BE TAKEN IN CASE CONTAINER IS PUNCTURED AND MATERIAL IS RELEASED: Shut off and eliminate all ignition sources. Keep people away. Remove free product. Add sand, earth, or other suitable absorbents to spill area. Minimize skin contact and breathing vapors. ventilate confined spaces. Open all windows and doors. Keep product out of sewers and water sources by diking or impounding. Advise authorities if product has entered or may enter sewers, water courses or extensive land areas. Assure conformity with applicable governmental regulations.	
			HEALTH	1		
			FLAMMABILITY	2		
			REACTIVITY	0		
I - IDENTIFICATION					WASTE DISPOSAL METHOD: Dispose of in an environmentally safe manner in accordance with governmental regulations. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury or death. Do not attempt to clean residue since it is difficult to remove.	
PRODUCT NAME: (RSM) ROOFSEAL MASTIC		PACKAGE TYPE: 1 gal				
PREPARED DEPARTMENT OF HAZARDOUS COMMUNICATIONS		DATE PREPARED: June 2010				
II - HAZARDOUS INGREDIENTS					VIII - SPECIAL PROTECTION INFORMATION RESPIRATORY: Air concentrations of fumes determine the level of production needed. Use only HIOSH approved respiratory equipment within the limits of the protection factors for that equipment EYE: Safety glasses, splash goggles or face shield should be used. CONTACT LENSES SHOULD NOT BE WORN WHEN WORKING WITH THIS MATERIAL. SKIN: Protective gloves recommended: Impervious gloves and clothing. That is impervious to petroleum solvents and asphalt components. PROTECTIVE GLOVES:	
PRINCIPLE HAZARDOUS COMPONENT(S)	CAS NO	ACGIH TLV	OSHA PEL	% or RANGE		
Petroleum Asphalt	8052-42-4	5.0 mg/m ³ (Fume)	5.0 mg/m ³ (Fume)	50%		
Stoddard Solvent	8052-43-3	100 ppm	100 ppm	25%		
Cellulose Fiber	9004-34-6	10 mg/m ³	10 mg/m ³	5%		
Inorganic Filter	1317-65-3	10 mg/m ³	10 mg/m ³	30%		
III - PHYSICAL DATA					OTHER: Keep containers closed when not in use. DO NOT STORE NEAR HEAT, FLAME, SPARKS, OR STRONG OXIDANTS VENTILATION REQUIREMENTS: General good ventilation is recommended. Use explosion-proof equipment. No smoking or open lights	
BOILING POINT (°F) : Mineral Spirits 300-390°F		SPECIFIC GRAVITY (H ₂ O= 1) : 1.07-1.11				
VAPOR PRESSURE (mm Hg) : Approx. 6mm Hg 106°F		MELTING POINT: N/A				
VAPOR DENSITY (Air = 1) : 3.9		EVAPORATION RATE (H ₂ O = 1) : Slower than Ether			IX - SPECIAL PRECAUTIONS PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Keep containers closed when not in use. Store with adequate ventilation. SPECIAL PRECAUTIONARY STATEMENTS: Keep this and all chemicals out of reach of children.	
pH : na		APPEARANCE AND ODOR : Dark gray with solvent odor.				
SOLUBILITY IN WATER : Insoluble						
IV - FIRE AND EXPLOSION HAZARD DATA					NOTICE: We believe that the information contained on this material safety data sheet is accurate. The suggested procedures are based on experience as of the date of publication. They are not necessarily nor fully adequate in every circumstance. Also, the suggestions should not be confused with nor followed in violation of applicable laws, regulations, rules or insurance requirements. No warranty, expressed or implied, of merchantability fitness or otherwise is made.	
FLAMMABILITY as per CPSC FLAME EXTENTION TEST: Flash Point 105°F via TCC (Petroleum Solvent)						
SPECIAL FIRE FIGHTING PROCEDURES: None, however firefighters should always use self contained breathing apparatus as nitrogen oxides and carbon monoxides may be involved.						
UNUSUAL FIRE AND EXPLOSION HAZARDS: None					X - REGULATORY INFORMATION AND REFERENCES <div><div>SARA Title III Reporting Requirements</div><div><div>302</div><div>304/CERCLA</div><div>311</div><div>312</div><div>313</div><div>DOT</div></div></div>	
V - REACTIVITY DATA						
CHEMICAL STABILITY	UNSTABLE		CONDITIONS TO AVOID:			
	STABLE	X				
INCOMPATIBILITY (Materials to avoid): Will not react violently with water. Avoid heat or open flame, strong oxidizers such as liquid chlorine, concentrated oxygen, sodium hypochlorite or calcium hypochlorite.						
HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, carbon dioxide, ammonia, nitrogen oxides.						
HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID:			
	WILL NOT OCCUR	X				
VI - HEALTH HAZARD AREA						
ROUTE(S) OF ENTRY:		EYES Yes	SKIN Yes	INGESTION Yes	INHALATION Yes	
EFFECTS OF OVER EXPOSURE: Breathing asphalt aerosol or asphalt smoke protracted periods of time has produced damage to the lungs of mice. Among the changes observed were: bronchitis, pneumonia, and abscess formation.						
INHALATION: Petroleum Solvent - excessive inhalation of vapors can cause irritation of nose and throat, dizziness, weakness, fatigue, nausea, headache, possible unconsciousness and even asphyxiation.						
SKIN CONTACT/ABSORPTION: Prolonged or repeated contact can cause moderate irritation, defatting and dermatitis.						
INGESTION: Aspiration hazard						
EYES: Can cause severe irritation, redness, tearing, and blurred vision						
CARCINOGENICITY:		NTP? Not listed	IARC MONOGRAPHS? N/L	OSHA REGULATED? II for exposure limits		
EMERGENCY AND FIRST AID PROCEDURES:						
EYES AND SKIN: EYES - Flush with large amounts of water for at least 15 minutes. Get medical attention. SKIN - Remove contaminated clothing/shoes thoroughly wash exposed area with soap and water. If irritation persists or redness develops and persists, get medical attention.						
INHALATION: Move fresh air. If breathing difficult seek IMMEDIATE medical attention. Keep person warm and quiet						
INGESTION: DO NOT INDUCE VOMITING. Transport to hospital IMMEDIATE. Note to physician: Perform gastric lavage in accordance with procedures for ingestion of petroleum products.						
					References	
PERMISSIBLE EXPOSURE REFERENCES:						
Registry of Toxic Effects of Chemical Substances.						
Title 29 Code of Federal Regulations.						
National Toxicology Program (NTP) Report on Carcinogens.						
International Agency for Research on Cancer (IARC) Monographs.						
Title 40 Code of Federal Regulations						
REGULATORY STANDARDS:						
DOT Title 49 Code of Federal Regulations 172.101						
SARA Title III						
Nuclear Regulatory Commission						



MATERIAL SAFETY DATA SHEET

320 37th Avenue, St. Charles, Illinois 60174
www.unitedlabsinc.com . www.unitedlabsinc.ca

To Reorder Call:
800-323-2594

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME
UNITED 22 AQUA SPONGE

USE/DESCRIPTION	Spill Absorbent
------------------------	-----------------

FOR MEDICAL AND TRANSPORTATION EMERGENCIES
24 Hour INFOTRAC (US and CANADA): **800-535-5053**

REVISION DATE
January 20, 2012

HMIS III HEALTH (0 = Maximum Safety)

Always follow Label Directions and Cautions.

* Chronic
4 Severe
3 Serious
2 Moderate
1 Slight
0 Minimal

See Hazards Identification Section of this MSDS for more detailed information.

FLAMMABILITY (0 = Maximum Safety)

Susceptibility of Material to Burning.

4 Extremely flammable	1 Must be preheated
3 Ignites at normal temperature.	to burn.
2 Ignites when moderately heated.	0 Will not burn.

PHYSICAL HAZARD (0 = Maximum Safety)

Susceptible to Release of Energy.

- 4 May detonate-vacate area if materials are exposed to fire.
- 3 Strong shock of heat may detonate-use monitors from behind explosion resistant barriers.

2 Violent chemical change possible-use hose stream from distance
1 Unstable if heated-use precaution.
0 Normally stable.

PERSONAL PROTECTION: p & t



2. COMPOSITION/INFORMATION ON INGREDIENTS

In accordance with Federal Regulation 29 CFR 1910.1200, all materials in this product are considered non-hazardous.

3. HAZARDS IDENTIFICATION

Eyes: May cause mild irritation and redness.

Skin: May cause mild irritation and redness.

Inhalation: Nuisance dust. Avoid high dust concentration.

Ingestion: Large quantities may cause upset stomach and diarrhea.

4. FIRST AID MEASURES

Eyes: Immediately flush with plenty of water for at least 15 minutes. If symptoms develop, seek medical attention.

Skin: Wash with soap and water. If irritation persists seek medical attention.

Inhalation: Remove to fresh air. If symptoms develop, seek medical attention.

Ingestion: Get medical attention immediately. Rinse mouth out with water and give several glasses of water. Never give anything to an unconscious person.

5. FIRE FIGHTING MEASURES

Flash Point (TCC): None

Explosive Limits: Lower (LEL): NA Upper (UEL): NA

Flame Projection (Aerosol): NA

Hazardous Products of Combustion: When strongly heated, as in a fire, this product may produce oxides of carbon.

Fire and Explosion Hazards: If material is dry (unused), airborne dust may burn explosively.

Extinguishing Media: Foam, Carbon dioxide, Dry Chemical.

Fire Fighting Instructions: Wear self-contained breathing apparatus w/full protective clothing in chemical fires. Product becomes slippery when wet.

6. ACCIDENTAL RELEASE MEASURES

Small Spills: Sweep up and then wash area with water.

Large Spills: Ventilate area and avoid adding water. Sweep up and then wash area with water. Product becomes slippery when wet.

7. HANDLING AND STORAGE

Store in a cool, dry place in a well-ventilated area. Keep container tightly closed when not in use. Airborne dust may catch fire; keep away from sources of ignition.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Eyes: Normally not required.

Skin: Chemical resistant gloves are recommended.

Respiratory: Not normally required. Wear dust respirator to avoid inhaling nuisance dust.

Engineering Controls: Mechanical ventilation recommended when handling in enclosed/tight spaces.

9. PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point: NA

Specific Gravity: NA

Vapor Pressure: NA

Melting Point: NA

Vapor Density: NA

Evaporation Rate: NA

Solubility in Water: Insoluble

pH: NA

Appearance and Odor: White powder with floral scent

10. STABILITY AND REACTIVITY

Hazardous Polymerization: Will not occur.

Hazardous Decomposition: When strongly heated, as in a fire, this product may produce oxides of carbon.

Chemical Stability: Stable

Incompatibility: Oxidizing agents such as bleach.

11. TOXICOLOGICAL INFORMATION

Carcinogenicity (NTP/IARC/OSHA): None

California Proposition 65: Does this product contain chemical(s) known to the State of California to cause cancer and/or to cause birth defects or other reproductive harm? None

12. ECOLOGICAL INFORMATION

ND

13. DISPOSAL CONSIDERATIONS

Consult your local, state, provincial and federal regulations for proper disposal guidelines. Disposal regulations may be different for each state and/or locality.

14. TRANSPORT INFORMATION

DOT: Available upon request

TDG: Available upon request

UN: Available upon request

15. REGULATORY INFORMATION

VOC (Volatile Organic Compounds): None

TSCA (Toxic Substances Control Act): Listed

SARA Title III Section 302 EHS: None

SARA Title III Section 311/312: ND

SARA Title III Section 313 Toxic Chemicals: None

WHMIS Classification:

This product has been classified in accordance with the hazard criteria of the CPR (Controlled Products Regulations/WHMIS) and the MSDS contains all the information required by the CPR.

16. OTHER INFORMATION

Read and follow all label directions and precautions before using this product. These products are intended for industrial and institutional use only. NOT FOR HOUSEHOLD USE OR RESALE. KEEP OUT OF REACH OF CHILDREN.

UNITED 22 AQUA SPONGE

PREPARED BY: Sandy Kopacz



PROPYLENE

MATERIAL SAFETY DATA SHEET

DATE PREPARED: April 2010

Items

Quickfire Torch Kit Fuel 5.45 oz

Quickfire Replacement Fuel 5.45 oz

Fat Boy Replacement Fuel Cylinder

1. PRODUCT INFORMATION

Product Identifier: Max Power Propylene (Odorized)

Synonyms: Methyl ethylene, Propane

Chemical Family: Olefins

Chemical Formula: C₃H₆

Application and Use: Multi-purpose fuel or chemical feedstock

Product Description: Colorless, Hydrocarbon odor composed, stored and handled as liquids under pressure

DOT Hazard Class: Flammable Gas

C.A.S. Number: 115-07-1

UN 1077

TELEPHONE NUMBERS

Emergency 24hr.

Canada 1-800-265-0212
(ERP 2-0010-062)

US 1-800-424-9300

MANUFACTURER/SUPPLIER

BernzOmatic
1 BernzOmatic Drive
Medina, NY 14103
585-798-4949

2. REGULATED COMPONENTS

The following components are defined in accordance with sub-paragraph 13(a)(i) to (iv) or Paragraph 14 (a) of the Hazardous Products Act:

NAME	%	CAS #
Propylene	99.5 v/v	115-07-1
Propane	0 – 0.5 v/v	74-98-8

3. TYPICAL PHYSICAL & CHEMICAL PROPERTIES

Physical State:	colorless gas @ s.t.p
Specific Gravity:	0.5193 @ 68 degrees F
Vapor Density:	1.46 (air=1)
Boiling Point:	-53.8 degrees F (-47.7 degrees C)
Solubility in Water:	slightly soluble (0.18 wt% @ 100 degrees F)
Melting Point:	-301 degrees F (-185 degrees C)
Vapor Pressure:	160psia@68 degrees F
Volatiles:	100% by volume
Molecular Weight:	42.08
Density:	0.51 g/cc at 15 deg C
Appearance/odor:	colorless gas, stench to allow detection of leaks

4. HEALTH HAZARD INFORMATION

NATURE OF HAZARD

INHALATION:

May cause central nervous system disorder (e.g. loss of coordination, weakness, fatigue, mental confusion and blurred vision) and/or damage.

Breathing high vapor concentrations (saturated vapors) for a few minutes may be fatal. Saturated vapors can be encountered in confined spaces and/or under conditions of poor ventilation.

May cause irritation, breathing failure, coma and death without any warning odor being sensed.

Inhalation exposure to this product at extremely high concentrations, as in accidental releases in which concentrations reach or exceed the flammable range, may result in cardiac arrhythmias.

EYE CONTACT:

Vapors may cause a slight irritation and liquid contact with the eye may cause blindness.

SKIN CONTACT:

Exposure to rapidly expanding gas or vaporizing liquid may cause frostbite (cold burns)

INGESTION:

Not considered to be a hazard

INHALATION:

Exposure to low concentrations may result in a mild anesthetic action. Only exposures to extremely high concentrations will result in physiological effects.

SYSTEMIC AND OTHER EFFECTS:

In human studies, propylene at very high concentrations has caused tearing, coughing, and vomiting.

CARCINOGENICITY:

No evidence has been listed by the NTP and is listed by the IARC as “not classifiable as to its’ carcinogenicity to humans”.

TERATOLOGY:

No evidence.

REPRODUCTIVE EFFECTS:

No evidence has been listed.

5. FIRST AID MEASURES

INHALATION:

In emergency situations use proper respiratory protection to immediately remove the affected victim from exposure. Administer artificial respiration if breathing has stopped. Keep at rest. Call for prompt medical attention.

EYE CONTACT:

In case of cold burns caused by rapidly expanding gas or vaporizing liquid, get prompt medical attention.

SKIN CONTACT:

In case of cold burns caused by rapidly expanding gas or vaporizing liquid, get prompt medical attention.

INGESTION:

Do NOT induce vomiting if liquid propylene has been swallowed. Seek immediate medical attention.

6. PREVENTITIVE AND CORRECTIVE MEASURES

PERSONAL PROTECTION:

The selection of personal protective equipment varies, depending upon conditions of use. In open systems where contact is likely, wear gas-proof goggles, face shield, chemical resistant overalls, and appropriate thermal/chemical gloves. Where skin and eye contact is unlikely, but may occur as a result of short and/or periodic exposures, wear long sleeves, chemical resistant gloves, gas-proof goggles, and a face shield.

Where concentrations in air may exceed the occupational exposure limits given in Section 4 and where engineering, work practices or other means of exposure reduction are not adequate, approved respirators may be necessary to prevent overexposure by inhalation.

ENGINEERING CONTROLS:

The use of local exhaust ventilation is recommended to control emissions near the source. Laboratory samples should be handled in a fume hood. Provide mechanical ventilation of confined spaces. Use explosion-proof ventilation equipment.

HANDLING, STORAGE AND SHIPPING:

Keep containers closed. Handle and open containers with care.

Store in a cool, well-ventilated place away from incompatible materials. Store as pressurized liquid in a pressure vessel.

Store and load the container at normal (up to 38 deg C) temperature and at atmospheric pressure.

Material will accumulate static charges which may cause a spark. Static charge build-up could become an ignition source. Use proper relaxation and grounding procedures.

Empty containers may contain product residue. Do not pressurize, cut, heat or weld empty container. Do not reuse empty containers without commercial cleaning or reconditioning.

LAND SPILL:

Eliminate source of ignition. Keep away, Prevent additional discharge of material, if possible to do so without hazard.

Vapors or dust may be harmful or fatal. Warn occupants of downwind areas.

Allow to evaporate.

Consult an expert on disposal of recovered material. Ensure disposal in compliance with government requirements and ensure conformity to local disposal regulations. Notify the appropriate authorities immediately.

Take all additional action necessary to prevent and remedy the adverse effects of the spill.

WATER FILL:

Eliminate source of ignition. Vapors or dust may be harmful or fatal. Warn occupants and shipping in downwind area.

Allow to evaporate from surface.

Consult an expert on disposal of recovered material. Ensure disposal in compliance with government requirements and ensure conformity to local disposal regulations. Notify the appropriate authorities immediately.

Take all additional action necessary to prevent and remedy the adverse effects of the spill.

7. FIRE AND EXPLOSION HAZARD

Flashpoint: -162 deg F

Auto ignition: 860 deg F (460 deg C)

Flammable Limits: LEL 2.0% UEL 11.1%

GENERAL HAZARDS:

Extremely flammable: material will readily ignite at normal temperatures.

Flammable Gas: may readily form flammable mixtures at or above the flash point.

Toxic gases will form upon combustions.

Static Discharge: material may accumulate static charges which may cause a fire.

Auto-refrigeration: drains may become plugged and valves may become inoperable because of the formation of ice due to expanding vapors or vaporizing liquids.

FIRE FIGHTING:

Use water spray to cool fire exposed surfaces and to protect personnel.

Shut off fuel to fire if possible to do so without hazard. If a leak or spill has not ignited use water spray to disperse the vapors. Do not extinguish flames at leak because possibility of uncontrolled explosive re-ignition exists. Cut off fuel and/or allow fire to burn out.

Extinguish small residual fires with dry chemical powder or water spray.

Try to cover liquid spills with foam.

Respiratory and eye protection required for fire fighting personnel.

A self-contained breathing apparatus (SCBA) should be used for all indoor fires and any significant outdoor fires. For small outdoor fires, which may easily be extinguished with a portable fire extinguisher, use of a SCBA may not be required.

HAZARDOUS COMBUSTION PRODUCTS:

Smoke, carbon monoxide, carbon dioxide under thermal decomposition.

8. REACTIVITY DATA**STABILITY:**

This product is stable. Hazardous polymerization will not occur.

INCOMPATIBLE MATERIALS AND CONDITIONS TO AVOID:

Concentrated mineral acids, halogenated compounds, nitrogen dioxide, oxidizing agents, and molten sulfur.

HAZARDOUS DECOMPOSITION:

Incomplete combustion may result in carbon monoxide, carbon dioxide, and other toxic gases.

9. NOTES

All components of this product are listed on the TSCA inventory.

Nexen has no knowledge how its customers will handle, store, transfer, distribute or use odorized propylene or non-odorized propylene and therefore makes no warranty regarding the propylene or the odorant after the custody of these materials passes to the customers. It is recommended that Nixon's customers provide their employees and subsequent customers with information regarding the characteristics of propylene, how those characteristics relate to the employees or customers use including the limitation in detecting non-odorized or that may be added during subsequent distribution.

With proper handling, transportation and storage, adding a chemical odorant such as ethyl mercaptan has proven to be a very effective warning device but all odorants have certain limitations. The effectiveness of the odorant may be diminished by a person's sense of smell, by competing odors and by oxidation, which may cause a potentially dangerous situation. Further safety related information is contained on the Material Safety Data Sheet. Industry experience has shown that natural gas streams may contain trace amounts of radon, a naturally occurring radioactive gas, and radioactive particulate decay products which can accumulate in process equipment and storage vessels. These materials emit gamma, alpha and beta forms of radiation. Since gamma radiation can penetrate the walls of intact equipment a potential for exposure could exist at or adjacent to the external surface of process equipment that contain radon-enriched process streams or accumulated deposits of radon decay products. Equipment emitting gamma radiation at dose rates above background should be assumed to be contaminated with internal deposits of alpha- and beta-emitting radon decay products.

Measures should be taken to preclude the inhalation or ingestion of alpha- or beta-emitting materials. Before performing maintenance on contaminated environment, all process shut-down safety and "gas freeing" procedures should be followed and at least a 4 hour lapse should be allowed between process stream shut-down and the opening of equipment repair operations. This time will allow the gamma radiation dose rates to be reduced to background levels. Maintenance personnel should wear appropriate personal protective equipment and follow recommended industrial hygiene/safety and environmental procedures in accordance with prevailing regulations and industry guidelines.

10. PREPARATION

Date Prepared June 2008
Prepared by BernzOmatic
 1 BernzOmatic Drive
 Medina, NY 14103

CAUTION: "The information contained herein relates only to this product or material and may not be valid when used in combination with any other product or material or in any process. If the product is not to be used for a purpose or under conditions which are normal and reasonably foreseeable, this information cannot be relied upon as complete or applicable. For greater certainty, uses other than those described in Section 1 must be reviewed with the supplier. The information contained herein is based on the information available at the indicated date of preparation. This MSDS is for the use of Nexen customers and their employees and agents only. Any further distribution of this MSDS by Nexen customers is prohibited without the written consent of Nexem."

SAFETY DATA SHEET

1. Identification

Product identifier Propane

Other means of identification

SDS number WC002

Product code UN1075

Recommended use Portable fuel.

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer/Supplier Worthington Cylinder Corporation

Address 300 E. Breed St., Chilton, WI 5301
United States

Contact person Ann Stiefvater

E-mail address Ann.Stiefvater worthingtonindustries.com

Telephone number 1-920-849-1740

Emergency telephone number 1-703-527-3887 International / CHEMTREC 1-800-424-9300 Domestic

2. Hazard(s) identification

Physical hazards Flammable gases Category 1
Gases under pressure Liquefied gas

Health hazards Not classified.

OSHA defined hazards Not classified.

Label elements



Signal word Danger

Hazard statement Extremely flammable gas. Contains gas under pressure; may explode if heated.

Precautionary statement

Prevention Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Response Leaking gas fire: Do not extinguish, unless leak can be stopped safely. Eliminate all ignition sources if safe to do so.

Storage Protect from sunlight. Store in a well-ventilated place.

Disposal Dispose of waste and residues in accordance with local authority requirements.

Hazard(s) not otherwise classified (HNOC) May displace oxygen and cause rapid suffocation.

3. Composition/information on ingredients

Mixtures

Chemical name	CAS number	%
Propane	74-98-6	87.5-100
Ethane	74-84-0	0-7
Propylene	115-07-1	0-5
Butane	106-97-8	0-2.5

Additives

Chemical name	CAS number	%
Ethyl Mercaptan	75-08-1	0.005

Composition comments All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

Inhalation	Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Call a physician or poison control center immediately.
Skin contact	Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention if irritation develops and persists. If frostbite occurs, immerse involved area in warm water (between 100 F/38 C and 110 F/43 C, not exceeding 112 F/44 C). Keep immersed for 20 to 40 minutes. Seek medical assistance.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.
Ingestion	Ingestion is not a typical route of exposure for gases or liquefied gases.
Most important symptoms/effects, acute and delayed	Exposure to rapidly expanding gas or vaporizing liquid may cause frostbite ("cold burn"). Very high exposure can cause suffocation from lack of oxygen. May cause drowsiness or dizziness.
Indication of immediate medical attention and special treatment needed	Exposure may aggravate pre-existing respiratory disorders. Treat symptomatically.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media	Dry chemical, CO ₂ , water spray, fog, or foam.
Unsuitable extinguishing media	None known.
Specific hazards arising from the chemical	Selection of respiratory protection for firefighting: follow the general fire precautions indicated in the workplace.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire-fighting equipment/instructions	Move container from fire area if it can be done without risk. Do not extinguish fires unless gas flow can be stopped safely; explosive re-ignition may occur. Promptly isolate the scene by removing all persons from the vicinity of the incident. No action shall be taken involving any personal risk or without suitable training. For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus. Stop flow of material. Use water to keep fire exposed containers cool and to protect personnel effecting shutoff. If a leak or spill has not ignited, use water spray to disperse the vapors and to protect personnel attempting to stop leak. Prevent runoff from fire control or dilution from entering streams, sewers or drinking water supply.
General fire hazards	Extremely flammable gas.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Evacuate the area promptly. No action shall be taken involving any personal risk or without suitable training. Keep unnecessary personnel away. Ensure adequate ventilation. In case of inadequate ventilation, use respiratory protection. Wear appropriate personal protective equipment (See Section 8).
Methods and materials for containment and cleaning up	Ventilate well, stop flow of gas or liquid if possible. Immediately contact emergency personnel.
Environmental precautions	Should not be released into the environment. Prevent further leakage or spillage if safe to do so. Prevent from entering into soil, ditches, sanitary sewers, waterways and/or groundwater.

7. Handling and storage

Precautions for safe handling	Eliminate all sources of ignition. Wear appropriate personal protective equipment (See Section 8). Eating, drinking, and smoking should be prohibited in areas where this material is handled, stored, and processed. Do not breathe gas. Do not get in eyes, on skin, on clothing. Use only with adequate ventilation.
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Conditions for safe storage, including any incompatibilities

Store in accordance with local, regional, national, and international regulations. Secure cylinders in an upright position at all times, close all valves when not in use. Store in a cool, dry, well-ventilated place. Keep container tightly closed and sealed until ready for use. Protect cylinders from damage.

8. Exposure controls/personal protection**Occupational exposure limits****US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)**

Components	Type	Value
Propane (CAS 74-98-6)	PEL	1800 mg/m3 1000 ppm
Additives	Type	Value
Ethyl Mercaptan (CAS 75-08-1)	Ceiling	25 mg/m3 10 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value
Butane (CAS 106-97-8)	STEL	1000 ppm
Propylene (CAS 115-07-1)	TWA	500 ppm
Additives	Type	Value
Ethyl Mercaptan (CAS 75-08-1)	TWA	0.5 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Butane (CAS 106-97-8)	TWA	1900 mg/m3 800 ppm
Propane (CAS 74-98-6)	TWA	1800 mg/m3 1000 ppm
Additives	Type	Value
Ethyl Mercaptan (CAS 75-08-1)	Ceiling	1.3 mg/m3 0.5 ppm

Biological limit values

No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls

Provide adequate ventilation and minimize the risk of inhalation of gas. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear approved safety glasses or goggles.

Skin protection

Hand protection Wear appropriate chemical resistant gloves.

Other Wear protective clothing appropriate for the risk of exposure.

Respiratory protection If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.

Thermal hazards Contact with liquefied gas might cause frostbites, in some cases with tissue damage. Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

Do not eat, drink or smoke when using the product. Wash thoroughly after handling. Provide eyewash station and safety shower. Handle in accordance with good industrial hygiene and safety practices.

9. Physical and chemical properties

Appearance	Colorless gas.
Physical state	Gas.
Form	Compressed liquefied gas.
Color	Colorless.
Odor	Rotten egg.

Odor threshold	Not available.
pH	Not applicable.
Melting point/freezing point	-306.4 °F (-188 °C)
Initial boiling point and boiling range	-43.6 °F (-42 °C) 14.7 psia
Flash point	-155.2 °F (-104.0 °C)
Evaporation rate	Not applicable.
Flammability (solid, gas)	Extremely flammable gas.
Upper/lower flammability or explosive limits	
Explosive limit - lower (%)	2.15 %
Explosive limit - upper (%)	9.6 %
Vapor pressure	127 psig (21°C / 70°F)
Vapor density	Not available.
Relative density	0.504 (liquid) 1.5 (vapor) (air=1) 15°C / 60°F
Solubility(ies)	
Solubility (water)	Slightly soluble in water.
Partition coefficient (n-octanol/water)	1.77
Auto-ignition temperature	809.6 °F (432 °C)
Decomposition temperature	Not available.
Viscosity	Not applicable.
Other information	
Molecular weight	45 g/mol
Percent volatile	100 %

10. Stability and reactivity

Reactivity	Reacts violently with strong oxidants, nitrites, inorganic chlorides, chlorites and perchlorates causing fire and explosion hazard.
Chemical stability	Stable under normal temperature conditions and recommended use.
Possibility of hazardous reactions	Polymerization will not occur.
Conditions to avoid	Heat, flames and sparks.
Incompatible materials	Strong oxidizing agents. Strong acids. Halogens.
Hazardous decomposition products	Carbon oxides. Hydrocarbons.

11. Toxicological information

Information on likely routes of exposure

Ingestion	Not likely, due to the form of the product.
Inhalation	High concentrations: Suffocation (asphyxiant) hazard - if allowed to accumulate to concentrations that reduce oxygen below safe breathing levels. Breathing of high concentrations may cause dizziness, light-headedness, headache, nausea and loss of coordination. Continued inhalation may result in unconsciousness.
Skin contact	Contact with liquefied gas may cause frostbite.
Eye contact	Contact with liquefied gas may cause frostbite.
Symptoms related to the physical, chemical and toxicological characteristics	Exposure to rapidly expanding gas or vaporizing liquid may cause frostbite ("cold burn"). Very high exposure can cause suffocation from lack of oxygen. May cause drowsiness or dizziness.

Information on toxicological effects

Acute toxicity	High concentration: Suffocation (asphyxiant) hazard - if allowed to accumulate to concentrations that reduce oxygen below safe breathing levels.
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Components	Species	Test Results
Butane (CAS 106-97-8)		
Acute		
<i>Inhalation</i>		
LC50	Mouse	680 mg/l, 2 Hours
	Rat	658 mg/l, 4 Hours
Propane (CAS 74-98-6)		
Acute		
<i>Inhalation</i>		
LC50	Rat	> 1442 mg/l, 15 Minutes
Propylene (CAS 115-07-1)		
Acute		
<i>Inhalation</i>		
LC50	Mouse	680 mg/l, 2 Hours
	Rat	658 mg/l, 4 Hours
Additives	Species	Test Results
Ethyl Mercaptan (CAS 75-08-1)		
Acute		
<i>Dermal</i>		
LD50	Rat	> 2000 mg/kg
<i>Inhalation</i>		
LC50	Mouse	4420 mg/l, 4 Hours
<i>Oral</i>		
LD50	Rat	682 mg/kg
Skin corrosion/irritation	Contact with liquefied gas might cause frostbites, in some cases with tissue damage.	
Serious eye damage/eye irritation	Direct contact with liquefied gas may cause eye damage from frostbite.	
Respiratory or skin sensitization		
Respiratory sensitization	Not classified.	
Skin sensitization	Not classified.	
Germ cell mutagenicity	Not classified.	
Carcinogenicity	Not classified.	
IARC Monographs. Overall Evaluation of Carcinogenicity		
Propylene (CAS 115-07-1)	3 Not classifiable as to carcinogenicity to humans.	
Reproductive toxicity	Not classified.	
Specific target organ toxicity - single exposure	Not classified.	
Specific target organ toxicity - repeated exposure	Not classified.	
Aspiration hazard	Not classified.	
12. Ecological information		
Ecotoxicity	Not expected to be harmful to aquatic organisms.	
Persistence and degradability	The product is readily biodegradable.	
Bioaccumulative potential	The product is not expected to bioaccumulate.	
Partition coefficient n-octanol / water (log Kow)		
Propane (CAS Mixture)		1.77
Butane (CAS 106-97-8)		2.89
Propane (CAS 74-98-6)		2.36
Propylene (CAS 115-07-1)		1.77
Mobility in soil	May evaporate quickly.	
Mobility in general	May evaporate quickly.	

Other adverse effects None known.

13. Disposal considerations

Disposal instructions Use the container until empty. Do not dispose of any non-empty container. Empty containers have residual vapor that is flammable and explosive. Cylinders should be emptied and returned to a hazardous waste collection point. Do not puncture or incinerate even when empty. Dispose in accordance with all applicable regulations.

Hazardous waste code D001: Waste Flammable material with a flash point 140 °F

Waste from residues / unused products Dispose in accordance with all applicable regulations.

Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT

UN number UN1075

UN proper shipping name Propane

Transport hazard class(es)

Class 2.1

Subsidiary risk -

Packing group Not applicable.

Environmental hazards

Marine pollutant No

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

Special provisions 19, T50

Packaging exceptions 306

Packaging non bulk 304

Packaging bulk 314, 315

IATA

UN number UN1075

UN proper shipping name Propane

Transport hazard class(es)

Class 2.1

Subsidiary risk -

Label(s) 2.1

Packing group Not applicable.

Environmental hazards No

ERG Code 10L

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

IMDG

UN number UN1075

UN proper shipping name PROPANE

Transport hazard class(es)

Class 2.1

Subsidiary risk -

Label(s) 2.1

Packing group Not applicable.

Environmental hazards

Marine pollutant No

EmS F-D, S-U

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code This product is a compressed or liquefied gas and when transported in bulk is covered under IGC code.

15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
All components are on the U.S. EPA TSCA Inventory List.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

CERCLA Hazardous Substance List (40 CFR 302.4)

Butane (CAS 106-97-8)	LISTED
Ethyl Mercaptan (CAS 75-08-1)	LISTED
Propane (CAS 74-98-6)	LISTED
Propylene (CAS 115-07-1)	LISTED

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories	Immediate Hazard - No
	Delayed Hazard - No
	Fire Hazard - Yes
	Pressure Hazard - Yes
	Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical Yes**SARA 313 (TRI reporting)**

Chemical name	CAS number	% by wt.
Propylene	115-07-1	0-5

Other federal regulations**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Butane (CAS 106-97-8)
Ethyl Mercaptan (CAS 75-08-1)
Propane (CAS 74-98-6)
Propylene (CAS 115-07-1)

Clean Water Act (CWA) Section 112(r) (40 CFR 68.130) Hazardous substance**Safe Drinking Water Act (SDWA)** Not regulated.**US state regulations****US. Massachusetts RTK - Substance List**

Butane (CAS 106-97-8)
Ethyl Mercaptan (CAS 75-08-1)
Propane (CAS 74-98-6)
Propylene (CAS 115-07-1)

US. New Jersey Worker and Community Right-to-Know Act

Butane (CAS 106-97-8)
Ethyl Mercaptan (CAS 75-08-1)
Propane (CAS 74-98-6)
Propylene (CAS 115-07-1)

US. Pennsylvania Worker and Community Right-to-Know Law

Butane (CAS 106-97-8)
Ethyl Mercaptan (CAS 75-08-1)
Propane (CAS 74-98-6)
Propylene (CAS 115-07-1)

US. Rhode Island RTK

Butane (CAS 106-97-8)
Ethyl Mercaptan (CAS 75-08-1)
Propane (CAS 74-98-6)
Propylene (CAS 115-07-1)

US. California Proposition 65

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance

Not listed.

International Inventories

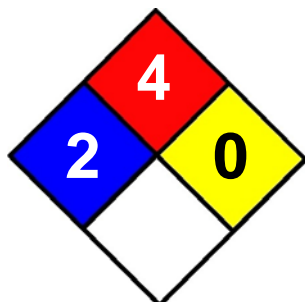
Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date	05-May-2014
Revision date	11-September-2014
Version #	02
NFPA Ratings	

**Disclaimer**

All information in this Material Safety Data Sheet is believed to be accurate and reliable. However, no guarantee or warranty of any kind is made with regard to the accuracy of information or the suitability of the recommendations contained herein. It is the user's responsibility to assess the safety and toxicity of this product under their own conditions of use and to comply with all applicable laws and regulations.



MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Product name	Cal-Blue Plus Gas Leak Detector (4182-01, 4182-08, 4182-24, 4182-53)
CAS #	Mixture
Product Use	Gas Leak Detector
Manufacturer	Nu-Calgon 2008 Altom Court St. Louis, MO 63146 US Phone: 314-469-7000 / 800-554-5499 Emergency Phone: 1-800-424-9300 (CHEMTREC)

2. Hazards Identification

Emergency overview	MAY CAUSE EYE AND SKIN IRRITATION.
Potential short term health effects	
Routes of exposure	Eye, Skin contact, Inhalation, Ingestion.
Eyes	May cause irritation.
Skin	May cause irritation.
Inhalation	Prolonged inhalation may be harmful.
Ingestion	May cause stomach distress, nausea or vomiting.
Target organs	Eyes. Skin. Respiratory system.
Chronic effects	Prolonged or repeated exposure can cause drying, defatting and dermatitis.
Signs and symptoms	Symptoms may include redness, oedema, drying, defatting and cracking of the skin. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.
Potential environmental effects	See section 12.

3. Composition/Information on Ingredients

Composition comments	None by WHMIS criteria.
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4. First Aid Measures

First aid procedures	
Eye contact	Flush with cool water. Remove contact lenses, if applicable, and continue flushing. Obtain medical attention if irritation persists.
Skin contact	Flush with cool water. Wash with soap and water. Obtain medical attention if irritation persists.
Inhalation	Not a normal route of exposure. If symptoms develop move victim to fresh air. If symptoms persist, obtain medical attention.
Ingestion	Do not induce vomiting. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Never give anything by mouth if victim is unconscious, or is convulsing. Obtain medical attention.
Notes to physician	Treat symptomatically.

5. Fire Fighting Measures

Flammable properties	Not flammable by WHMIS criteria.
Extinguishing media	
Suitable extinguishing media	Alcohol resistant foam. Dry chemical powder. Carbon dioxide (CO ₂).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Protection of firefighters	
Specific hazards arising from the chemical	Not available

Protective equipment for firefighters	Not available
Hazardous combustion products	May include and are not limited to: Oxides of carbon. Oxides of nitrogen.
Explosion data	
Sensitivity to mechanical impact	Not available.
Sensitivity to static discharge	Not available.

6. Accidental Release Measures

Personal precautions	Keep out of low areas. Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. For personal protection, see section 8.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.
Methods for containment	Use water spray to reduce vapours or divert vapour cloud drift.
Methods for cleaning up	<p>Large Spills: Dike the spilled material, where this is possible. Stop the flow of material, if this is without risk. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.</p> <p>Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. For waste disposal, see section 13.</p> <p>Never return spills to original containers for re-use.</p>

7. Handling and Storage

Handling	Ensure adequate ventilation. Avoid contact with eyes, skin and clothing.
Storage	Keep away from heat, open flames or other sources of ignition. Store away from incompatible materials (see Section 10 of the MSDS).

8. Exposure Controls/Personal Protection

Exposure limits	Not applicable.
Engineering controls	Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.
Personal protective equipment	
Eye/Face protection	Safety goggles or glasses.
Hand protection	Rubber gloves. Confirm with a reputable supplier first.
Skin and body protection	As required by employer code. Wear suitable protective clothing.
Respiratory protection	Not normally required if good ventilation is maintained. Where exposure guideline levels may be exceeded, use an approved NIOSH respirator.
General hygiene considerations	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and Chemical Properties

Appearance	Clear
Colour	Blue
Form	Liquid.
Odour	Neutral
Odour threshold	Not available.
Physical state	Liquid.
pH	8.1 - 8.5 (Concentrate)
Freezing point	-9.44 °C (15 °F)
Boiling point	Not available.
Pour point	Not available.

Evaporation rate	Not available
Flash point	Not available.
Auto-ignition temperature	Not available
Flammability Limits in Air, Upper, % by Volume	Not available
Flammability Limits in Air, Lower, % by Volume	Not available
Heat of combustion	Not available.
Vapour pressure	Not available
Vapour density	Not available
Specific gravity	Not available.
Partition coefficient (n-octanol/water)	Not available
Solubility (Water)	Not available.
Relative density	Not available.
Viscosity	325 - 425 cPs
VOC	Not available
Percent volatile	Not available

10. Stability and Reactivity

Reactivity	This product may react with strong oxidising agents.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Do not mix with other chemicals.
Incompatible materials	Strong oxidising agents.
Hazardous decomposition products	May include and are not limited to: Oxides of carbon. Oxides of nitrogen.

11. Toxicological Information

Effects of acute exposure	
Eye contact	May cause irritation.
Skin contact	May cause irritation.
Inhalation	Prolonged inhalation may be harmful.
Ingestion	May cause stomach distress, nausea or vomiting.
Sensitisation	Non-hazardous by WHMIS criteria.
Chronic effects	Non-hazardous by WHMIS criteria.
Carcinogenicity	Non-hazardous by WHMIS criteria.
Mutagenicity	Non-hazardous by WHMIS criteria.
Reproductive effects	Non-hazardous by WHMIS criteria.
Teratogenicity	Non-hazardous by WHMIS criteria.
Name of Toxicologically Synergistic Products	Not available.

12. Ecological Information

Ecotoxicity	Not available.
Persistence and degradability	Not available.
Bioaccumulation/accumulation	Not available
Mobility in environmental media	Not available.
Environmental effects	Not available.
Aquatic toxicity	Not available.
Chemical fate information	Not available.

13. Disposal Considerations

Disposal instructions	Review federal, provincial, and local government requirements prior to disposal.
Waste from residues / unused products	Not available
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport Information

Transportation of Dangerous Goods (TDG - Canada)

Not regulated as dangerous goods.

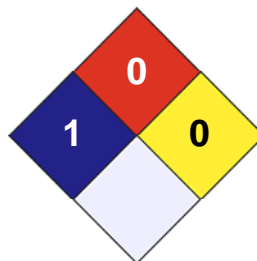
15. Regulatory Information

Canadian federal regulations	This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.		
WHMIS status	Not Controlled		
Inventory status			
Country(s) or region	Inventory Name	On Inventory (Yes/No)*	
Canada	Domestic Substances List (DSL)	No	
Canada	Non-Domestic Substances List (NDSL)	No	
*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)			

16. Other Information

LEGEND	
Severe	4
Serious	3
Moderate	2
Slight	1
Minimal	0

HEALTH	/ 1
FLAMMABILITY	0
PHYSICAL HAZARD	0
PERSONAL PROTECTION	X



Disclaimer

Information contained herein was obtained from sources considered technically accurate and reliable. While every effort has been made to ensure full disclosure of product hazards, in some cases data is not available and is so stated. Since conditions of actual product use are beyond control of the supplier, it is assumed that users of this material have been fully trained according to the requirements of all applicable legislation and regulatory instruments. No warranty, expressed or implied, is made and supplier will not be liable for any losses, injuries or consequential damages which may result from the use of or reliance on any information contained in this document.

Issue date 22-September-2014

Effective date 15-September-2014

Expiry Date 15-September-2017

Prepared by Nu-Calgon Technical Service Phone: (314) 469-7000

Other information For an updated MSDS, please contact the supplier/manufacturer listed on the first page of the document.
This MSDS conforms to the ANSI Z400.1/Z129.1-2010 Standard.

MATERIAL SAFETY DATA SHEET

OSHA - Meets 29 CFR 1910.1200 Standards



HMIS HAZARD RATINGS

HEALTH	1	* = Chronic Health Hazard	2 = MODERATE
FLAMMABILITY	0	0 = INSIGNIFICANT	3 = HIGH
PHYSICAL HAZARD	0	1 = SLIGHT	4 = EXTREME

TRANSPORTATION INFORMATION

PROPER SHIPPING NAME:	Not Regulated		
HAZARD CLASS / PKG GRP:	Not regulated	REF:	Not Applicable
IDENTIFICATION NUMBER:	None	LABEL:	None Required

SECTION 1 - PRODUCT / COMPANY IDENTIFICATION

IDENTITY (AS USED ON LABEL AND LIST)

Page 1 of 2

COOLER GUARD

MANUFACTURER'S NAME

Controlled Release Technologies, Inc.

EMERGENCY TELEPHONE NUMBER

ChemTel Inc. 1- (800) 255-3924 Intl. + 01 (813) 248-0585

ADDRESS (NUMBER, STREET, P.O. BOX)

1016 Industry Drive

TELEPHONE NUMBER FOR INFORMATION

(704) 487-0878

(CITY, STATE AND ZIP CODE)

Shelby, NC 28152

DATE PREPARED: September 14, 2007

SUPERSEDES: May 10, 2002

SECTION 2 - HAZARDOUS INGREDIENTS / IDENTITY INFORMATION

HAZARDOUS COMPONENTS

(SPECIFIC CHEMICAL IDENTITY; COMMON NAME(S))

CAS #

%

(OPTIONAL)

OSHA PEL

PPM

MG/M3

ACGIH TWA

PPM

MG/M3

SARA

TITLE III

RQ

LBS

No hazardous materials present as defined by OSHA - 29 CFR 1910.1000; EPA - 40 CFR 260 - 281, 302, 355, 370, 372; DOT - 49 CFR 172; WHMIS or EC Directive 91 / 155 / EEC.

SECTION 3 - HEALTH HAZARD DATA

ROUTES OF ENTRY - SIGNS AND SYMPTOMS OF EXPOSURE

EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Inhalation of mists or vapors may cause irritation to upper respiratory tract and mucous membranes.

Remove affected person to fresh air; wash mouth and nasal passages with water repeatedly; if breathing difficulties persist seek medical attention.

SKIN: Contact with skin may cause irritation, dermatitis.

Wash contacted area with soap and water; DO NOT attempt to neutralize with chemical agents; if irritation persists, seek medical attention.

EYES: Contact with eyes may cause pain and irritation.

Remove contact lenses. Immediately flush eyes for 15 minutes in clear running water while holding eyelids open; seek medical attention immediately.

INGESTION: Irritating to digestive tract; may cause gastric distress, stomach pains.

Drink large quantities of water or milk; DO NOT induce vomiting; never give anything by mouth to an unconscious person; seek medical attention immediately.

CARCINOGENICITY

NTP?

No

IARC MONOGRAPHS?

No

OSHA REGULATED?

No

California Prop 65, Safe Drinking Water and Toxic Enforcement Act of 1986 - there are no reportable chemicals present known to the state to cause cancer or reproductive toxicity.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: Preexisting skin, eye, or respiratory disorders may become aggravated through prolonged exposure.

MATERIAL SAFETY DATA SHEET			
IDENTITY (AS USED ON LABEL AND LIST) COOLER GUARD			Page 2 of 2 Date: September 14, 2007
SECTION 4 - FIRE FIGHTING MEASURES			
FLASH POINT (METHOD USED) Non-flammable		NFPA RATING None	FLAMMABLE LIMITS LEL: Not applicable UEL: Not applicable
EXTINGUISHING MEDIA Carbon dioxide, water, water fog, dry chemical, chemical foam			
SPECIAL FIRE FIGHTING PROCEDURES None			
UNUSUAL FIRE AND EXPLOSION HAZARDS None			
SECTION 5 - ACCIDENTAL RELEASE MEASURES			
STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Small spills - wash to sanitary sewer with plenty of water. Large spills - Recover and segregate product for reuse; shovel product into approved container for disposal.			
SECTION 6 - HANDLING AND STORAGE			
PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Keep container closed when not in use; protect containers from abuse; store containers in cool, dry area. Keep this and other chemicals out of reach of children.			
SECTION 7 - EXPOSURE CONTROLS / PERSONAL PROTECTION			
RESPIRATORY PROTECTION (SPECIFY TYPE): None required while threshold limits are kept below maximum allowable concentrations; if TWA exceeds standard workplace limits, NIOSH approved respirator must be worn. Refer to 29 CFR 1910.134 or European Standard EN 149 for complete regulations.			
VENTILATION LOCAL EXHAUST: Required MECHANICAL (GENERAL): Yes		SPECIAL: To maintain minimum TWA and STEL levels. OTHER: Engineering and work controls as required.	
PROTECTIVE GLOVES: Neoprene or rubber gloves with cuffs.		EYE PROTECTION: Protective eyeglasses or chemical safety goggles.	
OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Coveralls, apron, or other equipment should be worn to minimize skin contact.			
WORK / HYGIENIC PRACTICES: Practice safe workplace habits. Minimize body contact with this, as well as all chemicals in general.			
SECTION 8 - PHYSICAL / CHEMICAL PROPERTIES			
BOILING POINT Not applicable		SPECIFIC GRAVITY (WATER = 1) 1.100	
VAPOR PRESSURE (MM Hg) Not applicable		pH Not applicable	
VAPOR DENSITY (AIR = 1) Not applicable		EVAPORATION RATE (WATER = 1) Not applicable	
SOLUBILITY IN WATER Insoluble		% VOLATILE (BY WEIGHT) Practically none	
APPEARANCE AND ODOR Light brown solid, slight lemon odor			
SECTION 9 - STABILITY AND REACTIVITY			
STABILITY UNSTABLE: STABLE: X		CONDITIONS TO AVOID: Avoid generating airborne dust	
INCOMPATIBILITY (MATERIALS TO AVOID): Strong oxidizers, strong acids			
HAZARDOUS DECOMPOSITION OR BYPRODUCTS: Decomposition will not occur if handled and stored properly. In case of a fire, oxides of carbon, hydrocarbons, fumes, and smoke may be produced.			
HAZARDOUS POLYMERIZATION MAY OCCUR: WILL NOT OCCUR: X		CONDITIONS TO AVOID: None	
SECTION 10 - DISPOSAL CONSIDERATIONS			
WASTE DISPOSAL METHOD: Dispose of in accordance with Local, State, and Federal Regulations. Product is classified as non - hazardous, however, non-hazardous materials may become hazardous waste upon contact with other products. Refer to "40 CFR Protection of Environment Parts 260 - 299" for complete waste disposal regulations. Consult your local, state, or Federal Environmental Protection Agency before disposing of any chemicals.			
<p>The information contained herein is believed to be accurate but is not warranted to be so. Data and calculations are based on information furnished by the manufacturer of the product and manufacturers of the components of the product. Users are advised to confirm in advance of need that information is current, applicable and suited to the circumstances of use. Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Furthermore, vendor assumes no responsibility for injury caused by abnormal use of this material even if reasonable safety procedures are followed. Any questions regarding this product should be directed to the manufacturer of the product as described in Section 1.</p>			



SAFETY DATA SHEET

1. Identification

Product identifier	Food Grade Silicone
Other means of identification	
Product code	03040
Recommended use	Silicone-based multi-purpose lubricant
Recommended restrictions	None known.
Manufacturer/Importer/Supplier/Distributor information	
Manufactured or sold by:	
Company name	CRC Industries, Inc.
Address	885 Louis Dr. Warminster, PA 18974 US
Telephone	
General Information	215-674-4300
Technical Assistance	800-521-3168
Customer Service	800-272-4620
24-Hour Emergency (CHEMTREC)	800-424-9300 (US) 703-527-3887 (International)
Website	www.crcindustries.com

2. Hazard(s) identification

Physical hazards	Flammable aerosols	Category 1
	Gases under pressure	Liquefied gas
Health hazards	Reproductive toxicity (fertility)	Category 2
	Specific target organ toxicity, single exposure	Category 3 narcotic effects
	Specific target organ toxicity, repeated exposure	Category 2
	Aspiration hazard	Category 1
Environmental hazards	Hazardous to the aquatic environment, acute hazard	Category 3
	Hazardous to the aquatic environment, long-term hazard	Category 3
OSHA defined hazards	Not classified.	

Label elements



Signal word

Danger

Hazard statement

Extremely flammable aerosol. Contains gas under pressure; may explode if heated. May be fatal if swallowed and enters airways. May cause drowsiness or dizziness. Suspected of damaging fertility. May cause damage to organs (nervous system, upper respiratory tract, skin, eyes) through prolonged or repeated exposure. Harmful to aquatic life. Harmful to aquatic life with long lasting effects.

Precautionary statement

Prevention

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Do not spray on an open flame or other ignition source. Do not apply while equipment is energized. Pressurized container: Do not pierce or burn, even after use. Extinguish all flames, pilot lights and heaters. Vapors will accumulate readily and may ignite. Use only with adequate ventilation; maintain ventilation during use and until all vapors are gone. Open doors and windows or use other means to ensure a fresh air supply during use and while product is drying. If you experience any symptoms listed on this label, increase ventilation or leave the area. Do not breathe gas. Do not breathe mist or vapor. Wear protective gloves/protective clothing/eye protection/face protection. Avoid release to the environment.

Response

If swallowed: Immediately call a poison center/doctor. Do NOT induce vomiting. If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor if you feel unwell. If exposed or concerned: Get medical attention.

Storage

Store in a well-ventilated place. Store locked up. Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F. Exposure to high temperature may cause can to burst.

Disposal

Dispose of contents/container in accordance with local/regional/national regulations.

Hazard(s) not otherwise classified (HNOC)

Static accumulating flammable liquid can become electrostatically charged even in bonded and grounded equipment. Sparks may ignite liquid and vapor. May cause flash fire or explosion.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Naphtha (petroleum), hydrotreated light		64742-49-0	40 - 50
1,1-Difluoroethane	HFC-152a	75-37-6	30 - 40
2-Methylpentane		107-83-5	10 - 20
Polydimethylsiloxane		63148-62-9	3 - 5
n-Hexane		110-54-3	1 - 3
2,2-Dimethylbutane		75-83-2	< 0.2

Specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
Skin contact	Wash off with soap and plenty of water. Get medical attention if irritation develops and persists. Take off contaminated clothing and wash before reuse.
Eye contact	Rinse with water. Get medical attention if irritation develops and persists.
Ingestion	Call a physician or poison control center immediately. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Aspiration may cause pulmonary edema and pneumonitis.
Most important symptoms/effects, acute and delayed	Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea. May cause drowsiness or dizziness. Prolonged exposure may cause chronic effects.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically.
General information	IF exposed or concerned: Get medical advice/attention. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media	Water spray. Water fog. Foam. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical	Contents under pressure. Pressurized container may explode when exposed to heat or flame. This product is a poor conductor of electricity and can become electrostatically charged. If sufficient charge is accumulated, ignition of flammable mixtures can occur. Static electricity accumulation may be significantly increased by the presence of small quantities of water or other contaminants. Material will float and may ignite on surface of water.
Special protective equipment and precautions for firefighters	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.
Fire-fighting equipment/instructions	In case of fire: Stop leak if safe to do so. Move containers from fire area if you can do so without risk. Containers should be cooled with water to prevent vapor pressure build up. In the event of fire, cool tanks with water spray.
General fire hazards	Extremely flammable aerosol.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Remove all possible sources of ignition in the surrounding area. Wear appropriate personal protective equipment. Do not breathe gas. Do not breathe mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Use appropriate containment to avoid environmental contamination. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. This product is miscible in water. Stop the flow of material, if this is without risk. Collect spillage. Dike far ahead of spill for later disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Prevent entry into waterways, sewer, basements or confined areas. For waste disposal, see section 13 of the SDS.
Environmental precautions	Avoid release to the environment. Contact local authorities in case of spillage to drain/aquatic environment. Prevent further leakage or spillage if safe to do so. Do not contaminate water. Avoid discharge into drains, water courses or onto the ground. Use appropriate containment to avoid environmental contamination.

7. Handling and storage

Precautions for safe handling	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Minimize fire risks from flammable and combustible materials (including combustible dust and static accumulating liquids) or dangerous reactions with incompatible materials. Handling operations that can promote accumulation of static charges include but are not limited to: mixing, filtering, pumping at high flow rates, splash filling, creating mists or sprays, tank and container filling, tank cleaning, sampling, gauging, switch loading, vacuum truck operations. Pressurized container: Do not pierce or burn, even after use. Do not use if spray button is missing or defective. Do not spray on a naked flame or any other incandescent material. Do not smoke while using or until sprayed surface is thoroughly dry. Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. Use caution around energized equipment. The metal container will conduct electricity if it contacts a live source. This may result in injury to the user from electrical shock and/or flash fire. Do not breathe mist or vapor. Do not breathe gas. Avoid contact during pregnancy/while nursing. Avoid prolonged exposure. Use only in well-ventilated areas. Wear appropriate personal protective equipment. When using, do not eat, drink or smoke. Wash hands thoroughly after handling. Observe good industrial hygiene practices. Avoid release to the environment. Do not empty into drains. For product usage instructions, please see the product label.
Conditions for safe storage, including any incompatibilities	Level 3 Aerosol. Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50°C/122 °F. Do not puncture, incinerate or crush. Do not handle or store near an open flame, heat or other sources of ignition. This material can accumulate static charge which may cause spark and become an ignition source. Avoid spark promoters. These alone may be insufficient to remove static electricity. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS). Keep out of the reach of children.

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
n-Hexane (CAS 110-54-3)	PEL	1800 mg/m3 500 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value
2,2-Dimethylbutane (CAS 75-83-2)	STEL	1000 ppm
	TWA	500 ppm
2-Methylpentane (CAS 107-83-5)	STEL	1000 ppm
	TWA	500 ppm
n-Hexane (CAS 110-54-3)	TWA	50 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
2,2-Dimethylbutane (CAS 75-83-2)	Ceiling	1800 mg/m3
	TWA	510 ppm 350 mg/m3 100 ppm
2-Methylpentane (CAS 107-83-5)	Ceiling	1800 mg/m3
	TWA	510 ppm 350 mg/m3 100 ppm
n-Hexane (CAS 110-54-3)	TWA	180 mg/m3 50 ppm

US. AIHA Workplace Environmental Exposure Level (WEEL) Guides

Components	Type	Value
1,1-Difluoroethane (CAS 75-37-6)	TWA	2700 mg/m3 1000 ppm

Biological limit values**ACGIH Biological Exposure Indices**

Components	Value	Determinant	Specimen	Sampling Time
n-Hexane (CAS 110-54-3)	0.4 mg/l	2,5-Hexanedione, without hydrolysis	Urine	*

* - For sampling details, please see the source document.

Exposure guidelines**US - California OELs: Skin designation**

n-Hexane (CAS 110-54-3) Can be absorbed through the skin.

US ACGIH Threshold Limit Values: Skin designation

n-Hexane (CAS 110-54-3) Can be absorbed through the skin.

Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Skin protection

Hand protection Wear protective gloves such as: Nitrile. Polyvinyl chloride (PVC). Viton®.

Other

Wear appropriate chemical resistant clothing.

Respiratory protection

If engineering controls are not feasible or if exposure exceeds the applicable exposure limits, use a NIOSH-approved cartridge respirator with an organic vapor cartridge. Use a self-contained breathing apparatus in confined spaces and for emergencies. Air monitoring is needed to determine actual employee exposure levels.

Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance

Physical state	Liquid.
Form	Aerosol.
Color	Clear water-white.
Odor	Mild solvent.
Odor threshold	Not available.
pH	Not available.
Melting point/freezing point	Not available.
Initial boiling point and boiling range	118.4 °F (48 °C) estimated
Flash point	< 0 °F (< -17.8 °C) Tag Closed Cup
Evaporation rate	Fast.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	1 % estimated
Flammability limit - upper (%)	8 % estimated
Vapor pressure	3083.3 hPa estimated
Vapor density	> 1 (air = 1)
Relative density	0.81 estimated
Solubility (water)	Negligible.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	489.2 °F (254 °C) estimated
Decomposition temperature	Not available.
Viscosity (kinematic)	Not available.
Percent volatile	97 % estimated

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Heat, flames and sparks. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents. Chlorine.
Hazardous decomposition products	Carbon oxides.

11. Toxicological information

Information on likely routes of exposure

Ingestion	May be fatal if swallowed and enters airways.
Inhalation	Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea. Prolonged inhalation may be harmful. May cause damage to organs by inhalation.
Skin contact	Prolonged skin contact may cause temporary irritation. Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis.
Eye contact	Direct contact with eyes may cause temporary irritation.
Symptoms related to the physical, chemical and toxicological characteristics	Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

Information on toxicological effects

Acute toxicity	May be fatal if swallowed and enters airways. Narcotic effects.
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Product	Species	Test Results
Food Grade Silicone		
Acute		
<i>Dermal</i>		
LD50	Rabbit	3767.2212 mg/kg estimated
<i>Inhalation</i>		
LC50	Rat	62.4636 mg/l, 4 hours estimated
<i>Oral</i>		
LD50	Rat	23868.4531 mg/kg estimated

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation	Prolonged skin contact may cause temporary irritation.
Serious eye damage/eye irritation	Direct contact with eyes may cause temporary irritation.
Respiratory sensitization	Not available.
Skin sensitization	This product is not expected to cause skin sensitization.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.
Reproductive toxicity	Suspected of damaging fertility.
Specific target organ toxicity - single exposure	Narcotic effects.
Specific target organ toxicity - repeated exposure	May cause damage to organs (nervous system, upper respiratory tract, skin, eyes) through prolonged or repeated exposure.
Aspiration hazard	May be fatal if swallowed and enters airways.
Chronic effects	Prolonged inhalation may be harmful. May cause damage to organs through prolonged or repeated exposure.
	Overexposure to n-hexane may cause progressive and potentially irreversible damage to the peripheral nervous system, particularly in the arms and legs.

12. Ecological information

Ecotoxicity Harmful to aquatic life with long lasting effects. Accumulation in aquatic organisms is expected.

Product	Species	Test Results
Food Grade Silicone		
Aquatic		
Fish	LC50	613.7199 mg/l, 96 hours estimated
Components	Species	Test Results
n-Hexane (CAS 110-54-3)		
Aquatic		
Fish	LC50	Fathead minnow (Pimephales promelas) 2.101 - 2.981 mg/l, 96 hours
Polydimethylsiloxane (CAS 63148-62-9)		
Aquatic		
Fish	LC50	Channel catfish (Ictalurus punctatus) 2.36 - 4.15 mg/l, 96 hours

* Estimates for product may be based on additional component data not shown.

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential No data available.

Partition coefficient n-octanol / water (log Kow)	
1,1-Difluoroethane	0.75
2,2-Dimethylbutane	3.82
2-Methylpentane	3.74
n-Hexane	3.9

Mobility in soil No data available.

Other adverse effects

No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations**Disposal of waste from residues / unused products**

This material and its container must be disposed of as hazardous waste. If discarded, this product is considered a RCRA ignitable waste, D001. Consult authorities before disposal. Contents under pressure. Do not puncture, incinerate or crush. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose in accordance with all applicable regulations.

Hazardous waste code

D001: Waste Flammable material with a flash point <140 F

Contaminated packaging

Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information**DOT**

UN number	UN1950
UN proper shipping name	Aerosols, flammable, Limited Quantity
Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
Label(s)	2.1
Packing group	Not applicable.
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Special provisions	N82
Packaging exceptions	306
Packaging non bulk	None
Packaging bulk	None

IATA

UN number	UN1950
UN proper shipping name	Aerosols, flammable, Limited Quantity
Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
Packing group	Not applicable.
Environmental hazards	No.
ERG Code	10L
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Other information	
Passenger and cargo aircraft	Allowed.
Cargo aircraft only	Allowed.

IMDG

UN number	UN1950
UN proper shipping name	AEROSOLS, LIMITED QUANTITY
Transport hazard class(es)	
Class	2
Subsidiary risk	-
Packing group	Not applicable.
Environmental hazards	
Marine pollutant	No.
EmS	F-D, S-U
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

15. Regulatory information**US federal regulations**

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
All components are on the U.S. EPA TSCA Inventory List.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

SARA 304 Emergency release notification

Not regulated.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

US EPCRA (SARA Title III) Section 313 - Toxic Chemical: Listed substance

n-Hexane (CAS 110-54-3)

CERCLA Hazardous Substance List (40 CFR 302.4)

n-Hexane (CAS 110-54-3)

CERCLA Hazardous Substances: Reportable quantity

n-Hexane (CAS 110-54-3) 5000 LBS

Spills or releases resulting in the loss of any ingredient at or above its RQ require immediate notification to the National Response Center (800-424-8802) and to your Local Emergency Planning Committee.

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

n-Hexane (CAS 110-54-3)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

1,1-Difluoroethane (CAS 75-37-6)

Safe Drinking Water Act (SDWA) Not regulated.

Food and Drug Administration (FDA) Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Section 311/312 Immediate Hazard - Yes
Hazard categories Delayed Hazard - Yes
Fire Hazard - Yes
Pressure Hazard - Yes
Reactivity Hazard - No

SARA 302 Extremely hazardous substance No

US state regulations**US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)**

Not listed.

US. New Jersey Worker and Community Right-to-Know Act

2,2-Dimethylbutane (CAS 75-83-2)
2-Methylpentane (CAS 107-83-5)
1,1-Difluoroethane (CAS 75-37-6)
n-Hexane (CAS 110-54-3)

US. Massachusetts RTK - Substance List

1,1-Difluoroethane (CAS 75-37-6)
2-Methylpentane (CAS 107-83-5)
n-Hexane (CAS 110-54-3)

US. Rhode Island RTK

1,1-Difluoroethane (CAS 75-37-6)
n-Hexane (CAS 110-54-3)

US. Pennsylvania Worker and Community Right-to-Know Law

2,2-Dimethylbutane (CAS 75-83-2)
2-Methylpentane (CAS 107-83-5)
n-Hexane (CAS 110-54-3)

US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

Volatile organic compounds (VOC) regulations**EPA**

VOC content (40 CFR 51.100(s)) 60 %

Consumer products (40 CFR 59, Subpt. C) Not regulated

State**Consumer products**

This product is regulated as a Silicone Based Multi-Purpose Lubricant. This product is compliant for use in all 50 states.

VOC content (CA) 60 %

VOC content (OTC) 60 %

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date	02-03-2014
Revision date	08-12-2014
Prepared by	Allison Cho
Version #	02
Further information	CRC # 519E-F
HMIS® ratings	Health: 2* Flammability: 4 Physical hazard: 0 Personal protection: B
NFPA ratings	Health: 2 Flammability: 4 Instability: 0
NFPA ratings	

Disclaimer

The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. This information is accurate to the best of CRC Industries' knowledge or obtained from sources believed by CRC to be accurate. Before using any product, read all warnings and directions on the label. For further clarification of any information contained on this (M)SDS consult your supervisor, a health & safety professional, or CRC Industries.



SAFETY DATA SHEET

1. Identification

Product identifier Heavy Duty Degreaser

Other means of identification

Product code 03095, 03095T

Recommended use General purpose degreaser

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Manufactured or sold by:

Company name CRC Industries, Inc.

Address 885 Louis Dr.
Warminster, PA 18974 US

Telephone

General Information 215-674-4300

Technical Assistance 800-521-3168

Customer Service 800-272-4620

24-Hour Emergency (CHEMTREC) 800-424-9300 (US)
703-527-3887 (International)

Website www.crcindustries.com

2. Hazard(s) identification

Physical hazards	Gases under pressure	Compressed gas
Health hazards	Acute toxicity, inhalation	Category 4
	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2B
	Carcinogenicity	Category 1B
	Specific target organ toxicity, single exposure	Category 3 narcotic effects
Environmental hazards	Hazardous to the aquatic environment, acute hazard	Category 2
	Hazardous to the aquatic environment, long-term hazard	Category 2
OSHA defined hazards	Not classified.	

Label elements



Signal word Danger

Hazard statement Contains gas under pressure; may explode if heated. Causes skin irritation. Causes eye irritation. Harmful if inhaled. May cause drowsiness or dizziness. May cause cancer by inhalation or ingestion. Toxic to aquatic life. Toxic to aquatic life with long lasting effects.

Precautionary statement

Prevention

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not puncture or incinerate container. Do not expose to heat or store at temperatures above 49°C/120°F. Use with adequate ventilation. Open doors and windows or use other means to ensure a fresh air supply during use and while product is drying. If you experience any symptoms listed on this label, increase ventilation or leave the area. Avoid breathing mist or vapor. Avoid breathing gas. Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. Avoid release to the environment.

Response	If on skin: Wash with plenty of water. If skin irritation occurs: Get medical attention. Take off contaminated clothing and wash before reuse. If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor if you feel unwell. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention. If exposed or concerned: Get medical attention. Collect spillage.
Storage	Store in a well-ventilated place. Store locked up. Exposure to high temperature may cause can to burst.
Disposal	Dispose of contents/container in accordance with local/regional/national regulations.
Hazard(s) not otherwise classified (HNOC)	None known.

Supplemental information

11.13% of the mixture consists of component(s) of unknown acute hazards to the aquatic environment. 3.4% of the mixture consists of component(s) of unknown long-term hazards to the aquatic environment.

When exposed to extreme heat or hot surfaces, vapors may decompose to harmful or fatal corrosive gases such as hydrogen fluoride, hydrogen chloride and possibly phosgene.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Tetrachloroethylene	Perchloroethylene	127-18-4	80 - 90
COzol® 210		Proprietary	5 - 10
Carbon dioxide		124-38-9	1 - 3

Specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Call a POISON CENTER or doctor/physician if you feel unwell.
Skin contact	Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.
Ingestion	If ingestion of a large amount does occur, call a poison control center immediately. Rinse mouth. Do not induce vomiting.
Most important symptoms/effects, acute and delayed	Irritation of eyes and mucous membranes. Irritation of nose and throat. Exposed individuals may experience eye tearing, redness, and discomfort. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. May cause redness and pain.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Keep victim warm. Keep victim under observation. Symptoms may be delayed.
General information	IF exposed or concerned: Get medical advice/attention. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media	Water spray. Foam. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	Contents under pressure. When exposed to extreme heat or hot surfaces, vapors may decompose to harmful or fatal corrosive gases such as hydrogen fluoride, hydrogen chloride and possibly phosgene.
Special protective equipment and precautions for firefighters	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.
Fire-fighting equipment/instructions	In case of fire: Stop leak if safe to do so. Move containers from fire area if you can do so without risk. Containers should be cooled with water to prevent vapor pressure build up.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Avoid inhalation of vapors and spray mists. Avoid breathing gas. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. This material is classified as a water pollutant under the Clean Water Act and should be prevented from contaminating soil or from entering sewage and drainage systems which lead to waterways. Stop the flow of material, if this is without risk. Collect spillage. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. For waste disposal, see section 13 of the SDS.

Environmental precautions

Avoid release to the environment. Contact local authorities in case of spillage to drain/aquatic environment. Prevent further leakage or spillage if safe to do so. Do not contaminate water. Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Pressurized container: Do not pierce or burn, even after use. Do not use if spray button is missing or defective. Do not spray on a naked flame or any other incandescent material. Do not smoke while using or until sprayed surface is thoroughly dry. Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. Use caution around energized equipment. The metal container will conduct electricity if it contacts a live source. This may result in injury to the user from electrical shock and/or flash fire. Avoid inhalation of vapors and spray mists. Avoid breathing gas. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Use only outdoors or in a well-ventilated area. Should be handled in closed systems, if possible. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. Avoid release to the environment. Do not empty into drains. For product usage instructions, please see the product label.

Conditions for safe storage, including any incompatibilities

Level 1 Aerosol.

Contents under pressure. Do not expose to heat or store at temperatures above 120°F/49°C as can may burst. Do not puncture, incinerate or crush. Do not handle or store near an open flame, heat or other sources of ignition. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Carbon dioxide (CAS 124-38-9)	PEL	9000 mg/m3
Trans-1,2-dichloroethylene (CAS 156-60-5)	PEL	5000 ppm 790 mg/m3 200 ppm

US. OSHA Table Z-2 (29 CFR 1910.1000)

Components	Type	Value
Tetrachloroethylene (CAS 127-18-4)	Ceiling	200 ppm
	TWA	100 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value
Carbon dioxide (CAS 124-38-9)	STEL	30000 ppm
	TWA	5000 ppm
Tetrachloroethylene (CAS 127-18-4)	STEL	100 ppm
	TWA	25 ppm
Trans-1,2-dichloroethylene (CAS 156-60-5)	TWA	200 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Carbon dioxide (CAS 124-38-9)	STEL	54000 mg/m3
		30000 ppm
	TWA	9000 mg/m3 5000 ppm
Trans-1,2-dichloroethylene (CAS 156-60-5)	TWA	790 mg/m3
		200 ppm

Biological limit values**ACGIH Biological Exposure Indices**

Components	Value	Determinant	Specimen	Sampling Time
Tetrachloroethylene (CAS 127-18-4)	0.5 mg/l	Tetrachloroethylene	Blood	*
	3 ppm	Tetrachloroethylene	End-exhaled air	*

* - For sampling details, please see the source document.

Exposure guidelines**US - Minnesota Haz Subs: Skin designation applies**

Tetrachloroethylene (CAS 127-18-4)

Skin designation applies.

Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Skin protection**Hand protection**

Wear protective gloves such as: Viton®. Polyvinyl alcohol (PVA).

Other

Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

Respiratory protection

Wear positive pressure self-contained breathing apparatus (SCBA). Air monitoring is needed to determine actual employee exposure levels.

Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

When using do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties**Appearance**

Physical state Liquid.

Form Aerosol.

Color Colorless.

Odor Solvent.

Odor threshold Not available.

pH Not available.

Melting point/freezing point -112 °F (-80 °C) estimated

Initial boiling point and boiling range 119.7 °F (48.7 °C) estimated

Flash point None (Tag Closed Cup)

Evaporation rate Fast.

Flammability (solid, gas) Not available.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) 6.7 % estimated

Flammability limit - upper (%)	18 % estimated
Vapor pressure	1443.6 hPa estimated
Vapor density	> 4 (air = 1)
Relative density	1.58
Solubility (water)	Slight.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	860 °F (460 °C) estimated
Decomposition temperature	Not available.
Viscosity (kinematic)	Not available.
Percent volatile	97.6 % estimated

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Heat, flames and sparks. Contact with incompatible materials. When exposed to extreme heat or hot surfaces, vapors may decompose to harmful or fatal corrosive gases such as hydrogen fluoride, hydrogen chloride and possibly phosgene.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	Hydrogen chloride. Hydrogen fluoride. Phosgene. Carbon oxides.

11. Toxicological information

Information on likely routes of exposure

Ingestion	Single dose oral toxicity is considered to be extremely low. Swallowing large amounts may cause injury if aspirated into the lungs. This may be rapidly absorbed through the lungs and result in injury to other body systems.
Inhalation	Harmful if inhaled. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.
Skin contact	Causes skin irritation.
Eye contact	Causes eye irritation.
Symptoms related to the physical, chemical and toxicological characteristics	Irritation of nose and throat. Irritation of eyes and mucous membranes. May cause redness and pain. Exposed individuals may experience eye tearing, redness, and discomfort. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

Information on toxicological effects

Acute toxicity	Harmful if inhaled. Narcotic effects.
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Product	Species	Test Results
Heavy Duty Degreaser		
Acute		
<i>Dermal</i>		
LD50	Rabbit	3464.3928 mg/kg estimated
<i>Inhalation</i>		
LC50	Rat	5900.6211 mg/l, 4 hours estimated 4533.9824 ppm, 4 hours estimated
<i>Oral</i>		
LD50	Rat	2518.0356 mg/kg estimated
Subchronic		
<i>Inhalation</i>		
LC50	Rat	51759.8359 ppm, 90 days estimated

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation	Causes skin irritation.
Serious eye damage/eye irritation	Causes eye irritation.
Respiratory sensitization	Not available.
Skin sensitization	This product is not expected to cause skin sensitization.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	May cause cancer.

IARC Monographs. Overall Evaluation of Carcinogenicity

Tetrachloroethylene (CAS 127-18-4) 2A Probably carcinogenic to humans.

US. National Toxicology Program (NTP) Report on Carcinogens

Tetrachloroethylene (CAS 127-18-4) Reasonably Anticipated to be a Human Carcinogen.

Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity - single exposure	May cause drowsiness or dizziness.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Based on available data, the classification criteria are not met. May be an aspiration hazard.
Chronic effects	Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects.

12. Ecological information

Ecotoxicity Toxic to aquatic life with long lasting effects. Accumulation in aquatic organisms is expected.

Product	Species		Test Results
Heavy Duty Degreaser			
Aquatic			
Fish	LC50	Fish	21.5469 mg/l, 96 hours estimated
Acute			
Crustacea	EC50	Daphnia	499.3621 mg/l, 48 hours estimated
Components	Species		Test Results
Tetrachloroethylene (CAS 127-18-4)			
Aquatic			
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	4.73 - 5.27 mg/l, 96 hours

* Estimates for product may be based on additional component data not shown.

Persistence and degradability	No data is available on the degradability of this product.
Bioaccumulative potential	No data available.
Partition coefficient n-octanol / water (log Kow)	
Tetrachloroethylene	2.88
Mobility in soil	No data available.
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal of waste from residues / unused products	This material and its container must be disposed of as hazardous waste. Empty container can be recycled. Consult authorities before disposal. Contents under pressure. Do not puncture, incinerate or crush. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose in accordance with all applicable regulations.
Hazardous waste code	D039: Waste Tetrachloroethylene F001: Waste Tetrachloroethylene - Spent halogenated solvent used in degreasing F002: Waste Tetrachloroethylene - Spent halogenated solvent
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT

UN number	UN1950
UN proper shipping name	Aerosols, poison, Limited Quantity, MARINE POLLUTANT
Transport hazard class(es)	
Class	2.2
Subsidiary risk	6.1(PGIII)
Label(s)	2.2, 6.1
Packing group	Not applicable.
Environmental hazards	
Marine pollutant	Yes
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Special provisions	Not available.
Packaging exceptions	306
Packaging non bulk	None
Packaging bulk	None

IATA

UN number	UN1950
UN proper shipping name	Aerosols, non-flammable, containing substances in Division 6.1, Packing Group III, Limited Quantity
Transport hazard class(es)	
Class	2.2
Subsidiary risk	6.1(PGIII)
Packing group	Not applicable.
Environmental hazards	No.
ERG Code	2P
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Other information	
Passenger and cargo aircraft	Allowed.
Cargo aircraft only	Allowed.

IMDG

UN number	UN1950
UN proper shipping name	AEROSOLS, MARINE POLLUTANT
Transport hazard class(es)	
Class	2
Subsidiary risk	6.1
Packing group	Not applicable.
Environmental hazards	
Marine pollutant	Yes
EmS	Not available.
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

General information DOT Regulated Marine Pollutant. IMDG Regulated Marine Pollutant.

15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
All components are on the U.S. EPA TSCA Inventory List.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Decafluoropentane (CAS 138495-42-8) 1.0 % One-Time Export Notification only.

SARA 304 Emergency release notification

Not regulated.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

US EPCRA (SARA Title III) Section 313 - Toxic Chemical: Listed substance

Tetrachloroethylene (CAS 127-18-4)

CERCLA Hazardous Substance List (40 CFR 302.4)

Tetrachloroethylene (CAS 127-18-4)

Trans-1,2-dichloroethylene (CAS 156-60-5)

CERCLA Hazardous Substances: Reportable quantity

Tetrachloroethylene (CAS 127-18-4)	100 LBS
Trans-1,2-dichloroethylene (CAS 156-60-5)	1000 LBS

Spills or releases resulting in the loss of any ingredient at or above its RQ require immediate notification to the National Response Center (800-424-8802) and to your Local Emergency Planning Committee.

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Tetrachloroethylene (CAS 127-18-4)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

Food and Drug Administration (FDA) Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Section 311/312	Immediate Hazard - Yes
Hazard categories	Delayed Hazard - Yes
	Fire Hazard - No
	Pressure Hazard - Yes
	Reactivity Hazard - No

SARA 302 Extremely hazardous substance No

US state regulations**US. New Jersey Worker and Community Right-to-Know Act**

Carbon dioxide (CAS 124-38-9)
Tetrachloroethylene (CAS 127-18-4)
Trans-1,2-dichloroethylene (CAS 156-60-5)

US. Massachusetts RTK - Substance List

Carbon dioxide (CAS 124-38-9)
Tetrachloroethylene (CAS 127-18-4)
Trans-1,2-dichloroethylene (CAS 156-60-5)

US. Pennsylvania Worker and Community Right-to-Know Law

Tetrachloroethylene (CAS 127-18-4)
Carbon dioxide (CAS 124-38-9)
Trans-1,2-dichloroethylene (CAS 156-60-5)

US. Rhode Island RTK

Tetrachloroethylene (CAS 127-18-4)
Trans-1,2-dichloroethylene (CAS 156-60-5)

US. California Proposition 65

WARNING: This product contains a chemical known to the State of California to cause cancer.

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance

Tetrachloroethylene (CAS 127-18-4)	Listed: April 1, 1988
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Volatile organic compounds (VOC) regulations**EPA**

VOC content (40 CFR 51.100(s)) 7.8 %

Consumer products (40 CFR 59, Subpt. C) Not regulated

State

Consumer products This product is regulated as a General Purpose Degreaser (aerosol). This product is not compliant to be sold for use in California, Connecticut, Delaware, The District of Columbia, Illinois, Indiana, Maine, Maryland, Massachusetts, Michigan, New Jersey, New York, and Rhode Island. This product is compliant in all other states.

VOC content (CA) 9.8 %

VOC content (OTC) 7.8 %

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes

Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date	05-19-2014
Prepared by	Allison Cho
Version #	01
Further information	CRC # 894A
HMIS® ratings	Health: 2* Flammability: 1 Physical hazard: 0 Personal protection: B
NFPA ratings	Health: 2 Flammability: 1 Instability: 0
Disclaimer	The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. This information is accurate to the best of CRC Industries' knowledge or obtained from sources believed by CRC to be accurate. Before using any product, read all warnings and directions on the label. For further clarification of any information contained on this (M)SDS consult your supervisor, a health & safety professional, or CRC Industries.



SAFETY DATA SHEET

1. Identification

Product identifier Knock'er Loose® Penetrating Solvent

Other means of identification

Product code 03016, 03020

Recommended use Penetrant

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Manufactured or sold by:

Company name CRC Industries, Inc.

Address 885 Louis Dr.
Warminster, PA 18974 US

Telephone

General Information 215-674-4300

Technical Assistance 800-521-3168

Customer Service 800-272-4620

24-Hour Emergency (CHEMTREC) 800-424-9300 (US)
703-527-3887 (International)

Website www.crcindustries.com

2. Hazard(s) identification

Physical hazards	Gases under pressure	Compressed gas
Health hazards	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2A
	Sensitization, skin	Category 1
	Specific target organ toxicity, single exposure	Category 3 respiratory tract irritation
	Specific target organ toxicity, repeated exposure	Category 2
	Aspiration hazard	Category 1
Environmental hazards	Hazardous to the aquatic environment, long-term hazard	Category 3
OSHA defined hazards	Not classified.	

Label elements



Signal word Danger

Hazard statement Contains gas under pressure; may explode if heated. May be fatal if swallowed and enters airways. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. May cause respiratory irritation. Suspected of causing cancer. May cause damage to organs through prolonged or repeated exposure. Harmful to aquatic life with long lasting effects.

Precautionary statement

Prevention

Do not puncture or incinerate container. Do not expose to heat or store at temperatures above 49°C/120°F. Use with adequate ventilation. Open doors and windows or use other means to ensure a fresh air supply during use and while product is drying. If you experience any symptoms listed on this label, increase ventilation or leave the area. Do not breathe gas, mist or vapor. Wear protective gloves/protective clothing/eye protection/face protection. Contaminated work clothing must not be allowed out of the workplace. Wash hands thoroughly after handling. Avoid release to the environment.

Response	If swallowed: Immediately call a poison center/doctor. Do NOT induce vomiting. If on skin: Wash with plenty of water. If skin irritation or rash occurs: Get medical attention. Take off contaminated clothing and wash before reuse. If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor if you feel unwell. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.
Storage	Store locked up. Protect from sunlight. Store in a well-ventilated place. Exposure to high temperature may cause can to burst.
Disposal	Dispose of contents/container in accordance with local/regional/national regulations.
Hazard(s) not otherwise classified (HNOC)	None known.
Supplemental information	90.18% of the mixture consists of component(s) of unknown long-term hazards to the aquatic environment.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Distillates (petroleum), hydrotreated middle		64742-46-7	40 - 50
Dipropylene glycol monomethyl ether acetate		88917-22-0	5 - 10
Dipropylene glycol monopropyl ether (dpmp)		29911-27-1	5 - 10
Turpentine, oil		8006-64-2	5 - 10
2,6-Dimethyl-4-heptanone		108-83-8	3 - 5
Fatty ester		Proprietary	3 - 5
Stoddard Solvent		8052-41-3	3 - 5
Carbon dioxide		124-38-9	1 - 3
Pine oil		8002-09-3	1 - 3
Pinus sylvestris extract		94266-48-5	1 - 3

Specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
Skin contact	Remove contaminated clothing immediately and wash skin with soap and water. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.
Ingestion	Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Aspiration may cause pulmonary edema and pneumonitis.
Most important symptoms/effects, acute and delayed	Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause an allergic skin reaction. Dermatitis. Rash. May cause redness and pain. Prolonged exposure may cause chronic effects.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.
General information	IF exposed or concerned: Get medical advice/attention. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.

5. Fire-fighting measures

Suitable extinguishing media	Water.
Unsuitable extinguishing media	None known.

Specific hazards arising from the chemical

Contents under pressure. Pressurized container may explode when exposed to heat or flame.

Special protective equipment and precautions for firefighters

Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

Fire-fighting equipment/instructions

In case of fire: Stop leak if safe to do so. Do not move cargo or vehicle if cargo has been exposed to heat. If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also consider initial evacuation for 800 meters (1/2 mile) in all directions. ALWAYS stay away from tanks engulfed in flame. Move containers from fire area if you can do so without risk. Containers should be cooled with water to prevent vapor pressure build up. For massive fire in cargo area, use unmanned hose holder or monitor nozzles, if possible. If not, withdraw and let fire burn out.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Do not breathe mist or vapor. Do not breathe gas. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. This product is miscible in water.

Large Spills: Stop leak if you can do so without risk. Move the cylinder to a safe and open area if the leak is irreparable. Isolate area until gas has dispersed. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Scoop up used absorbent into drums or other appropriate container. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

Environmental precautions

Avoid release to the environment. Contact local authorities in case of spillage to drain/aquatic environment. Prevent further leakage or spillage if safe to do so. Do not contaminate water. Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Pressurized container: Do not pierce or burn, even after use. Do not use if spray button is missing or defective. Do not spray on a naked flame or any other incandescent material. Do not smoke while using or until sprayed surface is thoroughly dry. Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. Use caution around energized equipment. The metal container will conduct electricity if it contacts a live source. This may result in injury to the user from electrical shock and/or flash fire. Do not re-use empty containers. Do not breathe mist or vapor. Do not breathe gas. Avoid contact with skin. Avoid contact with eyes. Avoid prolonged exposure. Avoid contact with clothing. Use only in well-ventilated areas. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Observe good industrial hygiene practices. Avoid release to the environment. Do not empty into drains. For product usage instructions, please see the product label.

Conditions for safe storage, including any incompatibilities

Level 1 Aerosol.

Store in a well-ventilated place. Contents under pressure. Do not expose to heat or store at temperatures above 120°F/49°C as can may burst. Do not puncture, incinerate or crush. Do not handle or store near an open flame, heat or other sources of ignition. Store away from incompatible materials (see Section 10 of the SDS). Keep out of the reach of children.

8. Exposure controls/personal protection

Occupational exposure limits**US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)**

Components	Type	Value	Form
2,6-Dimethyl-4-heptanone (CAS 108-83-8)	PEL	290 mg/m3	
Carbon dioxide (CAS 124-38-9)	PEL	50 ppm 9000 mg/m3	

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
Distillates (petroleum), hydrotreated middle (CAS 64742-46-7)	PEL	5000 ppm 5 mg/m3	Mist.
Stoddard Solvent (CAS 8052-41-3)	PEL	2900 mg/m3	
Turpentine, oil (CAS 8006-64-2)	PEL	500 ppm 560 mg/m3 100 ppm	

US. ACGIH Threshold Limit Values

Components	Type	Value
2,6-Dimethyl-4-heptanone (CAS 108-83-8)	TWA	25 ppm
Carbon dioxide (CAS 124-38-9)	STEL	30000 ppm
Stoddard Solvent (CAS 8052-41-3)	TWA	5000 ppm
	TWA	100 ppm
Turpentine, oil (CAS 8006-64-2)	TWA	20 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
2,6-Dimethyl-4-heptanone (CAS 108-83-8)	TWA	150 mg/m3	
Carbon dioxide (CAS 124-38-9)	STEL	25 ppm 54000 mg/m3	
	TWA	30000 ppm 9000 mg/m3 5000 ppm	
Distillates (petroleum), hydrotreated middle (CAS 64742-46-7)	STEL	10 mg/m3	Mist.
Stoddard Solvent (CAS 8052-41-3)	TWA Ceiling	5 mg/m3 1800 mg/m3	Mist.
Turpentine, oil (CAS 8006-64-2)	TWA	350 mg/m3 560 mg/m3 100 ppm	

Biological limit values

No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Skin protection

Hand protection Wear protective gloves such as: Nitrile. Rubber.

Other Wear appropriate chemical resistant clothing.

Respiratory protection	If engineering controls are not feasible or if exposure exceeds the applicable exposure limits, use a NIOSH-approved cartridge respirator with an organic vapor cartridge. Use a self-contained breathing apparatus in confined spaces and for emergencies. Air monitoring is needed to determine actual employee exposure levels.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.

9. Physical and chemical properties

Appearance

Physical state	Liquid.
Form	Aerosol.
Color	Red.
Odor	Pleasant pine.
Odor threshold	Not available.
pH	Not available.
Melting point/freezing point	-121 °F (-85 °C) estimated
Initial boiling point and boiling range	311 °F (155 °C) estimated
Flash point	147 °F (63.9 °C) Tag Closed Cup
Evaporation rate	Moderate
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	0.7 % estimated
Flammability limit - upper (%)	7.1 % estimated
Vapor pressure	1958.7 hPa estimated
Vapor density	> 1 (air = 1)
Relative density	0.86
Solubility (water)	Negligible.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	401 °F (205 °C) estimated
Decomposition temperature	Not available.
Viscosity (kinematic)	Not available.
Percent volatile	98.4 % estimated

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents. Chlorine.
Hazardous decomposition products	Carbon monoxide. Irritating and/or toxic fumes and gases may be emitted upon the products decomposition.

11. Toxicological information

Information on likely routes of exposure

Ingestion	May be fatal if swallowed and enters airways.
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Inhalation	Prolonged inhalation may be harmful. May cause damage to organs by inhalation. May cause irritation to the respiratory system.
Skin contact	Causes skin irritation. May cause an allergic skin reaction.
Eye contact	Causes serious eye irritation.
Symptoms related to the physical, chemical and toxicological characteristics	Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause an allergic skin reaction. Skin irritation. May cause redness and pain. Dermatitis. Rash.
Information on toxicological effects	
Acute toxicity	May be fatal if swallowed and enters airways. May cause an allergic skin reaction. May cause respiratory irritation.

Product	Species	Test Results
Knock'er Loose® Penetrating Solvent		
Acute		
<i>Dermal</i>		
LD50	Rabbit	9017.0938 mg/kg
<i>Inhalation</i>		
LC50	Rat	117.794 mg/l, 4 hours estimated
<i>Oral</i>		
LD50	Rat	4127.4175 mg/kg estimated

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation	Causes skin irritation.
Serious eye damage/eye irritation	Causes serious eye irritation.
Respiratory or skin sensitization	
ACGIH sensitization	
Turpentine, oil (CAS 8006-64-2)	Sensitizer.
Respiratory sensitization	Not available.
Skin sensitization	May cause an allergic skin reaction.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.
Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity - single exposure	Respiratory tract irritation.
Specific target organ toxicity - repeated exposure	May cause damage to organs through prolonged or repeated exposure.
Aspiration hazard	May be fatal if swallowed and enters airways.
Chronic effects	Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects. May cause damage to organs through prolonged or repeated exposure.

12. Ecological information

Ecotoxicity	Harmful to aquatic life with long lasting effects. Accumulation in aquatic organisms is expected.
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Product	Species		Test Results
Knock'er Loose® Penetrating Solvent			
Aquatic			
Acute			
Crustacea	EC50	Daphnia	433.5422 mg/l, 48 hours estimated
Fish	LC50	Fish	2032.5204 µg/l, 96 hours estimated

Components		Species	Test Results
Dipropylene glycol monomethyl ether acetate (CAS 88917-22-0)			
Aquatic			
Acute			
Crustacea	LC50	Water flea (Daphnia magna)	2701 mg/l, 48 hours
Fish	LC50	Fathead minnow (Pimephales promelas)	151 mg/l, 96 hours
		Rainbow trout,donaldson trout (Oncorhynchus mykiss)	111 mg/l, 96 hours
Dipropylene glycol monopropyl ether (dpmp) (CAS 29911-27-1)			
Aquatic			
Acute			
Crustacea	EC50	Water flea (Daphnia magna)	> 100 mg/l, 48 hours
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	> 100 mg/l, 96 hours

* Estimates for product may be based on additional component data not shown.

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential No data available.

Partition coefficient n-octanol / water (log Kow)

Dipropylene glycol monomethyl ether acetate	0.61 OECD 107
Dipropylene glycol monopropyl ether (dpmp)	0.87 OECD 107
Stoddard Solvent	3.16 - 7.15

Mobility in soil No data available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal of waste from residues / unused products	The dispensed liquid product is not a RCRA hazardous waste (See 40 CFR Part 261.20 - 261.33). Consult authorities before disposal. Contents under pressure. Do not puncture, incinerate or crush. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national regulations.
Hazardous waste code	Not regulated.
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied. Do not re-use empty containers.

14. Transport information

DOT

UN number	UN1950
UN proper shipping name	Aerosols, non-flammable, limited quantity
Transport hazard class(es)	
Class	2.2
Subsidiary risk	-
Label(s)	2.2
Packing group	Not applicable.
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Special provisions	Not available.
Packaging exceptions	306
Packaging non bulk	None
Packaging bulk	None

IATA

UN number	UN1950
UN proper shipping name	Aerosols, non-flammable, limited quantity
Transport hazard class(es)	
Class	2.2
Subsidiary risk	-
Packing group	Not applicable.

Environmental hazards	No.
ERG Code	2L
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Other information	
Passenger and cargo aircraft	Allowed.
Cargo aircraft only	Allowed.

IMDG

UN number	UN1950
UN proper shipping name	AEROSOLS, LIMITED QUANTITY
Transport hazard class(es)	
Class	2
Subsidiary risk	-
Packing group	Not applicable.
Environmental hazards	
Marine pollutant	No.
EmS	F-D, S-U
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

SARA 304 Emergency release notification

Not regulated.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

US EPCRA (SARA Title III) Section 313 - Toxic Chemical: Listed substance

Not listed.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

CERCLA Hazardous Substances: Reportable quantity

Not listed.

Spills or releases resulting in the loss of any ingredient at or above its RQ require immediate notification to the National Response Center (800-424-8802) and to your Local Emergency Planning Committee.

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

Food and Drug Administration (FDA) Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Section 311/312	Immediate Hazard - Yes
Hazard categories	Delayed Hazard - Yes
	Fire Hazard - No
	Pressure Hazard - Yes
	Reactivity Hazard - No

SARA 302 Extremely hazardous substance No

US state regulations

US. New Jersey Worker and Community Right-to-Know Act

2,6-Dimethyl-4-heptanone (CAS 108-83-8)
Carbon dioxide (CAS 124-38-9)
Pine oil (CAS 8002-09-3)

Stoddard Solvent (CAS 8052-41-3)

Turpentine, oil (CAS 8006-64-2)

US. Massachusetts RTK - Substance List

2,6-Dimethyl-4-heptanone (CAS 108-83-8)

Carbon dioxide (CAS 124-38-9)

Stoddard Solvent (CAS 8052-41-3)

Turpentine, oil (CAS 8006-64-2)

US. Pennsylvania Worker and Community Right-to-Know Law

2,6-Dimethyl-4-heptanone (CAS 108-83-8)

Carbon dioxide (CAS 124-38-9)

Stoddard Solvent (CAS 8052-41-3)

US. Rhode Island RTK

None.

US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

Volatile organic compounds (VOC) regulations

EPA

VOC content (40 CFR 51.100(s)) 98.4 %

Consumer products (40 CFR 59, Subpt. C) Not regulated

State

Consumer products This product is regulated as a Penetrant. This product is compliant for use in all 50 states.

VOC content (CA) 23.6 %

VOC content (OTC) 23.6 %

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	No
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	No
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date	11-19-2013
Revision date	06-11-2014
Prepared by	Allison Cho
Version #	02
Further information	CRC # 548A
HMIS® ratings	Health: 1* Flammability: 1 Physical hazard: 0 Personal protection: B

NFPA ratings

Health: 1
Flammability: 1
Instability: 0

NFPA ratings**Disclaimer**

The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. This information is accurate to the best of CRC Industries' knowledge or obtained from sources believed by CRC to be accurate. Before using any product, read all warnings and directions on the label. For further clarification of any information contained on this (M)SDS consult your supervisor, a health & safety professional, or CRC Industries.

PACKAGING SERVICE CO., INC.

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MATERIAL SAFETY DATA SHEET

This Material Safety Data Sheet conforms to the requirements of ANSI Z400.1.

THIS MSDS COMPLIES WITH 29 CFR 1910.1200 (HAZARD COMMUNICATION STANDARD)

IMPORTANT: Read this MSDS before handling & disposing of this product.

Pass this information on to employees, customers, & users of this product.

SECTION 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY

PRODUCT IDENTITY: CROWN BRUSH & ROLLER CLEANER

COMPANY IDENTITY: PACKAGING SERVICE CO., INC.

COMPANY ADDRESS: 1904 MYKAWA ROAD / P O Box 875

COMPANY CITY: PEARLAND, TX 77581

COMPANY PHONE: 1-281-485-1458

CHEMTREC PHONE: 1-800-424-9300

SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS

CONTAINS:

25-35% LIGHT ALIPHATIC SOLVENT NAPHTHA (*64742-89-8),

25-35% MEDIUM ALIPHATIC SOLVENT NAPHTHA (*64742-88-7),

15-25% TOLUENE (108-88-3) [203-625-9],

5-15% ACETONE (67-64-1) [200-662-2],

0-10% ISOPROPANOL (67-63-0) [200-661-7],

0-10% NONYLPHENOL ETHOXYLATE (9016-45-9),

0- 4% METHANOL (67-56-1) [200-659-6],

0- 5% MIXED XYLENES (1330-20-7) [215-535-7]

Number in parentheses is CAS #, number in brackets is European EC #.

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SECTION 3. HAZARDS IDENTIFICATION

RISK STATEMENTS:

R12 Extremely Flammable.

R18 In use may form flammable/explosive vapor-air mixture.

R41 Risk of serious damage to eyes.

R65 Harmful: may cause lung damage if swallowed.

R36/37/38 Irritating to eyes, respiratory system and skin.

R39/25 Toxic: danger of very serious irreversible effects if swallowed.

R20/65 Harmful by inhalation, may cause lung damage if swallowed.

SAFETY STATEMENTS:

S7 Keep container tightly closed.

S9 Keep container in a well-ventilated place.

S16 Keep away from sources of ignition. No smoking.

S29 Do not empty into drains.

S45 In case of accident, or if you feel unwell, seek medical advice immediately. (Show the label where possible).

S53 Avoid exposure - Obtain special instructions before use.

S24/25 Avoid contact with skin and eyes.

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SECTION 4. FIRST AID MEASURES

EYE CONTACT:

For eyes, flush with plenty of water for 15 minutes & get medical attention.

SKIN CONTACT:

In case of contact with skin immediately remove contaminated clothing.
Wash thoroughly with soap & water. Wash contaminated clothing before reuse.

INHALATION:

After high vapor exposure, remove to fresh air. If breathing is difficult, give oxygen. If breathing has stopped give artificial respiration.

SWALLOWING:

If swallowed, CALL A PHYSICIAN IMMEDIATELY! Do NOT induce vomiting. Have patient lie down & keep warm. Vomiting may lead to pneumonitis, which may be fatal.

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SECTION 5. FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA:

NFPA Class B extinguishers (Carbon Dioxide or foam) for Class I B liquid fires.

SPECIAL FIRE FIGHTING PROCEDURES

Water spray may be ineffective on fire but can protect fire fighters & cool closed containers. Use fog nozzles if water is used.

Do not enter confined fire-space without full bunker gear.

(Helmet with face shield, bunker coats, gloves & rubber boots).

Use NIOSH approved positive-pressure self-contained breathing apparatus.

UNUSUAL EXPLOSION AND FIRE PROCEDURES

EXTREMELY FLAMMABLE!! VAPORS CAN CAUSE FLASH FIRE

Keep container tightly closed.

Isolate from oxidizers, heat, sparks, electric equipment & open flame.

Closed containers may explode if exposed to extreme heat.

Applying to hot surfaces requires special precautions.

Empty container very hazardous! Continue all label precautions!

SECTION 6. ACCIDENTAL RELEASE MEASURES

CONTAINMENT TECHNIQUES:

Stop spill at source. Dike area & contain.

CLEAN-UP PROCEDURES:

Clean up remainder with absorbent materials. Mop up & dispose of. Persons without proper protection should be kept from area until cleaned up.

OTHER PRECAUTIONS:

Vapors may ignite explosively & spread long distances. Prevent vapor buildup. Put out pilot lights & turn off heaters, electric equipment & other ignition sources during use & until all vapors are gone.

SECTION 7. HANDLING AND STORAGE

HANDLING:

Isolate from oxidizers, heat, sparks, electric equipment & open flame.
Use only with adequate ventilation. Avoid breathing of vapor or spray mist.
Avoid contact with skin & eyes.
Wear OSHA Standard goggles or face shield. Consult Safety Equipment Supplier.
Wear gloves, apron & footwear impervious to this material. Wash clothing before reuse.
Avoid free fall of liquid. Ground containers when transferring. Do not flame cut, saw, drill, braze, or weld. Empty container very hazardous! Continue all label precautions!

STORAGE:

Vapors may ignite explosively & spread long distances. Prevent vapor buildup.
Put out pilot lights & turn off heaters, electric equipment & other ignition sources during use & until all vapors are gone.
Do not store above 49 C/120 F. Store large amounts in structures made for OSHA Class I B liquids
Keep container tightly closed & upright when not in use to prevent leakage.

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SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

EXPOSURE CONTROLS:

Ventilate to keep vapors of this material below 65 ppm.
If over TLV, in accordance with 29 CFR 1910.134, use NIOSH approved positive-pressure self-contained breathing apparatus.
Consult Safety Equipment Supplier. Use explosion-proof equipment.

VENTILATION:

LOCAL EXHAUST	: Necessary
MECHANICAL (GENERAL)	: Acceptable
SPECIAL	: None
OTHER	: None

PERSONAL PROTECTIONS:

Wear OSHA Standard goggles or face shield. Consult Safety Equipment Supplier.
Wear gloves, apron & footwear impervious to this material. Wash clothing before reuse.

WORK & HYGIENIC PRACTICES:

Provide readily accessible eye wash stations & safety showers.
Wash at end of each workshift & before eating, smoking or using the toilet.
Promptly remove clothing that becomes contaminated. Destroy contaminated leather articles. Launder or discard contaminated clothing.

SECTION 9. PHYSICAL DATA

APPEARANCE: Liquid, Water-White
 ODOR: Ketone
 BOILING RANGE: 62 122 197°C / 145 253 388* F (*=End Point)
 AUTO IGNITION TEMPERATURE: 276 C / 530 F (Lowest Component)
 LOWER FLAMMABLE LIMIT IN AIR (% by vol): 1.5
 FLASH POINT (TEST METHOD): -16 C / 2 F (TCC)
 FLAMMABILITY CLASSIFICATION: Class I B
 GRAVITY @ 60 F:
 API: 42.8
 SPECIFIC GRAVITY (Water=1): .812
 POUNDS/GALLON: 6.764
 VOC'S (>0.44 Lbs/Sq In): 65.6 Vol. % / 532.9 g/L / 4.438 Lbs/Gal
 TOTAL VOC'S (TVOC): 94.4 Vol. % / 747.4 g/L / 6.225 Lbs/Gal
 NONEXEMPT VOC'S (CVOC): 84.4 Vol. % / 668.2 g/L / 5.565 Lbs/Gal
 HAZARDOUS AIR POLLUTANTS (HAPS): 23.0 Wt. % / 163.0 g/L / 1.357 Lbs/Gal
 VAPOR PRESSURE (mm of Hg)@20 C 52.0
 NONEXEMPT VOC PARTIAL PRESSURE (mm of Hg @ 20 C) 20.7
 VAPOR DENSITY (air=1): 3.2
 WATER ABSORPTION: Appreciable
 REFRACTIVE INDEX: 1.426

SECTION 10. STABILITY & REACTIVITY

STABILITY:

Stable

CONDITIONS TO AVOID:

Isolate from oxidizers, heat, sparks, electric equipment & open flame.

MATERIALS TO AVOID:

Isolate from strong oxidizers such as permanganates, chromates & peroxides.

HAZARDOUS DECOMPOSITION PRODUCTS:

Carbon Monoxide, Carbon Dioxide, Carbon Oxides from burning.

HAZARDOUS POLYMERIZATION:

Will not occur.

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SECTION 11. TOXICOLOGICAL INFORMATION

MATERIAL	CAS #	TWA (OSHA)	TLV (ACGIH)	HAP
Light Aliphatic Solvent Naphtha	*64742-89-8	500 ppm	300 ppm	No
Medium Aliphatic Solvent Naphtha	*64742-88-7	500 ppm	100 ppm	No
Toluene	108-88-3	200 ppm	50 ppm A4	Yes
Acetone	67-64-1	1000 ppm	500 ppm A4	No
Isopropanol	67-63-0	400 ppm	200 ppm A4	No
Nonylphenol Ethoxylate	9016-45-9	None Known	None Known	No
Methanol	67-56-1	200 ppm S	200 ppm S	Yes
Mixed Xylenes	1330-20-7	100 ppm	100 ppm A4	Yes

In addition to EPA Hazardous Air Pollutants showing 'Yes' under "HAP" above, using manufacturers' data, based on EPA Method 311, the following EPA Hazardous Air Pollutants may be present in trace amounts (less than 0.1%):

Benzene, Cumene, Polycyclic Aromatics

SECTION 11. TOXICOLOGICAL INFORMATION (CONTINUED)

MATERIAL	CAS #	CEILING	STEL (OSHA/ACGIH)
Light Aliphatic Solvent Naphtha	*64742-89-8	None Known	5.3E3 ppm
Acetone	67-64-1	None Known	750 ppm
Isopropanol	67-63-0	None Known	400 ppm
Methanol	67-56-1	None Known	250 ppm
Mixed Xylenes	1330-20-7	None Known	150 ppm

ACUTE HAZARDS

EYE & SKIN CONTACT:

Primary irritation to skin, defatting, dermatitis.

Absorption thru skin increases exposure.

Primary irritation to eyes, redness, tearing, blurred vision.

Liquid can cause eye irritation. Wash thoroughly after handling.

INHALATION:

Anesthetic. Irritates respiratory tract. Acute overexposure can cause serious nervous system depression. Vapor harmful.

Breathing vapor can cause irritation.

Acute overexposure can cause damage to kidneys, blood, nerves, liver & lungs.

SWALLOWING:

Harmful or fatal if swallowed.

Swallowing can cause abdominal irritation, nausea, vomiting & diarrhea.

SUBCHRONIC HAZARDS/CONDITIONS AGGREGATED

CONDITIONS AGGREGATED:

Persons with severe skin, liver or kidney problems should avoid use.

CHRONIC HAZARDS

CANCER, REPRODUCTIVE & OTHER CHRONIC HAZARDS:

Tumors have been reported in laboratory animals.

Overexposure may create cancer risk.

Leukemia been reported in humans from Benzene.

This product may contain less than 83 ppm of Benzene.

Not considered hazardous in such low concentrations. Contains traces of

Ethylene Oxide: Causes tumors in laboratory animals. Consult OSHA Standard (29 CFR 1910.1047). Do not breathe headspace.

Absorption thru skin may be harmful. Studies with laboratory animals indicate this product can cause damage to fetus.

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SECTION 12. ECOLOGICAL INFORMATION

MAMMALIAN INFORMATION:

MATERIAL	CAS #	LOWEST KNOWN LETHAL DOSE DATA
		LOWEST KNOWN LD50 (ORAL)
Methanol	67-56-1	1000.0 mg/kg (Man)

AQUATIC ANIMAL INFORMATION:

The most sensitive known aquatic group to any component of this product is:
Goldfish 250 ppm or mg/L (24 hour exposure).
Keep out of sewers and natural water supplies.

MOBILITY:

This material is a mobile liquid.

DEGRADABILITY:

This product is partially biodegradable.

ACCUMULATION:

Bioaccumulation of this product has not been determined.

SECTION 13. DISPOSAL CONSIDERATIONS

Recycle / dispose of observing national, regional, state, provincial and local health, safety & pollution laws.
If questions exist, contact the appropriate agencies.

SECTION 14. TRANSPORT INFORMATION

DOT SHIPPING NAME: Paint Related Material

(Contains: Toluene, Mixed Xylenes), 3, UN1263, PG-II

"RQ," must be put before shipping name if in a container of over 3333 pounds.

DRUM LABEL: (FLAMMABLE LIQUID)

IATA / ICAO: Paint Related Material

(Contains: Toluene, Mixed Xylenes), 3, UN1263, PG-II

IMO / IMDG: Paint Related Material

(Contains: Toluene, Mixed Xylenes), 3, UN1263, PG-II

EMERGENCY RESPONSE GUIDEBOOK NUMBER: 128

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SECTION 15. REGULATORY INFORMATION

EPA REGULATION:

SARA SECTION 311/312 HAZARDS: Acute Health, Chronic Health, and Fire.

All components of this product are on the TSCA list.

SARA Title III Section 313 Supplier Notification

This product contains the indicated <*> toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning & Community Right-To-Know Act of 1986 & of 40 CFR 372. This information must be included in all MSDSs that are copied and distributed for this material.

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SECTION 15. REGULATORY INFORMATION (CONTINUED)

SARA TITLE III INGREDIENTS	CAS#	WT. % (REG. SECTION	RQ (LBS)
Light Aliphatic Solvent Naphtha	*64742-89-8	<30 (311,312)	None
Medium Aliphatic Solvent Naphtha	*64742-88-7	<30 (311,312)	None
*Toluene	108-88-3	<20 (311,312,313,RCRA)	None
Acetone	67-64-1	<20 (311,312)	5000
Isopropanol	67-63-0	<10 (311,312)	None
*Methanol	67-56-1	< 3 (311,312,313,RCRA)	5000
*Mixed Xylenes	1330-20-7	< 3 (311,312,313,RCRA)	100

IF > 3,333 POUNDS OF THIS PRODUCT IS IN ONE CONTAINER THE "RQ" OF XYLENE IS EXCEEDED.

STATE REGULATIONS:

CALIFORNIA PROPOSITION 65: This product contains the following chemicals known to the State of California to cause cancer & reproductive toxicity:

Ethylene Oxide, Toluene

INTERNATIONAL REGULATIONS:

The components of this product are listed on the chemical inventories of the following countries:

Australia, Canada, Europe (EINECS), Japan, Korea, United Kingdom.

SECTION 16. OTHER INFORMATION**HAZARD RATINGS:**

HEALTH (NFPA): 1

HEALTH (HMIS): 2

FLAMMABILITY: 3

REACTIVITY: 0

This information is intended solely for the use of individuals trained in the NFPA & HMIS hazard rating systems.

EMPLOYEE TRAINING:

Employees should be made aware of all hazards of this material (as stated in this MSDS) before handling it.

NOTICE

The supplier disclaims all expressed or implied warranties of merchantability or fitness for a specific use, with respect to the product or the information provided herein, except for conformation to contracted specifications.

All information appearing herein is based upon data obtained from manufacturers and/or recognized technical sources. While the information is believed to be accurate, we make no representations as to its accuracy or sufficiency.

Conditions of use are beyond our control, and therefore users are responsible for verifying the data under their own operating conditions to determine whether the product is suitable for their particular purposes and they assume all risks of their use, handling, and disposal of the product. Users also assume all risks in regards to the publication or use of, or reliance upon, information contained herein.

This information relates only to the product designated herein, and does not relate to its use in combination with any other material or process.



Material Safety Data Sheet

An **RPM** Company

24 Hour Emergency Phone Numbers:

Medical/Poison Control:

In U.S.: Call 1-800-222-1222

Outside U.S.: Call your local poison control center

Transportation/National Response Center:

1-800-535-5053

1-352-323-3500

.....
 • NOTE: The National Response Center emergency numbers to
 • be used only in the event of chemical emergencies involving a
 • spill, leak, fire, exposure or accident involving chemicals.
 •
 •

IMPORTANT: Provide this information to employees, customers, and users of this product. Read this MSDS before handling or disposing of this product. This product is covered by the OSHA Hazard Communication Standard and this document has been prepared in accordance with requirements of this standard. All abbreviated terms used in this MSDS are further described in Section 16.

Section 1 - Chemical Product / Company Information

This Material Safety Data Sheet is available in American Spanish upon request.
 Los Datos de Seguridad del Producto pueden obtenerse en Espanol si lo requiere.

Product Name: Window, Door & Siding 100% Silicone Rubber Sealant - Black

Product UPC Number: 070798086425

Product Use/Class: Caulk

Manufacturer: DAP Products Inc.
 2400 Boston Street Suite 200
 Baltimore, MD 21224-4723
 888-327-8477 (non-emergency matters)

Revision Date: 07/18/2013

Supersedes: 03/21/2012

MSDS Number: 00008642001

Section 2 - Hazards Identification

Emergency Overview: A(n) black paste product with a acetic acid odor. **WARNING** May cause eye, skin, nose, throat and respiratory tract irritation. May be harmful if swallowed. Remove contact lenses before using.

Refer to other MSDS sections for other detailed information.

Effects Of Overexposure - Eye Contact: Direct contact may cause mild irritation.

Effects Of Overexposure - Skin Contact: May cause mild irritation.

Effects Of Overexposure - Inhalation: Material is not likely to present an inhalation hazard at ambient conditions. However, if material is heated or high vapor concentration is attained, central nervous system depression may occur, which is characterized by drowsiness, dizziness, confusion or loss of coordination.

Effects Of Overexposure - Ingestion: Low ingestion hazard in normal use. Harmful if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Ingestion may result in obstruction when material hardens.

Effects Of Overexposure - Chronic Hazards: Prolonged or repeated contact with skin can cause defatting of the skin, which may lead to dermatitis.

Primary Route(s) Of Entry: Skin Contact, Inhalation, Ingestion, Eye Contact

Medical Conditions which May be Aggravated by Exposure: No known applicable information.

Carcinogenicity:

CAS No.	Chemical Name	ACGIH	OSHA	IARC	NTP
64742-46-7	Hydrotreated middle distillate	Suspected human carcinogen.	Not Listed.	Not classifiable as to carcinogenicity to humans.	Not Listed.
1333-86-4	Carbon black	Confirmed animal carcinogen with unknown relevance to humans.	Not Listed.	Possibly carcinogenic to humans.	Not Listed.

Section 3 - Composition / Information On Ingredients

Chemical Name	CASRN	Wt%
Dimethylsiloxane, hydroxy term	51721300-5110P	40-70
Hydrotreated middle distillate	64742-46-7	10-30
Silica, amorphous	7631-86-9	5-10
Silanetriol, methyl-, triaceta	4253-34-3	3-7
Ethyltriacetoxysilane	17689-77-9	3-7
Carbon black	1333-86-4	0.5-1.5

Section 4 - First Aid Measures

First Aid - Eye Contact: Immediately flush the contaminated eye(s) with lukewarm, gently flowing water for 5 minutes while holding the eyelid(s) open. Obtain medical attention.

First Aid - Skin Contact: Remove contaminated clothing, shoes and leather goods (e.g. watchbands, belts). Quickly and gently blot or brush away excess chemical. Flush with lukewarm gently flowing water for 15 minutes. If irritation persists, repeat flushing. If irritation persists, obtain medical advice.

First Aid - Inhalation: Material is not likely to present an inhalation hazard at ambient conditions. If material is heated or vapor is generated, care should be taken to prevent inhalation. In case of exposure to vapor, move to fresh air.

First Aid - Ingestion: If irritation or discomfort occur, obtain medical advice.

Note to Physician: Treat according to person's condition and specifics of exposure.

COMMENTS: If over-exposure occurs, call your poison control center at 1-800-222-1222.

Section 5 - Fire Fighting Measures

Extinguishing Media: Carbon Dioxide, Dry Chemical, Foam, Water Fog

Unusual Fire And Explosion Hazards: None.

Special Firefighting Procedures: Self-contained breathing apparatus and protective clothing should be worn in fighting large fires involving chemicals. Determine the need to evacuate or isolate the area according to your local emergency plan. Use water spray to keep fire exposed containers cool.

Section 6 - Accidental Release Measures

Steps To Be Taken If Material Is Released Or Spilled: Wear proper protective equipment as specified in Section 8. Observe all personal protection equipment recommendations described in Sections 5 and 8. Wipe up or scrape up and contain for salvage or disposal. Clean area as appropriate since spilled materials, even in small quantities, may present a slip hazard. Final cleaning may require use of steam, solvents or detergents. Dispose of saturated absorbant or cleaning

materials appropriately, since spontaneous heating may occur. Local, state and federal laws and regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which federal, state and local laws and regulations are applicable. Sections 13 and 15 of this MSDS provide information regarding certain federal and state requirements.

Note: See Section 8 for Personal Protective Equipment for Spills.

Section 7 - Handling And Storage

Handling: Use with adequate ventilation. Product evolves acetic acid (HOAc) when exposed to water or humid air. Provide ventilation during use to control HOAc within exposure guidelines or use respiratory protection. Avoid eye contact. Avoid breathing vapor, mist, dust, or fumes. Keep container closed. Avoid skin contact.

Storage: Use reasonable care and store away from oxidizing materials. Keep container closed and store away from water or moisture. This material in its finely divided form presents an explosion hazard. Follow NFPA 654 (for chemical dusts) or 484 (for metal dusts) as appropriate for managing dust hazards to minimize secondary explosion potential.

Section 8 - Exposure Controls / Personal Protection

Chemical Name	CASRN	ACGIH TWA	ACGIH STEL	ACGIH CEIL	OSHA TWA	OSHA STEL	OSHA CEIL	Skin
Dimethylsiloxane, hydroxy term	51721300-5110P	N.E.	N.E.	N.E.	N.E.	N.E.	N.E.	No
Hydrotreated middle distillate	64742-46-7	5 MGM3	N.E.	N.E.	5 MGM3	N.E.	N.E.	No
Silica, amorphous	7631-86-9	10 MGM3	N.E.	N.E.	5 MGM3	N.E.	N.E.	No
Silanetriol, methyl-, triaceta	4253-34-3	N.E.	N.E.	N.E.	N.E.	N.E.	N.E.	No
Ethyltriacetoxysilane	17689-77-9	N.E.	N.E.	N.E.	N.E.	N.E.	N.E.	No
Carbon black	1333-86-4	3 MGM3	N.E.	N.E.	3.5 MGM3	N.E.	N.E.	No

Important: Listed Permissible Exposure Levels (PEL) are from the U.S. Dept. of Labor OSHA Final Rule Limits (CFR 29 1910.1000); these limits may vary between states.

Note: An employee's skin exposure to substances having a "YES" in the "SKIN" column in the table above shall be prevented or reduced to the extent necessary under the circumstances through the use of gloves, coveralls, goggles or other appropriate personal protective equipment, engineering controls or work practices.

Exposure Notes:

Consult local authorities for acceptable provincial values.

Acetic acid is formed upon contact with water or humid air. Provide adequate ventilation to control exposures within guidelines of OSHA PEL: TWA 10 ppm and ACGIH TLV: TWA 10 ppm, STEL 15 ppm.

Precautionary Measures: Avoid eye contact. Avoid breathing vapor, mist, dust, or fumes. Keep container closed. Avoid skin contact. Use reasonable care.

Comments: Product evolves acetic acid (HOAc) when exposed to water or humid air. Provide ventilation during use to control HOAc within exposure guidelines or use respiratory protection.

Note: These precautions are for room temperature handling. Use at elevated temperature or aerosol/spray applications may require added precautions.

Engineering Controls: Local Ventilation: Recommended.
General Ventilation: Recommended.

Respiratory Protection: Personal Protective Equipment for Routine Handling:

Inhalation:

Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines. IH personnel can assist in judging the adequacy of existing engineering controls.

Suitable Respirator:

Respiratory protection is not needed under ambient conditions. If vapor is generated when material is heated or handled, the following is advised. General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators.

Personal Protective Equipment for Spills:

Inhalation/Suitable Respirator:

Respiratory protection recommended. Follow OSHA Respirator Regulations (29 CFR 1910.134) and use NIOSH/MHSA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection.

Skin Protection: Personal Protective Equipment for Routine Handling:

Wash at mealtime and end of shift. Contaminated clothing and shoes should be removed as soon as practical and thoroughly cleaned before reuse. Chemical protective gloves are recommended.

Suitable Gloves:

Avoid skin contact by implementing good industrial hygiene practices and procedures. Select and use gloves and/or protective clothing to further minimize the potential for skin contact. Consult with your glove and/or personnel protective equipment manufacturer for selection of appropriate compatible materials.

Personal Protective Equipment for Spills:

Wash at mealtime and end of shift. Contaminated clothing and shoes should be removed as soon as practical and thoroughly cleaned before reuse. Chemical protective gloves are recommended.

Eye Protection: Personal Protective Equipment for Routine Handling:

Use proper protection - safety glasses as a minimum.

Personal Protective Equipment for Spills:

Use full face respirator.

Other protective equipment: None.

Hygienic Practices: Wash hands before breaks and at the end of workday. Remove and wash contaminated clothing and gloves, including the inside, before re-use.

Section 9 - Physical And Chemical Properties

Boiling Range:	Not Established	Vapor Density:	Heavier Than Air
Odor:	Acetic Acid	Odor Threshold:	Not Established
Color:	Black	Evaporation Rate:	Slower Than n-Butyl Acetate
Solubility in H2O:	Not Established	Specific Gravity:	0.96 - 0.96
Freeze Point:	Not Established	pH:	Not Applicable
Vapor Pressure:	Not Established	Viscosity:	Not Established
Physical State:	Paste	Flammability:	Non-Flammable
Flash Point, F:	Greater than 200	Method:	(Seta Closed Cup)
Lower Explosive Limit, %:	Not Determined	Upper Explosive Limit, %:	Not Determined

When reported, vapor pressure of this product has been calculated theoretically based on its constituent makeup and has not been determined experimentally.

(See section 16 for abbreviation legend)

Section 10 - Stability And Reactivity

Conditions To Avoid: Excessive heat and freezing.

Incompatibility: Oxidizing material can cause a reaction. Water, moisture, or humid air can cause hazardous vapors to form as described in Section 8. Incompatible with strong bases and oxidizing agents.

Hazardous Decomposition Products: Thermal breakdown of this product during fire or very high heat conditions may evolve the following decomposition products: Carbon oxides and traces of incompletely burned carbon compounds. Silicon dioxide. Formaldehyde.

Hazardous Polymerization: Hazardous polymerization will not occur under normal conditions.

Stability: Stable under recommended storage conditions.

Section 11 - Toxicological Information

Product LD50: Not Established

Product LC50: Not Established

CASRN	Chemical Name	LD50	LC50
1333-86-4	Carbon black	Rat:>15400 mg/kg	*****

Significant Data with Possible Relevance to Humans: None.

Section 12 - Ecological Information

Ecological Information: Ecological injuries are not known or expected under normal use.

Section 13 - Disposal Information

Disposal Information: Dispose of material in accordance with all federal, state and local regulations. State and Local regulations/restrictions are complex and may differ from Federal regulations. Responsibility for proper waste disposal is with the owner of the waste.

EPA Waste Code if Discarded (40 CFR Section 261): None.

Section 14 - Transportation Information

DOT Proper Shipping Name:	Not Regulated.	Packing Group:	N.A.
DOT Technical Name:	N.A.	Hazard Subclass:	N.A.
DOT Hazard Class:	N.A.	DOT UN/NA Number:	N.A.

Section 15 - Regulatory Information

CERCLA - SARA Hazard Category:

This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

Immediate Health Hazard, Chronic Health Hazard

SARA Section 313:

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

None

Toxic Substances Control Act:

All ingredients in this product are either on TSCA inventory list, or otherwise exempt.

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States:

None

New Jersey Right-to-Know:

The following materials are non-hazardous, but are among the top five components in this product:

Chemical Name	CAS Number
Proprietary Polymer	Proprietary

Pennsylvania Right-to-Know:

The following non-hazardous ingredients are present in the product at greater than 3%:

Chemical Name	CAS Number
Proprietary Polymer	Proprietary

California Proposition 65:

None.

Section 16 - Other Information

HMIS Ratings:

Health: 1 Flammability: 1 Reactivity: 0 Personal Protection: X

Volatile Organic Compounds (VOC), less water less exempts: g/L: 28.8 lb/gal: 0.24 wt:wt%: 3.0

Volatile Organic Compounds (VOC), less water less exempts, less LVP-VOCs: wt:wt%: 3.0

REASON FOR REVISION: Periodic Update

Legend:

N.A. – Not Applicable

ACGIH – American Conference of Governmental Industrial Hygienists

N.E. – Not Established

SARA – Superfund Amendments and Reauthorization Act of 1986

N.D. – Not Determined

NJRTK – New Jersey Right-to-Know Law

VOC – Volatile Organic Compound

OSHA – Occupational Safety and Health Administration

PEL – Permissible Exposure Limit

HMIS – Hazardous Materials Identification System

TLV – Threshold Limit Value

NTP – National Toxicology Program

CEIL – Ceiling Exposure Limit

STEL – Short Term Exposure Limit

LD50 – Lethal Dose 50

LC50 – Lethal Concentration 50

F – Degree Fahrenheit

MSDS – Material Safety Data Sheet

C – Degree Celsius

CASRN – The Chemical Abstracts Service Registry Number

DAP believes the data and statements contained herein are accurate as of the date hereof. They are offered in good faith as typical values and not as a product specification. **NO WARRANTY OF MERCHANTABILITY, WARRANTY OF FITNESS FOR ANY PARTICULAR PURPOSE OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, IS MADE WITH REGARD TO THE INFORMATION HEREIN PROVIDED OR THE PRODUCT TO WHICH THE INFORMATION REFERS.** Since this document is intended only as a guide to the appropriate use and precautionary handling of the referenced product by a properly trained person, it is therefore the responsibility of the user to (i) review the recommendations with due consideration for the specific context of the intended use and (ii) determine if they are appropriate.

<End of MSDS>



Material Safety Data Sheet

An **RPM** Company

24 Hour Emergency Phone Numbers:
Medical/Poison Control:
 In U.S.: Call 1-800-222-1222
 Outside U.S.: Call your local poison control center
Transportation/National Response Center:
 1-800-535-5053
 1-352-323-3500

.....
 •NOTE: The National Response Center emergency numbers to
 •be used only in the event of chemical emergencies involving a
 •spill, leak, fire, exposure or accident involving chemicals.
 •.....

IMPORTANT: Provide this information to employees, customers, and users of this product. Read this MSDS before handling or disposing of this product. This product is covered by the OSHA Hazard Communication Standard and this document has been prepared in accordance with requirements of this standard. All abbreviated terms used in this MSDS are further described in Section 16.

Section 1 - Chemical Product / Company Information

This Material Safety Data Sheet is available in Canadian French and Hispanic American Spanish upon request.
 On peut demander cette fiche signalétique (MSDS) a la langue francaise-canadienne.
 Los Datos de Seguridad del Producto pueden obtenerse en Espanol si lo riquiere.

Product Name: Alex Plus Crystal Clear
Product UPC Number: 070798184015 070798999565
Product Use/Class: Latex Caulk
Manufacturer: DAP Inc.
 2400 Boston Street Suite 200
 Baltimore, MD 21224-4723
 888-327-8477 (non-emergency)

Revision Date: 04/01/2008
Supersedes: 07/23/2004
MSDS Number: 00010045001

Section 2 - Hazards Identification

Emergency Overview: A white paste product with a very slight ammonia odor. **WARNING** May cause eye, skin, nose, throat and respiratory tract irritation. May cause eye or skin irritation. Harmful if swallowed or absorbed through the skin. This product contains ethylene glycol.

Refer to other MSDS sections for other detailed information.

Effects Of Overexposure - Eye Contact: May cause eye irritation.

Effects Of Overexposure - Skin Contact: May cause skin irritation. Harmful if absorbed through the skin.

Effects Of Overexposure - Inhalation: Harmful if inhaled. Inhalation of high vapor concentrations can cause central nervous system depression and narcosis. Inhalation may cause irritation to the respiratory tract (nose, mouth, mucous membranes).

Effects Of Overexposure - Ingestion: Ingestion of ethylene glycol can cause gastrointestinal irritation, nausea, vomiting, diarrhea and if ingested in sufficient quantities, death. Harmful or fatal if swallowed. If ingested, may cause vomiting, diarrhea, and depressed respiration.

Effects Of Overexposure - Chronic Hazards: Repeated or prolonged exposure may cause respiratory system damage.

Prolonged and repeated skin contact may cause irritation and possibly dermatitis. Prolonged, repeated, or high exposures may cause weakness and depression of the central nervous system. Overexposure may cause kidney, cardiovascular, skin and liver damage.

Ethylene Glycol may cause kidney and liver damage upon prolonged and repeated overexposures. Studies have shown that repeated inhalation of ethylene glycol has produced adverse cardiovascular changes in laboratory animals. Ethylene glycol has been shown to cause birth defects in laboratory animals.

Primary Route(s) Of Entry: Skin Contact, Inhalation, Ingestion, Eye Contact

Medical Conditions which May be Aggravated by Exposure: None known.

Carcinogenicity:

None

Section 3 - Composition / Information On Ingredients

Chemical Name	CASRN	Wt%
Stoddard solvent	8052-41-3	1-5
Ethylene glycol	107-21-1	0.5-1.5
Ammonia	7664-41-7	0.1-1.0

Section 4 - First Aid Measures

First Aid - Eye Contact: In case of contact, immediately flush eyes with large quantities of water for at least 15 minutes until irritation subsides. Get medical attention immediately.

First Aid - Skin Contact: Wash off immediately with soap and plenty of water for at least 15 minutes. Get medical aid if symptoms persist. If skin irritation persists, call a physician. Remove and wash contaminated clothing.

First Aid - Inhalation: If inhaled, remove to fresh air. If breathing is difficult, leave the area to obtain fresh air. If continued breathing difficulty is experienced, get medical attention immediately.

First Aid - Ingestion: If swallowed, DO NOT INDUCE VOMITING. Get medical attention immediately. Harmful or fatal if liquid is aspirated into the lungs. If swallowed, drink 8-10 oz. of water, get immediate medical attention.

Note to Physician: None.

COMMENTS: If over-exposure occurs, call your poison control center at 1-800-222-1222.

Section 5 - Fire Fighting Measures

Extinguishing Media: Alcohol, Carbon Dioxide, Dry Chemical, Foam, Water Fog

Unusual Fire And Explosion Hazards: No special protective measures against fire required.

Special Firefighting Procedures: Wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent) and full protective gear. Use water spray to cool exposed surfaces.

Section 6 - Accidental Release Measures

Steps To Be Taken If Material Is Released Or Spilled: Wear proper protective equipment as specified in Section 8. Use absorbent material or scrape up dried material and place in container.

Section 7 - Handling And Storage

Handling: KEEP OUT OF REACH OF CHILDREN DO NOT TAKE INTERNALLY. Avoid breathing vapor and contact with eyes, skin and clothing. Use only with adequate ventilation. Open all windows and doors or use other means to ensure cross-ventilation and fresh air entry during application and drying. Odor is not an adequate warning for hazardous conditions. Wash thoroughly after handling.

Storage: Do not store at temperatures above 120 degrees F. Store containers away from excessive heat and freezing. Close container after each use. Store away from caustics and oxidizers.

Section 8 - Exposure Controls / Personal Protection

Chemical Name	CASRN	ACGIH TWA	ACGIH STEL	ACGIH CEIL	OSHA TWA	OSHA STEL	OSHA CEIL	Skin
Stoddard solvent	8052-41-3	100 PPM	N.E.	N.E.	500 PPM	N.E.	N.E.	No
Ethylene glycol	107-21-1	N.E.	N.E.	100 MGM3	N.E.	N.E.	N.E.	No
Ammonia	7664-41-7	25 PPM	35 PPM	N.E.	50 PPM	N.E.	N.E.	No

Precautionary Measures: Please refer to other sections and subsections of this MSDS.

Engineering Controls: Good general ventilation should be sufficient to control airborne levels. Ensure adequate ventilation, especially in confined areas. Local ventilation of emission sources may be necessary to maintain ambient concentrations below recommended exposure limits.

Respiratory Protection: In case of insufficient ventilation, wear suitable respiratory equipment. A NIOSH-approved air purifying respirator with an organic vapor cartridge or canister may be necessary under certain circumstances where airborne concentrations are expected to exceed exposure limits. A respiratory protection program that meets the OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

Skin Protection: Rubber gloves.

Eye Protection: Goggles or safety glasses with side shields.

Other protective equipment: Not required under normal use.

Hygienic Practices: Wash hands before breaks and at the end of workday. Remove and wash contaminated clothing before re-use.

Important: Listed Permissible Exposure Levels (PEL) are from the U.S. Dept. of Labor OSHA Final Rule Limits (CFR 29 1910.1000); these limits may vary between states.

Note: An employee's skin exposure to substances having a "YES" in the "SKIN" column in the table above shall be prevented or reduced to the extent necessary under the circumstances through the use of gloves, coveralls, goggles or other appropriate personal protective equipment, engineering controls or work practices.

Section 9 - Physical And Chemical Properties

Boiling Range:	Not Established	Vapor Density:	Heavier Than Air
Odor:	Very Slight Ammonia	Odor Threshold:	Not Established
Color:	White – Changes to Crystal clear as dries	Evaporation Rate:	Slower Than n-Butyl Acetate
Solubility in H2O:	Not Established	Specific Gravity:	1.1
Freeze Point:	Not Established	pH:	Between 7.0 and 12.0
Vapor Pressure:	Not Established	Viscosity:	Not Established
Physical State:	Paste	Flammability:	Non-Flammable
Flash Point, F:	Greater than 200	Method:	(Seta Closed Cup)
Lower Explosive Limit, %:	Not Established	Upper Explosive Limit, %:	Not Established

When reported, vapor pressure of this product has been calculated theoretically based on its constituent makeup and has not been determined experimentally.

(See section 16 for abbreviation legend)

Section 10 - Stability And Reactivity

Conditions To Avoid: Excessive heat and freezing.

Incompatibility: Incompatible with strong bases and oxidizing agents.

Hazardous Decomposition Products: Normal decomposition products, i.e., COx, NOx.

Hazardous Polymerization: Hazardous polymerization will not occur under normal conditions.

Stability: Stable under recommended storage conditions.

Section 11 - Toxicological Information

Product LD50: Not Established

Product LC50: Not Established

CASRN	Chemical Name	LD50	LC50
107-21-1	Ethylene glycol	Rat:4700 mg/kg	Rat:10876 mg/kg
7664-41-7	Ammonia	-----	Rat:2000 ppm/4H

Significant Data with Possible Relevance to Humans: None.

Section 12 - Ecological Information

Ecological Information: Ecological injuries are not known or expected under normal use.

Section 13 - Disposal Information

Disposal Information: Dispose of material in accordance with all federal, state and local regulations. State and Local regulations/restrictions are complex and may differ from Federal regulations. Responsibility for proper waste disposal is with the owner of the waste.

EPA Waste Code if Discarded (40 CFR Section 261): This product does not meet the definition of a hazardous waste according to U.S. EPA Hazardous Waste Management Regulation, 40 CFR Section 261.

Section 14 - Transportation Information

DOT Proper Shipping Name: Not Regulated.

Packing Group: N.A.

DOT Technical Name: None.

Hazard Subclass: N.A.

DOT Hazard Class: N.A.

DOT UN/NA Number: None

Note: The shipping information provided is applicable for domestic ground transport only. Different categorization may apply if shipped via other modes of transportation and/or to non-domestic destinations.

Section 15 - Regulatory Information

CERCLA - SARA Hazard Category:

This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

Immediate Health Hazard, Chronic Health Hazard

SARA Section 313:

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

None

Toxic Substances Control Act:

All ingredients in this product are either on TSCA inventory list, or otherwise exempt.

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States:

None

New Jersey Right-to-Know:

The following materials are non-hazardous, but are among the top five components in this product:

Chemical Name	CAS Number
Non-Hazardous Polymer	Proprietary
Water	7732-18-5

Pennsylvania Right-to-Know:

The following non-hazardous ingredients are present in the product at greater than 3%:

Chemical Name	CAS Number
Non-Hazardous Polymer	Proprietary
Water	7732-18-5

California Proposition 65:

None

Section 16 - Other Information**HMIS Ratings:**

Health: 1 Flammability: 1 Reactivity: 0 Personal Protection: X

Volatile Organic Compounds (VOC), less water less exempts: g/L: 64.8 lb/gal: 0.5 wt:wt%: 3.6

Volatile Organic Compounds (VOC), less water less exempts, less LVP-VOCs: wt:wt%: 1.5

REASON FOR REVISION: Periodic Update

Legend:

N.A. – Not Applicable

ACGIH – American Conference of Governmental Industrial Hygienists

N.E. – Not Established

SARA – Superfund Amendments and Reauthorization Act of 1986

N.D. – Not Determined

NJRTK – New Jersey Right-to-Know Law

VOC – Volatile Organic Compound

OSHA – Occupational Safety and Health Administration

PEL – Permissible Exposure Limit

HMIS – Hazardous Materials Identification System

TLV – Threshold Limit Value

NTP – National Toxicology Program

CEIL – Ceiling Exposure Limit

STEL – Short Term Exposure Limit

LD50 – Lethal Dose 50

LC50 – Lethal Concentration 50

F – Degree Fahrenheit

MSDS – Material Safety Data Sheet

C – Degree Celsius

CASRN – The Chemical Abstracts Service Registry Number

DAP believes the data and statements contained herein are accurate as of the date hereof. They are offered in good faith as typical values and not as a product specification. **NO WARRANTY OF MERCHANTABILITY, WARRANTY OF FITNESS FOR ANY PARTICULAR PURPOSE OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, IS MADE WITH REGARD TO THE INFORMATION HEREIN PROVIDED OR THE PRODUCT TO WHICH THE INFORMATION REFERS.** Since this document is intended only as a guide to the appropriate use and precautionary handling of the referenced product by a properly trained person, it is therefore the responsibility of the user to (i) review the recommendations with due consideration for the specific context of the intended use and (ii) determine if they are appropriate.

<End of MSDS>

Material Safety Data Sheet

24 Hour Emergency Phone Numbers:

Medical: 1-800-327-3874

1-513-558-5111

Transportation:

1-800-535-5053

1-352-323-3500

•NOTE: National Response Center emergency numbers to be used
•only in the event of chemical emergencies involving a spill, leak,
•fire, exposure or accident involving chemicals.

IMPORTANT: Provide this information to employees, customers, and users of this product. Read this MSDS before handling or disposing of this product. This product is covered by the OSHA Hazard Communication Standard and this document has been prepared in accordance with requirements of this standard. All abbreviated terms used in this MSDS are further described in Section 16.

Section 1 - Chemical Product / Company Information

This Material Safety Data Sheet is available in Canadian French and Hispanic American Spanish upon request.
Esta hoja de datos de la seguridad de los materiales está disponible en francés canadiense y en español a su solicitud.
Los Datos de Seguridad del Producto pueden obtenerse en Espanol si lo requiere.

Product Name: Alex Plus Acrylic Latex Caulk Plus Silicone - All Colors **Revision Date:** 04/21/2005

Product UPC Number: 18103 18118 18120 18122 18124 18126 18128 18130 18134 18136 18139 18152 18172 18656 30108 35000 35004 35006 35008 35010 35012 35014 74225 74230 74241 74243 74250 74254 74256 74258 74260 74270 74275 76250 **Supersedes:** 12/05/2002

Product Use/Class: Latex Caulk

MSDS Number: 00010002001

Manufacturer: DAP Inc.
2400 Boston Street Suite 200
Baltimore, MD 21224-4723
888-327-8477 (non-emergency matters)

Section 2 - Composition / Information On Ingredients

Chemical Name	CASRN	WT%	ACGIH TWA	ACGIH STEL	ACGIH CEIL	OSHA TWA	OSHA STEL	OSHA CEIL	Skin
Calcium carbonate	1317-65-3	40-70	10 MGM3	N.E.	N.E.	5 MGM3	N.E.	N.E.	No
Ester Branched & Linear(C7&C9)	PHTHALATE ESTER	1-5	N.E.	N.E.	N.E.	N.E.	N.E.	N.E.	No
Titanium dioxide	13463-67-7	0.1-1.0	10 MGM3	N.E.	N.E.	15 MGM3	N.E.	N.E.	No
Carbon Black	1333-86-4	0.0-1.5	3.5 MGM3	N.E.	N.E.	3.5 MGM3	N.E.	N.E.	No
Silica, crystalline	14808-60-7	0.1-1.0	0.05 MGM3	N.E.	N.E.	(10 ÷ % SiO ₂) / 2 MGM3	N.E.	N.E.	No
Ethylene glycol	107-21-1	0.1-1.0	N.E.	N.E.	100 MGM3	N.E.	N.E.	N.E.	No
Ammonia	7664-41-7	<0.010	25 PPM	35 PPM	N.E.	50 PPM	N.E.	N.E.	No
Formaldehyde	50-00-0	<0.02	N.E.	N.E.	0.3 PPM	0.75 PPM	2 PPM	N.E.	No
Ethyl acrylate	140-88-5	<0.009	5 PPM	15 PPM	N.E.	25 PPM	N.E.	N.E.	Yes
Acetaldehyde	75-07-0	<0.002	N.E.	N.E.	25 PPM	200 PPM	N.E.	N.E.	No
Acrylonitrile	107-13-1	<0.0003	2 PPM	N.E.	N.E.	2 PPM	10 PPM	N.E.	Yes

Exposure Notes:

107-13-1 Acrylonitrile is a specially regulated substance for which an OSHA chemical-specific exposure standard exists. Detailed information regarding this substance may be found in 29 CFR 1910.1045. Medical surveillance information regarding this substance may be found in Appendix C to 29 CFR 1910.1045.

50-00-0 Formaldehyde is a specially regulated substance for which an OSHA chemical-specific exposure standard exists. Detailed information regarding this substance may be found in 29 CFR 1910.1048. Medical surveillance information regarding this substance may be found in Appendix C to 29 CFR 1910.1048.

Important: Listed Permissible Exposure Levels (PEL) are from the U.S. Dept. of Labor OSHA Final Rule Limits (CFR 29 1910.1000); these limits may vary between states.

Note: An employee's skin exposure to substances having a "YES" in the "SKIN" column in the table above shall be prevented or reduced to the extent necessary under the circumstances through the use of gloves, coveralls, goggles or other appropriate personal protective equipment, engineering controls or work practices

Section 3 - Hazards Identification

Emergency Overview: A colored paste product. WARNING Harmful if swallowed or absorbed through the skin. May cause eye, skin, nose, throat and respiratory tract irritation. This product contains ethylene glycol.

Refer to other MSDS sections for other detailed information.

Effects Of Overexposure - Eye Contact: May cause eye irritation.

Effects Of Overexposure - Skin Contact: Harmful if absorbed through the skin. May cause sensitization by skin contact. May cause skin irritation and/or dermatitis.

Effects Of Overexposure - Inhalation: Harmful if inhaled. May cause irritation of respiratory tract. Prolonged, repeated, or high exposures may cause weakness and depression of the central nervous system. Inhalation of vapors may cause irritation of the nose, throat, lungs and respiratory tract.

Effects Of Overexposure - Ingestion: Harmful if swallowed.

Effects Of Overexposure - Chronic Hazards: Prolonged and repeated skin contact may cause irritation and possibly dermatitis. Repeated or prolonged exposure may cause respiratory system damage. Overexposure may cause kidney, cardiovascular, skin and liver damage.

Formaldehyde vapor is a known animal carcinogen according to OSHA and NTP and is considered possibly carcinogenic to humans by inhalation. The International Agency for Research on Cancer considers formaldehyde to be a human carcinogen.

Ethylene Glycol may cause kidney and liver damage upon prolonged and repeated overexposures. Studies have shown that repeated inhalation of ethylene glycol has produced adverse cardiovascular changes in laboratory animals. Ethylene glycol has been shown to cause birth defects in laboratory animals.

Primary Route(s) Of Entry: Skin Contact, Inhalation, Eye Contact

Medical Conditions which May be Aggravated by Exposure: None known.

Section 4 - First Aid Measures

First Aid - Eye Contact: In case of contact, immediately flush eyes with large quantities of water for at least 15 minutes until irritation subsides. Get medical attention immediately.

First Aid - Skin Contact: Wash off immediately with soap and plenty of water for at least 15 minutes. Get medical aid if symptoms persist. Remove and wash contaminated clothing.

First Aid - Inhalation: If inhaled, remove to fresh air. If breathing is difficult, leave the area to obtain fresh air. If continued breathing difficulty is experienced, get medical attention immediately.

First Aid - Ingestion: If swallowed, DO NOT INDUCE VOMITING. Get medical attention immediately.

Note to Physician: None.

COMMENTS: Call Medical Emergency at 1-800-327-3874 if any irritation or complication arises from any of the above routes of entry.

Section 5 - Fire Fighting Measures

Flash Point, F: Greater than 200 degrees Fahrenheit

Lower Explosive Limit, %: Not Established

Method: (Seta Closed Cup)

Upper Explosive Limit, %: Not Established

Extinguishing Media: Carbon Dioxide, Dry Chemical, Foam, Water Fog

Unusual Fire And Explosion Hazards: No special protective measures against fire required.

Special Firefighting Procedures: Wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent) and full protective gear. Use water spray to cool exposed surfaces.

Section 6 - Accidental Release Measures

Steps To Be Taken If Material Is Released Or Spilled: Wear proper protective equipment as specified in Section 8. Use absorbent material or scrape up dried material and place in container.

Section 7 - Handling And Storage

Handling: KEEP OUT OF REACH OF CHILDREN DO NOT TAKE INTERNALLY. Do not breathe vapors. Use only with adequate ventilation. Wash thoroughly after handling. Avoid breathing vapor and contact with eyes, skin and clothing. Open all windows and doors or use other means to ensure cross-ventilation and fresh air entry during application and drying. Odor is not an adequate warning for hazardous conditions.

Storage: Close container after each use. Store containers away from excessive heat and freezing. Do not store at temperatures above 120 degrees F. Store away from caustics and oxidizers.

Section 8 - Exposure Controls / Personal Protection

Precautionary Measures: Please refer to other sections and subsections of this MSDS.

Engineering Controls: Good general ventilation should be sufficient to control airborne levels. Ensure adequate ventilation, especially in confined areas. Local ventilation of emission sources may be necessary to maintain ambient concentrations below recommended exposure limits.

Respiratory Protection: In case of insufficient ventilation, wear suitable respiratory equipment. A NIOSH-approved air purifying respirator with an organic vapor cartridge or canister may be necessary under certain circumstances where airborne concentrations are expected to exceed exposure limits. A respiratory protection program that meets the OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

Skin Protection: Rubber gloves.

Eye Protection: Goggles or safety glasses with side shields.

Other protective equipment: Not required under normal use.

Hygienic Practices: Remove and wash contaminated clothing before re-use. Wash hands before breaks and at the end of workday.

Section 9 - Physical And Chemical Properties

Boiling Range:	210 – 220 °F	Vapor Density:	Heavier Than Air
Odor:	Very Slight Ammonia	Odor Threshold:	Not Established
Appearance:	Colored	Evaporation Rate:	Slower Than n-Butyl Acetate
Solubility in H₂O:	Not Established	Specific Gravity:	1.69
Freeze Point:	Not Established	pH:	Between 7.0 and 12.0
Vapor Pressure:	Not Established	Viscosity:	Not Established
Physical State:	Paste		

When reported, vapor pressure of this product has been calculated theoretically based on its constituent makeup and has not been determined experimentally.

(See section 16 for abbreviation legend)

Section 10 - Stability And Reactivity

Conditions To Avoid: Excessive heat and freezing.

Incompatibility: Incompatible with strong bases and oxidizing agents.

Hazardous Decomposition Products: Normal decomposition products, i.e., CO_x, NO_x.

Hazardous Polymerization: Hazardous polymerization will not occur under normal conditions.

Stability: Stable under recommended storage conditions.

Section 11 - Toxicological Information

Product LD50: Not Established

Product LC50: Not Established

CASRN	Chemical Name	LD50	LC50	WT%
PHthalate ESTER	Ester Branched & Linear (C7&C9)	Oral Rat: 10 mg/kg	-----	1-5
107-21-1	Ethylene glycol	Rat:4700 mg/kg	Rat:10876 mg/kg	0.1-1.0
7664-41-7	Ammonia	-----	Rat:2000 ppm/4H	<0.010
50-00-0	Formaldehyde	-----	Rat:203 mg/m3	<0.02
140-88-5	Ethyl acrylate	-----	Rat:1414 ppm/4H	<0.009
75-07-0	Acetaldehyde	-----	Rat:13300 ppm/4H	<0.002
107-13-1	Acrylonitrile	Oral Rat:78 mg/kg	Rat:425 ppm/4H	<0.0003

Carcinogenicity:

CAS No.	Chemical Name	ACGIH	OSHA	IARC	NTP	WT%
13463-67-7	Titanium dioxide	-----	-----	Classification not possible from current data.	-----	0.1-1.0
14808-60-7	Silica, crystalline	Suspected human carcinogen.	-----	-----	Known carcinogen.	0.1-1.0
50-00-0	Formaldehyde	Suspected human carcinogen.	Potential cancer hazard.	Human carcinogen.	Anticipated carcinogen.	<0.02
140-88-5	Ethyl acrylate	-----	-----	Possible carcinogen.	-----	<0.009
75-07-0	Acetaldehyde	Confirmed animal carcinogen with unknown relevance to humans.	-----	Possible carcinogen.	Anticipated carcinogen.	<0.002
107-13-1	Acrylonitrile	Confirmed animal carcinogen with unknown relevance to humans.	Cancer hazard.	Possible carcinogen.	Anticipated carcinogen.	<0.0003
79-06-1	Acrylamide	Confirmed animal carcinogen with unknown relevance to humans.	-----	Probable carcinogen.	Anticipated carcinogen.	<0.0001

Significant Data with Possible Relevance to Humans: This product contains trace amounts of free formaldehyde. OSHA and NTP identify formaldehyde as a potential carcinogen. IARC identifies formaldehyde as a human carcinogen. Formaldehyde has been shown to cause mutations in a variety of in-vitro test systems, the significance of which to humans is unknown. In a two-year inhalation study, rats showed carcinogenic effects in the respiratory system at 15 ppm of formaldehyde. There should be minimal risk when used with ventilation adequate to keep the atmospheric concentration of formaldehyde below the recommended exposure limits. Maintain adequate ventilation to prevent exposure above current OSHA / ACGIH exposure limits. Workplace monitoring of the air to define formaldehyde exposure levels may be necessary. This product contains trace amounts of acrylonitrile. It is exempt from the OSHA acrylonitrile standard 29 CFR 1910.1045, paragraph (a) (2) (ii). Acrylonitrile has been classified by IARC as possibly carcinogenic to humans, by OSHA as carcinogenic and by NTP as reasonably anticipated to be a human carcinogen.

Section 12 - Ecological Information

Ecological Information: Ecological injuries are not known or expected under normal use.

Section 13 - Disposal Information

Disposal Information: Dispose of material in accordance with all federal, state and local regulations. State and Local regulations/restrictions are complex and may differ from Federal regulations. Responsibility for proper waste disposal is with the owner of the waste.

EPA Waste Code if Discarded (40 CFR Section 261): None

Section 14 - Transportation Information

DOT Proper Shipping Name:	Not Regulated	Packing Group:	N.A.
DOT Technical Name:	N.A.	Hazard Subclass:	N.A.
DOT Hazard Class:	N.A.	DOT UN/NA Number:	N.A.

Note: The shipping information provided is applicable for domestic ground transport only. Different categorization may apply if shipped via other modes of transportation and/or to non-domestic destinations.

Section 15 - Regulatory Information

CERCLA - SARA Hazard Category:

This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

Immediate Health Hazard, Chronic Health Hazard

SARA Section 313:

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Chemical Name	CAS Number	WT%
Ethylene glycol	107-21-1	0.5-1.5

Toxic Substances Control Act:

All ingredients in this product are either on TSCA inventory list, or otherwise exempt.

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States:

None

U.S. State Regulations:

New Jersey Right-to-Know:

The following materials are non-hazardous, but are among the top five components in this product:

Chemical Name	CAS Number	WT%
Non-Hazardous Polymer	Proprietary	10-30
Water	7732-18-5	10-30

Pennsylvania Right-to-Know:

The following non-hazardous ingredients are present in the product at greater than 3%:

Chemical Name	CAS Number	WT%
Non-Hazardous Polymer	Proprietary	10-30
Water	7732-18-5	10-30

California Proposition 65:

Warning: The following ingredients present in the product are known to the State of California to cause cancer:

Chemical Name	CAS Number	Definition	Date Listed	WT%
Silica, crystalline	14808-60-7	Carcinogenic.	Listed: October 1, 1988	0.1-1.0
Formaldehyde	50-00-0	Carcinogenic.	Listed: January 1, 1988	<0.02
Ethyl acrylate	140-88-5	Carcinogenic.	Listed: July 1, 1989	<0.009
Acetaldehyde	75-07-0	Carcinogenic.	Listed: April 1, 1988	<0.002
Acrylonitrile	107-13-1	Carcinogenic.	Listed: July 1, 1987	<0.0003
Acrylamide	79-06-1	Carcinogenic.	Listed: January 1, 1990	<0.0001

Warning: The following ingredients present in the product are known to the State of California to cause birth defects or other reproductive harm:

None

Section 16 - Other Information

HMIS Ratings:

Health: 1 Flammability: 1 Reactivity: 0 Personal Protection: B

VOLATILE ORGANIC COMPOUNDS, GR/LTR: 39.1 LB/GAL: 0.3 WT%: 1.700

REASON FOR REVISION: Periodic Update

Legend:

N.A. – Not Applicable

ACGIH – American Conference of Governmental Industrial Hygienists

N.E. – Not Established

SARA – Superfund Amendments and Reauthorization Act of 1986

N.D. – Not Determined

NJRTK – New Jersey Right-to-Know Law

VOC – Volatile Organic Compound

OSHA – Occupational Safety and Health Administration

PEL – Permissible Exposure Limit

HMIS – Hazardous Materials Identification System

TLV – Threshold Limit Value

NTP – National Toxicology Program

STEL – Short Term Exposure Limit

CEIL – Ceiling Exposure Limit

LD50 – Lethal Dose 50

LC50 – Lethal Concentration 50

F – Degree Fahrenheit

C – Degree Celsius

MSDS – Material Safety Data Sheet

CASRN – The Chemical Abstracts Service Registry Number

DAP believes the data and statements contained herein are accurate as of the date hereof. They are offered in good faith as typical values and not as a product specification. **NO WARRANTY OF MERCHANTABILITY, WARRANTY OF FITNESS FOR ANY PARTICULAR PURPOSE OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, IS MADE WITH REGARD TO THE INFORMATION HEREIN PROVIDED OR THE PRODUCT TO WHICH THE INFORMATION REFERS.** Since this document is intended only as a guide to the appropriate use and precautionary handling of the referenced product by a properly trained person, it is therefore the responsibility of the user to (i) review the recommendations with due consideration for the specific context of the intended use and (ii) determine if they are appropriate.

<End of MSDS>

Fiche signalétique

24 heures – Numéros de téléphone en cas d'urgence:

Urgence médicale: 1-800-327-3874
1-513-558-5111
Urgence transport: 1-800-535-5053
1-352-323-3500

NOTE: Les numéros de téléphone en cas d'urgence doivent être utilisés uniquement lors de déversement, de fuite, d'incendie, d'exposition ou d'accident impliquant des produits chimiques.

IMPORTANT: Lire attentivement cette fiche signalétique avant de manipuler ou de disposer de ce produit. Remettre ces informations aux employés, clients et utilisateurs de ce produit. Ce produit est régi sous la gouverne de l'OSHA, Communication de renseignements à l'égard de matières dangereuses, et ce document a été préparé pour répondre aux exigences de ces standards. Les significations pour toutes les abréviations utilisées dans cette fiche signalétique sont décrites à la Section 16.

Section 1 – Identification du produit et de la compagnie

This MSDS is offered in English upon request.

Los Datos de Seguridad del Producto pueden obtenerse en Espanol si lo requiere.

Nom du produit: Alex Plus - SellaPro Selante - Toutes couleurs **Date de révision:** 04/22/2005

Numéro UPC: 18103 18118 18120 18122 18124 18126
18128 18130 18134 18136 18139 18152
18172 18656 30108 35000 35004 35006
35008 35010 35012 35014 74225 74230
74241 74243 74250 74254 74256 74258
74260 74270 74275 76250 **Date d'abrogation:** 04/22/2005

Utilisation du produit/Classe: Calfeutrante au latex **Numéro de fiche:** 00010002001

Fabricant: DAP Inc.
2400 Boston Street Suite 200
Baltimore, MD 21224-4723
888-327-8477 (Pour toute information non urgente)

Section 2 - Composition / Ingrédients dangereux

Nom Chimique	CASRN	Poids%	ACGIH TWA	ACGIH STEL	ACGIH CEIL	OSHA TWA	OSHA STEL	OSHA CEIL	Peau
Pierre chaux	1317-65-3	40-70	10 MGM3	N.E.	N.E.	5 MGM3	N.E.	N.E.	Non
Di(C7, C9) Ester. Britannique & Lin aïre	PTHALATE ESTER	1-5	N.E.	N.E.	N.E.	N.E.	N.E.	N.E.	Non
Dioxyde de titane	13463-67-7	0.1-1.0	10 MGM3	N.E.	N.E.	15 MGM3	N.E.	N.E.	Non
Noir de carbone	1333-86-4	0.0-1.5	3.5 MGM3	N.E.	N.E.	3.5 MGM3	N.E.	N.E.	No
Silice cristalline	14808-60-7	0.1-1.0	0.05 MGM3	N.E.	N.E.	(10 % SiO2) / 2 MGM3	N.E.	N.E.	Non
thyl ne glycol	107-21-1	0.1-1.0	N.E.	N.E.	100 MGM3	N.E.	N.E.	N.E.	Non
Ammoniac	7664-41-7	0.010	25 PPM	35 PPM	N.E.	50 PPM	N.E.	N.E.	Non
Formald hyde	50-00-0	0.02	N.E.	N.E.	0.3 PPM	0.75 PPM	2 PPM	N.E.	Non
Acrylate d' thyle	140-88-5	0.009	5 PPM	15 PPM	N.E.	25 PPM	N.E.	N.E.	Oui
Ac tal d hyde	75-07-0	0.002	N.E.	N.E.	25 PPM	200 PPM	N.E.	N.E.	Non
Acrylonitrile	107-13-1	0.0003	2 PPM	N.E.	N.E.	2 PPM	10 PPM	N.E.	Oui

Notes concernant l'exposition:

50-00-0 Formaldéhyde est une substance régie spécialement selon les standards d'exposition à des produits chimiques spécifiques établis par l'OSHA. Pour de plus amples informations concernant cette substance, consulter l'OSHAS 29 CFR 1910.1048. Les informations concernant les problèmes médicaux à surveiller sont à l'Appendice C de l'OSHAS 29 CFR 1910.1048.

107-13-1 Acrylonitrile est une substance régie spécialement selon les standards d'exposition à des produits chimiques spécifiques établis par l'OSHA. Pour de plus amples informations concernant cette substance, consulter l'OSHAS 29 CFR 1910.1045. Les informations concernant les problèmes médicaux à surveiller sont à l'Appendice C de l'OSHAS 29 CFR 1910.1045.

Important: Les limites d'exposition permises (LEP) décrites proviennent du Department of Labor des États-Unis, règlement final concernant les valeurs d'exposition moyennes pondérées de l'OSHA (CFR 29 1910.1000); ces limites peuvent varier selon les États.

Note: Prendre tous les moyens selon les circonstances afin de prévenir ou réduire toute exposition de la peau des employés aux substances portant la mention OUI dans la colonne PEAU du tableau ci-dessus. Utiliser des gants, une combinaison, des lunettes à verres teintés, tout autre équipement de protection personnel adéquat, les contrôles techniques et les pratiques appropriées au type de travail.

Section 3 – Identification des dangers

Urgences générales: Un Color la P te avec un l'odeur d'Ammoniaque Tr s Insignifiante. AVERTISSEMENT Nocif si aval ou absorbé par la peau. Peut causer une irritation des yeux, de la peau, du nez, de la gorge et des voies respiratoires. Ce produit contient du glycol d' thyl ne.

Consulter les autres sections de cette fiche signalétique pour des informations plus détaillées.

Effets de surexposition – Contact oculaire: Peut causer une irritation des yeux.

Effets de surexposition – Contact cutané: Nocif en cas d'absorption par la peau. Peut entraîner une sensibilisation par contact avec la peau. Peut causer des irritations de la peau et/ou dermatites.

Effets de surexposition – Inhalation: Nocif en cas d'ingestion. Peut irriter le système respiratoire. L'inhalation des vapeurs peut causer une irritation du nez, de la gorge, des poumons et des voies respiratoires. L'exposition prolongée, ou répétée, ou de fortes concentrations peut provoquer un affaiblissement et une dépression du système nerveux central.

Effets de surexposition – Ingestion: Nocif si ingéré.

Effets de surexposition – Dangers chroniques: Un contact excessif et répété avec la peau peut causer une irritation et possiblement une dermatite. Une exposition excessive et répétée peut causer des lésions au système respiratoire. Une exposition excessive peut causer des lésions aux reins, au système cardiovasculaire, la peau et au foie.

La vapeur de formaldéhyde est une substance cancérigène animale connue selon OSHA et NTP et est probablement considérée cancérigène aux humains par l'inhalation. L'Agence Internationale pour la Recherche sur le Cancer considère du formaldéhyde pour être une substance cancérigène humaine.

Une exposition excessive et répétée à l' thyl ne glycol peut causer des lésions aux reins et au foie. Les études en laboratoire menées sur des animaux ont démontré que l'inhalation répétée d' thyl ne glycol cause des changements néfastes du système cardiovasculaire. Lors d'études en laboratoire sur les animaux, il a été démontré que l' thyl ne glycol cause des anomalies congénitales.

Voie(s) d'absorption: Peau le Contact, Inhalation, Oeil le Contact

Problèmes médicaux aggravés lors d'exposition au produit : Aucune connue.

Section 4 – Premiers soins

Premiers soins – Contact oculaire: En cas de contact avec les yeux, rincer abondamment avec de l'eau pendant au moins 15 minutes ou jusqu'à ce que l'irritation disparaisse. Obtenir des soins médicaux immédiatement.

Premiers soins – Contact cutané: Laver immédiatement et abondamment avec de l'eau et du savon l'eau pendant au moins 15 minutes. Si les symptômes persistent, obtenir des soins médicaux. Enlever et laver les vêtements contaminés.

Premiers soins – Inhalation: En cas d'inhalation, transporter la personne exposée à l'air frais. Si elle a de la difficulté à respirer, quitter les lieux afin d'obtenir de l'air frais. Si la difficulté à respirer persiste, obtenir des soins médicaux immédiatement.

Premiers soins – Ingestion: En cas d'ingestion, NE PAS FAIRE VOMIR. Obtenir des soins médicaux immédiatement.

Note au médecin: Pas d'information.

COMMENTAIRES: En cas d'apparition d'une irritation ou de complications suite à une exposition au produit, communiquer immédiatement avec l'urgence médicale au 1-800-327-3874.

Section 5 – Mesures de protection en cas d'incendie

Point d'éclair, ° F (° C): Plus grand que 200 **Limite d'explosibilité inférieure, %:** Pas Etabli
degrés Fahrenheit

Méthode: (Seta A Fermila Tasse)

Limite d'explosibilité supérieure, %: Pas Etabli

Moyens d'extinction: Dioxyde de carbone, Sèche Chimique, Mousse, Arroser le Brouillard

Risques particuliers d'explosions ou d'ignition: Pas de mesures spéciales de protection requises pour la lutte contre le feu.

Procédures spéciales de lutte contre les incendies: Porter un respirateur autonome pression d'air (approuvé NIOSH ou équivalent) et un équipement de protection personnel complet. Utiliser une lance-brouillard afin de refroidir les contenants exposés.

Section 6 – Mesures en cas de déversement accidentel

Procédures de nettoyage: Porter un équipement de protection personnel approprié tel que spécifié à la Section 8. Utiliser un matériau absorbant ou gratter le matériau sec puis le déposer dans un contenant.

Section 7 – Manutention et entreposage

Manutention: TENIR HORS DE LA PORTÉE DES ENFANTS NE PAS AVALER. Éviter de respirer les vapeurs. Utiliser seulement si la ventilation est adéquate. Laver vigoureusement après la manipulation. Évitez de respirer les vapeurs et ne laissez pas le produit venir en contact avec les yeux, la peau ou les vêtements. Ouvrir toutes les fenêtres et les portes ou utiliser tout autre moyen afin d'assurer une ventilation en croisé et l'entrée d'air frais durant l'application et le temps de séchage. L'odeur n'est pas un critère valable pour déterminer les conditions de danger.

Entreposage: Refermer les contenants après usage. Entreposer les contenants loin de la chaleur excessive ou du froid excessif. Entreposer loin des produits caustiques et des agents oxydants. Ne pas entreposer des températures supérieures à 120 °F (48,8 °C).

Section 8 – Contrôles d'exposition / Protection personnelle

Mesures de précaution: S'il vous plaît se référer aux autres sections et aux autres sous-sections de ce MSDS.

Contrôles d'ingénierie: Une bonne ventilation centrale devrait suffire pour contrôler les niveaux de matières en suspension. Assurer une ventilation adéquate, surtout dans les endroits clos. Une ventilation locale près de la source d'émission peut être nécessaire pour maintenir la concentration ambiante au-dessous des niveaux limites recommandés.

Protection des voies respiratoires: En cas de ventilation insuffisante, porter un appareil respiratoire approprié. Dans certaines circonstances, lorsque le niveau anticipé de concentrations en suspension est supérieur aux limites d'exposition permises, il est nécessaire de porter un respirateur purificateur d'air muni d'une cartouche ou d'un filtre à cartouche anti-vapeurs organiques. Un programme de protection respiratoire défini selon les normes de l'OSHA 1910.134 et de l'ANSI Z88.2 doit être appliqué chaque fois que les conditions sur les lieux de travail exigent de porter un respirateur.

Protection de la peau: gants en caoutchouc

Protection des yeux: Lunettes à lanières ou lunettes de sécurité avec boucliers latéraux.

Équipements de protection additionnels: inutile dans les conditions normales d'utilisation.

Pratiques hygiéniques: Se laver les mains avant les pauses et à la fin de la journée. Enlever et laver les vêtements contaminés avant utilisation.

Section 9 – Propriétés physiques et chimiques

Point d'ébullition:	210 - 220 F	Densité de vapeur:	Plus lourd Qu'Air
Odeur:	L'Ammoniacque très Insignifiante	Limite de détection olfactive:	Pas Etabli
Apparence:	Color	Taux d'évaporation:	Plus lent Que Acétate de n-Butyl
Solubilité dans l'eau (H₂O):	Pas Etabli	Poids spécifique:	1.693
Point de congélation:	Pas Etabli	Taux de pH:	Entre 7,0 et 12,0
Pression de vapeur:	Pas Etabli	Viscosité:	Pas Etabli
État physique:	Pâte		

(Consulter la Section 16 pour connaître la signification des abréviations))

Section 10 – Stabilité et réactivité

Conditions à éviter: Chaleur excessive ou froid excessif.

Incompatibilité: Incompatible avec les bases fortes et les oxydants.

Produits de décomposition dangereux: Produits de décomposition habituels : oxydes de carbone (COx) et oxydes d'azote (NOx).

Risque de polymérisation: Aucune polymérisation dangereuse ne surviendra dans des conditions normales d'utilisation.

Stabilité: Stable dans les conditions recommandées de stockage.

Section 11 – Propriétés toxicologiques

Produit DL50: Pas Etabli

Produit CL50: Pas Etabli

CASRN	Nom Chimique	LD50	LC50	Poids%
PHTHALATE ESTER	Di(C7, C9) Ester. Britannique & Lin aïre	Oral Rat: 10 mg/kg	-----	1-5
107-21-1	thyl ne glycol	Rat:4700 mg/kg	Rat:10876 mg/kg	0.1-1.0
7664-41-7	Ammoniac	-----	Rat:2000 ppm/4H	0.010
50-00-0	Formald hyde	-----	Rat:203 mg/m3	0.02
140-88-5	Acrylate d' thyle	-----	Rat:1414 ppm/4H	0.009
75-07-0	Ac tald hyde	-----	Rat:13300 ppm/4H	0.002
107-13-1	Acrylonitrile	Oral Rat:78 mg/kg	Rat:425 ppm/4H	0.0003

Effets cancérogènes:

Numéro CAS	Nom Chimique	ACGIH	OSHA	IARC	NTP	Poids%
13463-67-7	Dioxyde de titane	-----	-----	Classification pas possible des donn es actuelles.	-----	0.1-1.0
14808-60-7	Silice cristalline	Pr sum e canc rog ne humaine.	-----	-----	Canc rog ne connue.	0.1-1.0
50-00-0	Formald hyde	Pr sum e canc rog ne humaine.	Le danger potentiel de cancer.	Canc rog ne humaine.	Canc rog ne pr vue.	0.02
140-88-5	Acrylate d' thyle	-----	-----	Canc rog ne possible.	-----	0.009
75-07-0	Ac tald hyde	Confirm e canc rog ne animale avec le pertinence inconnu aux humains.	-----	Canc rog ne possible.	Canc rog ne pr vue.	0.002
107-13-1	Acrylonitrile	Confirm e canc rog ne animale avec le pertinence inconnu aux humains.	Danger de cancer.	Canc rog ne possible.	Canc rog ne pr vue.	0.0003
79-06-1	Acrylamide	Confirm e canc rog ne animale avec le pertinence inconnu aux humains.	-----	Canc rog ne probable.	Canc rog ne pr vue.	0.0001

Données significatives possiblement pertinentes à l'humain: Ce produit contient les quantités de trace de formald hyde libre. OSHA et NTP identifient du formald hyde comme une substance canc rog ne potentielle. IARC identifie du formald hyde comme une substance canc rog ne humaine. Le formald hyde a t montr pour causer des mutations dans une assortiment de syst mes de test in vitro, la signification dont l' tre humain inconnu. Des tudes d'inhalation d'une dur e de deux ans effectu es sur le rat ont mis en vidence des effets canc rig nes sur le syst me respiratoire pour des concentrations de 15 ppm de formald hyde. Le risque devrait tre minime si la ventilation est ad quate et maintient le niveau de concentrations de formald hyde en suspension sous les limites d'exposition permises.

Maintenir une ventilation ad quate afin d'abaisser les niveaux d'exposition sous les limites tablies par l' OSHA / ACGIH. L'analyse de l'air ambiant sur les lieux de travail peut s'av rer n cessaire afin de d terminer les niveaux d'exposition au formald hyde. Ce produit contient des traces d'acrylonitrile. Il ne rencontre pas les standards de l' OSHA 29 CFR 1910.1045, paragraphe (a) (2) (ii) concernant l'acrylonitrile. L'acrylonitrile a t classifi e potentiellement canc rig ne pour l'humain par l' AIRC, canc rig ne par l' OSHA et canc rig ne raisonnablement anticip pour l'humain par la NTP.

Section 12 – Information écologique

Information écologique: Aucune d gradation de l'environnement n'est connue ou pr visible dans les conditions normales d'utilisation.

Section 13 – Information sur la mise au rebut

Information concernant la mise au rebut: Disposer de ce mat riau en respectant les lois f d rales, provinciales et municipales. Les lois et restrictions provinciales et municipales sont complexes et peuvent diff rer

des lois fédérales. La responsabilité de la disposition appropriée des déchets appartient au propriétaire des déchets.

Code de mise au rebut de l'Agence de protection de l'environnement (40 CFR Section 261): Aucun

Section 14 – Étiquetage selon le Ministère des Transports

Nom du produit expédié: Pas Régulé

Nom technique: Pas Applicable

Classe de danger: Pas Applicable

Groupe d'emballage: Pas Applicable

Classe de transport: Pas Applicable

Numéro UN/NA: Pas Applicable

Note : L'information d'expédition fournie est applicable pour le transport de sol domestique seulement. La catégorisation diffidente peut s'appliquer si expédié via les autres modes de et/ou de transport aux destinations non résidentielles.

Section 15 – Information sur les règlements

CERCLA - Catégories de dangers selon le SARA:

Ce produit a été revu en conformité avec les Catégories de dangers établies par l'Agence de protection de l'environnement et promulguées aux Sections 311 et 312 du Superfund Amendment and Reauthorization Act de 1986 (SARA Titre III). Selon les définitions applicables, il est considéré répondre aux catégories suivantes :

RISQUE DE SANTE IMMEDIAT, RISQUE DE SANTE CHRONIQUE

SARA SECTION 313 :

Ce produit contient les substances suivantes assujetties aux normes de déclaration de la Section 313, du Titre III de la Superfund Amendments and Reauthorization Act de 1986 et du 40 CFR partie 372 :

Nom Chimique	Numéro CAS	Poids%
Éthylène glycol	107-21-1	0.5-1.5

LOI SUR LE CONTRÔLE DES SUBSTANCES TOXIQUES:

Tous ingrédients dans ce produit sont ou sur la liste d'inventaire de TSCA, ou autrement exempter.

Ce produit contient les substances chimiques suivantes déclarer selon les normes TSCA 12(B) si exporté l'extérieur des États-Unis:

Aucun

Lois particulières selon les états aux États-Unis:

NEW JERSEY RIGHT-TO-KNOW :

Les substances suivantes sont non-dangereuses mais sont comptées parmi les 5 principaux ingrédients composant ce produit:

Nom Chimique	Numéro CAS	Poids%
Polymère non-Hasardeux	De propriété	10-30
Eau	7732-18-5	10-30

PENNSYLVANIA RIGHT-TO-KNOW:

Les substances suivantes sont non-dangereuses mais sont présentes plus de 3% dans ce produit:

Nom Chimique	Numéro CAS	Poids%
Polymère non-Hasardeux	De propriété	10-30
Eau	7732-18-5	10-30

PROPOSITION 65 DE CALIFORNIE:

AVERTISSEMENT Les produits chimiques listés ci-dessous et contenus dans ce produit sont reconnus par l'état de la Californie pour causer le cancer:

Nom Chimique	Numéro CAS	Définition	Dater Enuméré	Poids%
Silice cristalline	14808-60-7	Canc.rog.ne.	Listed: October 1, 1988	0.1-1.0
Palygorskite (Attapulgite)	12174-11-7	Canc.rog.ne.	Listed: December 28, 1999	0.1-1.0
Formaldéhyde	50-00-0	Canc.rog.ne.	Listed: January 1, 1988	0.02
Acrylate d'éthyle	140-88-5	Canc.rog.ne.	Listed: July 1, 1989	0.009
Acétaldéhyde	75-07-0	Canc.rog.ne.	Listed: April 1, 1988	0.002
Acrylonitrile	107-13-1	Canc.rog.ne.	Listed: July 1, 1987	0.0003
Acrylamide	79-06-1	Canc.rog.ne.	Listed: January 1, 1990	0.0001

AVERTISSEMENT Les produits chimiques listés ci-dessous et contenus dans ce produit sont reconnus par l'état de la Californie pour causer le cancer, des anomalies congénitales ou d'autres problèmes reliés à la reproduction:

Aucun

Section 16 – Autres informations

Classification des dangers:

Santé: 1 Inflammabilité: 1 Réactivité: 0 Protection personnelle: B

COMPOSÉ ORGANIQUE VOLATIL, G/LITRE: 39.1 LB/GALLON: 0.3 POIDS %: 1.700

RAISONS DE RÉVISION: Mise à jour périodique

Légende:

N.A. – Non applicable	LD50 – Dose létale 50
N.D. – Non établi	LC50 – Concentration létale 50
N.D. – Non déterminé	NJRTK – New Jersey Right-to-Know Law
OSHA – Occupational Safety and Health Administration	VOC – Composé organique volatil
HMIS – Hazardous Materials Identification System	PEL – Limite d'exposition permise
TWA – Valeur d'exposition moyenne pondérée	TLV – Limite tolérable d'exposition
NTP – National Toxicology Program	F – Degré Fahrenheit
STEL – Limite d'exposition court terme	C – Degré Celsius
CASRN – Numéro enregistré selon le Chemical Abstracts Service	
ACGIH – American Conference of Governmental Industrial Hygienists	
SARA – Superfund Amendments and Reauthorization Act de 1986	
CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act	

DAP croit que les données et renseignements stipulés dans cette fiche signalétique sont précis à la date de rédaction de cette

fiche. Ces données sont offertes en toute bonne foi et représente des valeurs standard sans toutefois être des spécifications du produit. **AUCUNE GARANTIE SUR LA QUALITÉ MARCHANDE, GARANTIE D'APTITUDE POUR AUCUN TYPE D'EMPLOI PARTICULIER OU TOUTE AUTRE FORME DE GARANTIE N'EST EXPRESSÉMENT OU IMPLICITEMENT OFFERTE EN REGARD DES INFORMATIONS FOURNIES DANS CETTE FICHE OU DES INFORMATIONS RELATIVES AU PRODUIT.** Cette fiche est produite uniquement à titre de guide pour les personnes formées à cet effet afin qu'elles puissent appliquer les procédures appropriées de manutention auxquelles le produit réfère. Toutefois, c'est la responsabilité chaque utilisateur de revoir les recommandations selon le contexte spécifique de l'utilisation prévue et de déterminer si ces procédures sont appropriées.

<Fin de la fiche signalétique>

Hoja de datos de la seguridad de los materiales

Números telefónicos de emergencia las 24 horas:
Emergencias médicas: 1-800-327-3874
1-513-558-5111
Transporte:
1-800-535-5053
1-352-323-3500

NOTA: Los números de emergencia del Centro de Respuesta Nacional sólo se deben usar en caso de emergencias químicas que involucren un derramamiento, incendio, exposición o accidente que tengan que ver con químicos

IMPORTANTE: Lea esta hoja de datos de la seguridad de los materiales antes de manipular o desechar este producto, y entregue esta información a los empleados, clientes y usuarios de este producto. Este producto está cubierto por la norma de comunicación de riesgos OSHA, y este documento fue preparado de acuerdo con los requisitos de dicha norma. Todos los términos abreviados utilizados en este documento se describen con más detalles en la sección 16.

Sección 1 - Información del producto químico/ compañía

Esta hoja de datos de la seguridad de los materiales está disponible en francés canadiense y en español a su solicitud.
On peut demander cette MSDS a la langue Francaise Canadienne.

Nombre de producto: Alex Plus -SellaPro Selante - Todo colora

Fecha de revisión: 04/21/2005

Número de UPC del producto: 18103 18118 18120 18122 18124 18126 18128
18130 18134 18136 18139 18152 18172 18656
30108 35000 35004 35006 35008 35010 35012
35014 74225 74230 74241 74243 74250 74254
74256 74258 74260 74270 74275 76250

Reemplaza a: 04/21/2005

Uso/ clase del producto: Calafateo de Latex

Número de hoja de datos (MSDS): 00010002001

Fabricante: DAP Inc.
2400 Boston Street Suite 200
Baltimore, MD 21224-4723
888-327-8477 (asuntos de no emergencia)

Sección 2 - Composición / Información sobre los Ingredientes

Nombre Químico	CASRN	Peso%	ACGIH TWA	ACGIH STEL	ACGIH CEIL	OSHA TWA	OSHA STEL	OSHA CEIL	Piel
Carbonatodecalcio	1317-65-3	40-70	10 MGM3	N.E.	N.E.	5 MGM3	N.E.	N.E.	No
Di(C9 & C&) Ester Ramific & Lineal	PTHALATE ESTER	1-5	N.E.	N.E.	N.E.	N.E.	N.E.	N.E.	No
Dioxidodetitanio	13463-67-7	0.1-1.0	10 MGM3	N.E.	N.E.	15 MGM3	N.E.	N.E.	No
Carbon Black	1333-86-4	0.0-1.5	3.5 MGM3	N.E.	N.E.	3.5 MGM3	N.E.	N.E.	No
Silicecristalina	14808-60-7	0.1-1.0	0.05 MGM3	N.E.	N.E.	(10 % SiO2) / 2 MGM3	N.E.	N.E.	No
Etilen Glicol	107-21-1	0.1-1.0	N.E.	N.E.	100 MGM3	N.E.	N.E.	N.E.	No
Trihidruo De Nitrogeno	7664-41-7	0.010	25 PPM	35 PPM	N.E.	50 PPM	N.E.	N.E.	No
Formaldehido	50-00-0	0.02	N.E.	N.E.	0.3 PPM	0.75 PPM	2 PPM	N.E.	No
Ester Etilico Del Acido 2-Propenoico	140-88-5	0.009	5 PPM	15 PPM	N.E.	25 PPM	N.E.	N.E.	S
Aldeh doac tico	75-07-0	0.002	N.E.	N.E.	25 PPM	200 PPM	N.E.	N.E.	No
Cianuro De Vinilo	107-13-1	0.0003	2 PPM	N.E.	N.E.	2 PPM	10 PPM	N.E.	S

Notas sobre la exposición:

50-00-0 Formaldehído es una sustancia especialmente regulada para la cual existe una norma OSHA para la exposición a un químico específico. La información detallada respecto a esta sustancia se encuentra en 29 CFR 1910.1048. La información respecto a la vigilancia médica para esta sustancia se puede encontrar en el apéndice C de 29 CFR 1910.1048.

107-13-1 Acrylonitrile es una sustancia especialmente regulada para la cual existe una norma OSHA para la exposición a un químico específico. La información detallada respecto a esta sustancia se encuentra en 29 CFR 1910.1045. La información respecto a la vigilancia médica para esta sustancia se puede encontrar en el apéndice C de 29 CFR 1910.1045.

Importante: Los niveles de exposición permitidos (PEL) señalados son suministrados por el Dept. del Trabajo de EE.UU., Límites de la norma final OSHA (CFR 29 1910.1000); Estos límites pueden variar de estado a estado.

Nota: Se debe evitar o reducir al máximo la exposición de la piel de un empleado a sustancias que tengan "S" en la columna "PIEL" en la tabla anterior, según lo permitan las circunstancias mediante el uso de guantes, ropa de protección, gafas de seguridad y otros equipos personales de protección, controles de ingeniería o prácticas de trabajo.

Sección 3 - Identificación de riesgos

Generalidades sobre las emergencias: Un color pasta con una olor muy leve del amoníaco.

ADVERTENCIA Es dañino si se traga o absorbe por la piel. Podría causar irritación de los ojos, piel, nariz, garganta y tracto respiratorio. Este producto contiene glicol de etileno.

Consulte otras secciones de la hoja de datos de seguridad de los materiales para más información detallada.

Efectos de la sobre exposición - Contacto visual: Podría causar irritación a los ojos.

Efectos de la sobre exposición - Contacto de la piel: Dañino si se absorbe por la piel. Posibilidad de sensibilización en contacto con la piel. Puede causar irritaciones en la piel y/o dermatitis.

Efectos de la sobre exposición - Inhalación: Es dañino si se inhala. Las exposiciones prolongadas, repetidas o elevadas pueden causar debilidad y depresión del sistema nervioso central. Puede producir irritaciones en el sistema respiratorio. La inhalación de vapores puede causar irritación de la nariz, garganta, pulmones y tracto respiratorio.

Efectos de la sobre exposición - Ingestión: Dañino si se traga.

Efectos de la sobre exposición - Riesgos crónicos: El contacto prolongado y repetido de la piel podría causar irritación y posiblemente dermatitis. La exposición repetida o prolongada podría causar daños al sistema respiratorio. La sobre exposición podría causar daños cardiovasculares y en los riñones, piel e hígado.

El vapor del formaldehído es un cancerígeno animal conocido según OSHA y NTP y se considera posiblemente cancerígeno a humanos por aspiración. La Agencia Internacional para la Investigación en el Cáncer considera formaldehído para ser un cancerígeno humano.

El glicol de etileno puede causar daño al riñón e hígado con la sobre exposición prolongada y repetida. Los estudios han demostrado que la inhalación repetida al glicol de etileno ha producido cambios cardiovasculares adversos en los animales de laboratorio. Se ha demostrado que el glicol de etileno causa defectos de nacimiento en animales de laboratorio.

Ruta(s) principal de entrada: Piel el Contacto, Aspiración, Ojo el Contacto

Condiciones médicas que se pueden agravar a causa de la exposición: Ninguno conocido.

Sección 4 - Medidas de primeros auxilios

Primeros auxilios - Contacto visual: En caso de contacto, enjuague los ojos de inmediato con grandes cantidades de agua por al menos 15 minutos hasta que la irritación ceda. Obtenga atención médica de inmediato.

Primeros auxilios - Contacto de la piel: Lave inmediatamente con jabón y agua abundante por lo menos durante 15 minutos. Obtenga ayuda médica si los síntomas persisten. Retire y lave la ropa contaminada.

Primeros auxilios - Inhalación: Si se inhala, salga al aire fresco. Si se dificulta la respiración, abandone el área para obtener aire fresco. Si se experimenta dificultad continua para respirar, busque atención médica de inmediato.

Primeros auxilios - Ingestión: Si se traga, NO PROVOQUE EL VÓMITO. Obtenga atención médica de inmediato.

Nota para el médico: Sin información

COMENTARIOS: Llame para emergencias médicas al 1-800-327-3874 si surgiera cualquier irritación o complicación de cualquiera de las rutas de entrada anteriores.

Sección 5 - Medidas para combatir incendios

Punto de inflamación, F: Más que 200 grados Fahrenheit

Límite explosivo menor, %: No Establecido

Método: (Seta Cerr - Copa)

Límite explosivo mayor, %: No Establecido

Medios para extinguir: Bixido de carbono, Seque Sustancia Química, Espuma, Riegue Niebla

Riesgos inusuales de incendio y explosión: No se requieren medidas de protección especiales contra el fuego.

Procedimientos especiales para combatir incendios: Use un aparato para respiración auto-contenida con demanda de presión (aprobado por el Instituto NIOSH o equivalente) y equipo completo de protección. Use rociador de agua para enfriar las superficies expuestas.

Sección 6 - Medidas en caso de emisión accidental

Pasos a seguir en el caso de emisión o derramamiento de materiales: Use el equipo de protección correcto según lo especifica la Sección 8. Use material absorbente o raspe el material seco y coloque en un contenedor.

Sección 7 - Manejo y almacenamiento

Manejo: MANTENGA LEJOS DEL ALCANCE DE LOS NIÑOS NO TOME INTERNAMENTE. No respire los vapores. Use únicamente con ventilación adecuada. Lave a fondo después de manipular. Evitar respirar los vapores y el contacto con los ojos, la piel y la ropa. Abra todas las ventanas y puertas o use otros medios para garantizar una ventilación cruzada y la entrada de aire fresco durante la aplicación y el secado. Sentir el olor no es una advertencia adecuada de condiciones peligrosas.

Almacenamiento: Cierre el contenedor después de cada uso. Almacene los contenedores lejos del calor y congelamiento excesivos. Almacene lejos de sustancias corrosivas y oxidantes. No almacene a temperaturas por encima de 120 grados F.

Sección 8 - Controles de la exposición/ Protección personal

Medidas de precaución: Refírase por favor a otras secciones y subdivisiones de este MSDS.

Controles de ingeniería: Una buena ventilación general debería ser suficiente para controlar los niveles de transporte por el aire. Asegurarse de una ventilación adecuada, especialmente en locales cerrados. Puede ser necesaria la ventilación local de las fuentes de emisión para mantener las concentraciones ambientales por debajo de los límites de exposición recomendados.

Protección respiratoria: En caso de ventilación insuficiente, use equipo respiratorio adecuado. Un respirador para purificar el aire, aprobado por el NIOSH con cartucho de vapor orgánico podrá ser necesario bajo ciertas circunstancias donde se espera que las concentraciones de transporte por el aire superen los límites de exposición. Se debe seguir un programa de protección respiratoria que cumpla con los requisitos de OSHA 1910.134 y ANSI Z88.2 cada vez que las condiciones del lugar de trabajo exijan el uso de un respirador.

Protección de la piel: guantes de goma

Protección de la visión: Gafas de seguridad con protectores laterales.

Otro equipo de protección: no se precisa en el uso normal.

Prácticas higiénicas: Lávase las manos antes de los descansos y después de terminar la jornada laboral. Quitar y lavar la ropa contaminada antes de reutilizar.

Sección 9 - Propiedades físicas y químicas

Rango de ebullición:	210 - 220 F	Densidad del vapor:	Más pesado Que Aire
Olor:	Amoníaco muy Leve	Umbral de olor:	No Establecido
Aspecto:	Color	Índice de evaporación:	Más lento Que Acetato de N-butilo
Solubilidad en H2O:	No Establecido	Gravedad específica:	1.693
Punto de congelamiento:	No Establecido	pH:	Entre 7,0 y 12,0
Presión del vapor:	No Establecido	Viscosidad:	No Establecido
Estado físico:	Pasta		

(Ver sección 16 para la leyenda de las abreviaturas)

Sección 10 - Estabilidad y reactividad

Condiciones a evitar: Calentamiento y congelamiento excesivos.

Incompatibilidad: Incompatible con bases fuertes y agentes oxidantes.

Productos de descomposición peligrosos: Productos de descomposición normal, es decir, COx, NOx.

Polimerización peligrosa: No ocurrir polimerización peligrosa bajo condiciones normales.

Estabilidad: Estable bajo las condiciones de almacenamiento recomendadas.

Sección 11 - Información toxicológica

LD50 del producto: No Establecido

LC50 del producto: No Establecido

CASRN	Nombre Químico	LD50	LC50	Peso%
-------	----------------	------	------	-------

PHTHALATE ESTER	Di(C7, C9) Ester ramificado & Lineal	Oral Rat: 10 mg/kg	-----	1-5
107-21-1	Etilen Glicol	Rat:4700 mg/kg	Rat:10876 mg/kg	0.1-1.0
7664-41-7	Trihidruro De Nitrogeno	-----	Rat:2000 ppm/4H	0.010
50-00-0	Formaldehido	-----	Rat:203 mg/m3	0.02
140-88-5	Ester Etilico Del Acido 2 -Propenoico	-----	Rat:1414 ppm/4H	0.009
75-07-0	Aldeh doac tico	-----	Rat:13300 ppm/4H	0.002
107-13-1	Cianuro De Vinilo	Oral Rat:78 mg/kg	Rat:425 ppm/4H	0.0003

Carcinogenicidad:

Número CAS	Nombre Químico	ACGIH	OSHA	IARC	NTP	Peso%
13463-67-7	Dioxidodetitanio	-----	-----	Clasificaci n no posible de datos actuales.	-----	0.1-1.0
14808-60-7	Silic Cristalina	Cancer geno humano sospechado.	-----	-----	Cancer geno conocido.	0.1-1.0
50-00-0	Formaldehido	Cancer geno humano sospechado.	Peligro potencial de cancer.	Cancer geno humano.	Cancer geno anticipado.	0.02
140-88-5	Ester Etilico Del Acido 2 -Propenoico	-----	-----	Cancer geno posible.	-----	0.009
75-07-0	Aldeh doac tico	Cancer geno animal confirmado con la aplicabilidad desconocida a humanos.	-----	Cancer geno posible.	Cancer geno anticipado.	0.002
107-13-1	Cianuro De Vinilo	Cancer geno animal confirmado con la aplicabilidad desconocida a humanos.	Peligro de cancer.	Cancer geno posible.	Cancer geno anticipado.	0.0003
79-06-1	Acrilamida	Cancer geno animal confirmado con la aplicabilidad desconocida a humanos.	-----	Cancer geno probable.	Cancer geno anticipado.	0.0001

Datos significativos con posible relevancia para los humanos: Este producto contiene las cantidades de la huella de formaldeh do libre. OSHA y NTP identifican formaldeh do como un cancer geno potencial. IARC identifica formaldeh do como un cancer geno humano. El formaldeh do se ha mostrado para causar mutaciones en una variedad de en-vitros sistemas de la prueba, el significado de que a humanos es desconocido. En un estudio de inhalaci n con ratas durante dos a os se observaron efectos cancer genos en el sistema respiratorio con una concentraci n de 15 PPM de formaldeh do. El riesgo debe ser m nimo al usarse con ventilaci n adecuada para mantener la concentraci n atmosf rica del formaldeh do por debajo de los l mites de exposici n recomendados.

Mantenga ventilaci n adecuada para evitar la exposici n por encima de los l mites actuales de OSHA / ACGIH. Podr a ser necesario el monitoreo en el lugar de trabajo del aire para definir los niveles de exposici n al formaldeh do. Este producto contiene rastros de acrilonitrilo. Est exento del est ndar OSHA acrilonitrilo 29 CFR 1910.1045, par grafo (a) (2) (ii). El acrilonitrilo est clasificado por la IARC como posiblemente carcinog nico para humanos, por la agencia OSHA como carcinog nico y por la NTP como carcin geno humano con anticipaci n razonable.

Sección 12 - Información ecológica

Información ecológica: No se conocen ni esperan da os ecol gicos bajo uso normal.

Sección 13 - Información sobre desechos

Información sobre desechos: Deseche los materiales de acuerdo con todas las normas federales, estatales y locales. Las normas/ restricciones estatales y locales son complejas y pueden diferir de las normas federales. La responsabilidad de eliminar los desechos correctamente recae en el propietario de los desechos.

Código de desechos de EPA en caso de desecho (CFR 40 Sección 261): Ninguno

Sección 14 - Información sobre transporte

Nombre correcto para envío a DOT: No Regulado

Grupo de empaque: No Aplicable

Nombre técnico para DOT: No Aplicable

Sub-clase de riesgo: No Aplicable

Clase de riesgo para DOT: No Aplicable

Número UN/NA para DOT: No Aplicable

Nota: La información del envío proporcionada es aplicable para el transporte doméstico del suelo sólido. Categorización diferente puede aplicar si enviado vía otros modos del transporte y/o a destino no-domésticos.

Sección 15 - Información reglamentaria

Categoría de riesgo CERCLA - SARA:

Este producto ha sido revisado según las categorías de riesgo de EPA promulgadas según las secciones 311 y 312 de la Ley de enmienda y reautorización de fondos especiales de 1986 (SARA, por sus iniciales en inglés, Título III) y se considera, según las definiciones correspondientes, que cumple con las siguientes categorías:

PELIGRO DE SALUD INMEDIATO, PELIGRO DE SALUD CRÓNICO

Sección 313 de la ley SARA:

Este producto contiene las siguientes sustancias sujetas a los requisitos de reporte de la sección 313 del título III de la ley SARA de 1986 y 40 CFR parte 372:

Nombre Químico	Número CAS	Peso%
Etilen Glicol	107-21-1	0.5-1.5

Ley para el control de sustancias tóxicas:

Todos los ingredientes en este producto son o en lista de inventario de TSCA, o de otro modo eximia.

Este producto contiene las siguientes sustancias químicas de acuerdo con los requisitos de reporte de la ley TSCA 12(B) si es exportado desde los Estados Unidos:

Ninguno

Regulaciones estatales de EE.UU.:

Ley del Derecho a saber de New Jersey:

Los siguientes materiales no representan peligro, pero están entre los primeros cinco componentes de este producto:

Nombre Químico	Número CAS	Peso%
Polímero no-peligroso	Propietario	10-30
Aqua	7732-18-5	10-30

Ley del Derecho a saber de Pennsylvania:

Los siguientes ingredientes no peligrosos están presentes en el producto en una proporción mayor a 3%:

Nombre Químico	Número CAS	Peso%
Pol mero no-peligroso	Propietario	10-30
Aqua	7732-18-5	10-30

Propuesta 65 de California:

Advertencia: Los siguientes ingredientes presentes en el producto son conocidos para el Estado de California por causar cáncer:

Nombre Químico	Número CAS	Definición	Fecha Listó	Peso%
Silicecristalina	14808-60-7	Cancer geno.	Listed: October 1, 1988	0.1-1.0
Palygorskite (Attapulgite)	12174-11-7	Cancer geno.	Listed: December 28, 1999	0.1-1.0
Formaldehído	50-00-0	Cancer geno.	Listed: January 1, 1988	0.02
Ester Etilico Del Acido 2-Propenoico	140-88-5	Cancer geno.	Listed: July 1, 1989	0.009
Aldehído acético	75-07-0	Cancer geno.	Listed: April 1, 1988	0.002
Cianuro De Vinilo	107-13-1	Cancer geno.	Listed: July 1, 1987	0.0003
Acrilamida	79-06-1	Cancer geno.	Listed: January 1, 1990	0.0001

Advertencia: Los siguientes ingredientes presentes en el producto son conocidos para el Estado de California por causar defectos de nacimiento u otros daños reproductivos:

Ninguno

Sección 16 - Otra información

Índices HMIS:

Salud: 1 Inflamabilidad: 1 Reactividad: 0 Protección personal: B

COMPONENTES ORGÁNICOS VOLÁTILES, GR/LTR: 39.1 **LB/GAL:** 0.3 **WT%:** 1.700

RAZÓN DE LA REVISIÓN: Periódico Actualiza

Leyenda:

N.E. - No establecido

N.A. - No aplica

NJRTK - Ley del Derecho a saber de New Jersey

N.D. - No determinado

OSHA - Administración de la seguridad y salud ocupacional

LD50 - Dosis letal 50

PEL - Límites permitidos de exposición

C - Grados centígrados

VOC - Componente orgánico volátil

NTP - Programa nacional de toxicología

STEL - Límite de exposición a corto plazo

CEIL - Límite máximo de exposición

MSDS - Hoja de datos de la seguridad de los materiales

LC50 - Concentración letal 50

HMIS - Sistema de identificación de materiales peligrosos

F - Grados Fahrenheit

CASRN - Número de registro de servicios de abstractos químicos



TLV - Valor del límite umbral

ACGIH - Conferencia Americana de Higienistas Industriales gubernamentales

SARA - Ley de enmienda y reautorización de fondos especiales de 1986 (SARA)

DAP cree que los datos y las declaraciones contenidos en el presente son exactos hasta la fecha. Se ofrecen de buena fe como valores típicos y no como las especificaciones del producto. **NO SE OFRECE NINGUNA GARANTÍA DE COMERCIALIZACIÓN, IDONEIDAD PARA UN PROPÓSITO EN PARTICULAR O CUALQUIER OTRA GARANTÍA, EXPRESA O IMPLÍCITA, CON RESPECTO A LA INFORMACIÓN SUMINISTRADA EN EL PRESENTE O DEL PRODUCTO AL CUAL LA INFORMACIÓN SE REFIERE.** Dado que este documento tiene la intención de ser una guía únicamente para el uso correcto y el manejo preventivo del producto de la referencia por parte de personas correctamente entrenadas, es responsabilidad del usuario (i) revisar las recomendaciones con especial consideración al contexto específico del uso que se pretende y (ii) determinar si son correctas.

<Final de la hoja de datos de la seguridad de los materiales>

	<div style="border: 1px solid black; padding: 10px; text-align: center;"> <h2 style="margin: 0;">Material Safety Data Sheet</h2> </div> <div style="text-align: center; margin-top: 10px;">  <p>An RPM Company</p> </div>	<div style="border: 1px solid black; padding: 5px;"> 24 Hour Emergency Phone Numbers: Medical/Poison Control: In U.S.: Call 1-800-222-1222 Outside U.S.: Call your local poison control center Transportation/National Response Center: 1-800-535-5053 1-352-323-3500 </div> <div style="border: 1px solid black; padding: 5px; margin-top: 5px;"> <p>.....</p> <p>•NOTE: The National Response Center emergency numbers to be used only in the event of chemical emergencies involving a spill, leak, fire, exposure or accident involving chemicals.</p> <p>.....</p> </div>
<p>IMPORTANT: Provide this information to employees, customers, and users of this product. Read this MSDS before handling or disposing of this product. This product is covered by the OSHA Hazard Communication Standard and this document has been prepared in accordance with requirements of this standard. All abbreviated terms used in this MSDS are further described in Section 16.</p>		

Section 1 - Chemical Product / Company Information

This Material Safety Data Sheet is available in Canadian French and Hispanic American Spanish upon request.
 On peut demander cette fiche signalétique (MSDS) a la langue francaise-canadienne.
 Los Datos de Seguridad del Producto pueden obtenerse en Espanol si lo requiere.

Product Name: DAP Watertight Concrete Filler & Sealant
Product UPC Number: 070798180215
Product Use/Class: Latex Concrete Sealant
Manufacturer: DAP Inc.
 2400 Boston Street Suite 200
 Baltimore, MD 21224-4723
 888-327-8477 (non-emergency matters)

Revision Date: 09/03/2009
Supersedes: 12/23/1999
MSDS Number: 00010010001

Section 2 - Hazards Identification

Emergency Overview: A gray paste product with a very slight ammonia odor. **WARNING** May cause eye, skin, nose, throat and respiratory tract irritation. Harmful if swallowed or absorbed through the skin. This product contains ethylene glycol.

Refer to other MSDS sections for other detailed information.

Effects Of Overexposure - Eye Contact: May cause eye irritation.

Effects Of Overexposure - Skin Contact: Harmful if absorbed through the skin. May cause skin irritation.

Effects Of Overexposure - Inhalation: May be harmful if inhaled. Inhalation of vapors causes irritation of the nose, throat, lungs and respiratory tract. Inhalation may cause mild irritation to the respiratory tract (nose, mouth, mucous membranes). Inhalation of high concentrations may cause headache, nausea, and dizziness.

Effects Of Overexposure - Ingestion: Harmful or fatal if swallowed. If ingested, may cause vomiting, diarrhea, and depressed respiration. Ingestion may result in obstruction when material hardens. Ingestion of ethylene glycol can cause gastrointestinal irritation, nausea, vomiting, diarrhea and if ingested in sufficient quantities, death.

Effects Of Overexposure - Chronic Hazards: Repeated or prolonged exposure may cause skin, respiratory, kidney and liver damage. Prolonged and repeated skin contact may cause irritation and possibly dermatitis.

The International Agency for Research on Cancer (IARC) has determined that crystalline silica in the form of quartz or cristobalite that is inhaled from occupational sources is carcinogenic to humans (Group 1- carcinogenic to humans). Refer

to IARC Monograph 68, Silica, Some Silicates and Organic Fibres (published in June 1997) in conjunction with the use of these materials. The National Toxicology Program (NTP) classifies respirable crystalline silica as "known to be a human carcinogen". Refer to the 9th Report on Carcinogens (2000). The American Conference of Governmental Industrial Hygienists (ACGIH) classifies crystalline silica, quartz, as a suspected human carcinogen (Group A2).

Breathing dust containing respirable crystalline silica may not cause noticeable injury or illness even though permanent lung damage may be occurring. Inhalation of dust may have the following serious chronic health effects: Excessive inhalation of respirable dust can cause pneumoconiosis, a respiratory disease, which can result in delayed, progressive, disabling and sometimes fatal lung injury. Symptoms include cough, shortness of breath, wheezing, non-specific chest illness and reduced pulmonary function. Smoking exacerbates this disease. Individuals with pneumoconiosis are predisposed to develop tuberculosis. There is some evidence that breathing respirable crystalline silica or the disease silicosis is associated with an increased incidence of significant disease endpoints such as scleroderma (an immune system disorder manifested by fibrosis of the lungs, skin and other internal organs) and kidney disease. Prolonged, repeated, or high exposures may cause weakness and depression of the central nervous system.

The mixture of phthalate esters contained within this product has been shown to cause developmental effects at high doses in laboratory animals when administered orally by gavage in a developmental study and developmental and fertility effects when administered at high doses by feed in a two-generation reproduction study. The potential risk from occupational and consumer exposure is considered to be very low, based on limited relevance of the rodent findings to humans and the large safety margins between exposure and the effect levels.

Ethylene Glycol may cause kidney and liver damage upon prolonged and repeated overexposures. Studies have shown that repeated inhalation of ethylene glycol has produced adverse cardiovascular changes in laboratory animals. Ethylene glycol has been shown to cause birth defects in laboratory animals.

Primary Route(s) Of Entry: Skin Contact, Inhalation, Eye Contact

Medical Conditions which May be Aggravated by Exposure: None known.

Carcinogenicity:

CAS No.	Chemical Name	ACGIH	OSHA	IARC	NTP
14808-60-7	Silica, crystalline	Suspected human carcinogen.	Not Listed.	Human carcinogen.	Known carcinogen.
13463-67-7	Titanium dioxide	Not Listed.	Not Listed.	Possible carcinogen.	Not Listed.

Section 3 - Composition / Information On Ingredients

Chemical Name	CASRN	Wt%
Limestone	1317-65-3	40-70
Branched and linear phthalates	Proprietary	1-5
Silica, crystalline	14808-60-7	0.1-1.0
Titanium dioxide	13463-67-7	0.1-1.0
Ethylene glycol	107-21-1	0.1-1.0

Section 4 - First Aid Measures

First Aid - Eye Contact: In case of contact, immediately flush eyes with large quantities of water for at least 15 minutes until irritation subsides. Get medical attention immediately.

First Aid - Skin Contact: Wash off immediately with soap and plenty of water for at least 15 minutes. Get medical aid if symptoms persist. In case of contact, immediately flush skin with plenty of water while removing contaminated clothing and shoes. Remove and wash contaminated clothing. If skin irritation persists, call a physician.

First Aid - Inhalation: If inhaled, remove to fresh air. If breathing is difficult, leave the area to obtain fresh air. If continued breathing difficulty is experienced, get medical attention immediately. If inhaled, remove to fresh air. Administer oxygen if necessary. Consult a physician if symptoms persist or exposure was severe. First Aid: If you experience difficulty in

breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical attention immediately.

First Aid - Ingestion: If swallowed, DO NOT INDUCE VOMITING. Get medical attention immediately. If ingested, drink 2 glasses of water. Immediately see a physician. Never give anything by mouth to an unconscious person.

Note to Physician: None.

COMMENTS: If over-exposure occurs, call your poison control center at 1-800-222-1222.

Section 5 - Fire Fighting Measures

Extinguishing Media: Alcohol, Carbon Dioxide, Dry Chemical, Foam, Water Fog

Unusual Fire And Explosion Hazards: None known.

Special Firefighting Procedures: Wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent) and full protective gear. Use water spray to cool exposed surfaces.

Section 6 - Accidental Release Measures

Steps To Be Taken If Material Is Released Or Spilled: Wear proper protective equipment as specified in Section 8. If spilled, contain spilled material and remove with inert absorbent. Dispose of contaminated absorbent, container and unused contents in accordance with local, state and federal regulations.

Section 7 - Handling And Storage

Handling: KEEP OUT OF REACH OF CHILDREN DO NOT TAKE INTERNALLY. Use only with adequate ventilation. Open all windows and doors or use other means to ensure cross-ventilation and fresh air entry during application and drying. Odor is not an adequate warning for hazardous conditions. Avoid breathing vapor and contact with eyes, skin and clothing. Wash thoroughly after handling.

Storage: Avoid excessive heat and freezing. Do not store at temperatures above 120 degrees F. Close container after each use. Store away from caustics and oxidizers.

Section 8 - Exposure Controls / Personal Protection

Chemical Name	CASRN	ACGIH TWA	ACGIH STEL	ACGIH CEIL	OSHA TWA	OSHA STEL	OSHA CEIL	Skin
Limestone	1317-65-3	10 MGM3	N.E.	N.E.	5 MGM3 (respirable fraction)	N.E.	N.E.	No
Branched and linear phthalates	Proprietary	N.E.	N.E.	N.E.	N.E.	N.E.	N.E.	No
Silica, crystalline	14808-60-7	0.025 MGM.	N.E.	N.E.	10/(%SiO ₂ + 2) MGM3	N.E.	N.E.	No
Titanium dioxide	13463-67-7	10 MGM3	N.E.	N.E.	15 MGM3	N.E.	N.E.	No
Ethylene glycol	107-21-1	N.E.	N.E.	100 MGM3	N.E.	N.E.	N.E.	No

Exposure Notes:

14808-60-7 The 2002 ACGIH Threshold Limit Values for Chemical Substances and Physical Agents lists the median Respirable Particulate Mass (RPM) point for crystalline silica at 4.0 microns in terms of the particle's aerodynamic diameter.

The TLVs for crystalline silica represent the respirable fraction.

OSHA PEL TWA for Quartz is calculated using the following formula: 10 mg/m³/(% SiO₂ + 2). Both concentration and percent quartz for the application of this limit are to be determined from the fraction passing a size selector with the following characteristics.

..... Aerodynamic diameter (unit density sphere) Percent passing selector

2	90.....
2.5	75.....
3.5	50.....
5.0	25.....
10	0.....

Precautionary Measures: Contact lenses pose a special hazard; soft lenses may absorb and all lenses concentrate irritants.

Engineering Controls: Good general ventilation should be sufficient to control airborne levels. Ensure adequate ventilation, especially in confined areas. Local ventilation of emission sources may be necessary to maintain ambient concentrations below recommended exposure limits.

Respiratory Protection: No personal respiratory protective equipment normally required. In case of insufficient ventilation, wear suitable respiratory equipment. A NIOSH-approved air purifying respirator with an organic vapor cartridge or canister may be necessary under certain circumstances where airborne concentrations are expected to exceed exposure limits. A respiratory protection program that meets the OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. National Institute for Occupational Safety and Health (NIOSH) has recommended that the permissible exposure limit be changed to 50 micrograms respirable free silica per cubic meter of air (0.05 mg/m³) as determined by a full shift sample up to 10-hour work shift.

Skin Protection: Impervious gloves. Natural rubber, butyl rubber and polyvinyl chloride gloves are not suitable protection against the phthalates contained within this product; neoprene is recommended.

Eye Protection: Goggles or safety glasses with side shields.

Other protective equipment: Not required under normal use.

Hygienic Practices: Wash hands before breaks and at the end of workday. Remove and wash contaminated clothing before re-use.

Important: Listed Permissible Exposure Levels (PEL) are from the U.S. Dept. of Labor OSHA Final Rule Limits (CFR 29 1910.1000); these limits may vary between states.

Note: An employee's skin exposure to substances having a "YES" in the "SKIN" column in the table above shall be prevented or reduced to the extent necessary under the circumstances through the use of gloves, coveralls, goggles or other appropriate personal protective equipment, engineering controls or work practices.

Section 9 - Physical And Chemical Properties

Boiling Range:	Not Established	Vapor Density:	Heavier Than Air
Odor:	Very Slight Ammonia	Odor Threshold:	Not Established
Color:	Gray	Evaporation Rate:	Slower Than n-Butyl Acetate
Solubility in H₂O:	Not Established	Specific Gravity:	1.65
Freeze Point:	Not Established	pH:	Between 7.0 and 12.0
Vapor Pressure:	Not Established	Viscosity:	Not Established
Physical State:	Paste	Flammability:	Non-Flammable
Flash Point, F:	Greater than 200	Method:	(Seta Closed Cup)
Lower Explosive Limit, %:	Not Established	Upper Explosive Limit, %:	Not Established

When reported, vapor pressure of this product has been calculated theoretically based on its constituent makeup and has not been determined experimentally.

(See section 16 for abbreviation legend)

Section 10 - Stability And Reactivity

Conditions To Avoid: Excessive heat and freezing.

Incompatibility: Incompatible with strong bases and oxidizing agents.

Hazardous Decomposition Products: Normal decomposition products, i.e., COx, NOx.

Hazardous Polymerization: Hazardous polymerization will not occur under normal conditions.

Stability: Stable under recommended storage conditions.

Section 11 - Toxicological Information

Product LD50: Not Established

Product LC50: Not Established

CASRN	Chemical Name	LD50	LC50
107-21-1	Ethylene glycol	Rat:4700 mg/kg	Rat:10876 mg/kg

Significant Data with Possible Relevance to Humans: None.

Section 12 - Ecological Information

Ecological Information: Ecological injuries are not known or expected under normal use.

Section 13 - Disposal Information

Disposal Information: Dispose of material in accordance with all federal, state and local regulations. State and Local regulations/restrictions are complex and may differ from Federal regulations. Responsibility for proper waste disposal is with the owner of the waste.

EPA Waste Code if Discarded (40 CFR Section 261): This product does not meet the definition of a hazardous waste according to U.S. EPA Hazardous Waste Management Regulation, 40 CFR Section 261.

Section 14 - Transportation Information

DOT Proper Shipping Name:	Not Regulated	Packing Group:	N.A.
DOT Technical Name:	N.A.	Hazard Subclass:	N.A.
DOT Hazard Class:	N.A.	DOT UN/NA Number:	None

Note: The shipping information provided is applicable for domestic ground transport only. Different categorization may apply if shipped via other modes of transportation and/or to non-domestic destinations.

Section 15 - Regulatory Information

CERCLA - SARA Hazard Category:

This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

Immediate Health Hazard, Chronic Health Hazard

SARA Section 313:

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

None

Toxic Substances Control Act:

All ingredients in this product are either on TSCA inventory list, or otherwise exempt.

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States:

None

New Jersey Right-to-Know:

The following materials are non-hazardous, but are among the top five components in this product:

Chemical Name	CAS Number
Water	7732-18-5
Non-Hazardous Polymer	Proprietary
Acrylic polymer	Proprietary

Pennsylvania Right-to-Know:

The following non-hazardous ingredients are present in the product at greater than 3%:

Chemical Name	CAS Number
Water	7732-18-5
Non-Hazardous Polymer	Proprietary
Acrylic polymer	Proprietary

California Proposition 65:

WARNING: This product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

Section 16 - Other Information

HMIS Ratings:

Health: 1	Flammability: 1	Reactivity: 0	Personal Protection: X
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Volatile Organic Compounds (VOC), less water less exempts: g/L: 35.0 **lb/gal:** 0.29 **wt:wt%:** 1.54

Volatile Organic Compounds (VOC), less water less exempts, less LVP-VOCs: **wt:wt%:** 0.8

REASON FOR REVISION: Periodic Update

Legend:

N.A. – Not Applicable

ACGIH – American Conference of Governmental Industrial Hygienists

N.E. – Not Established

SARA – Superfund Amendments and Reauthorization Act of 1986

N.D. – Not Determined

NJRTK – New Jersey Right-to-Know Law

VOC – Volatile Organic Compound

OSHA – Occupational Safety and Health Administration

PEL – Permissible Exposure Limit

HMIS – Hazardous Materials Identification System

TLV – Threshold Limit Value

NTP – National Toxicology Program

CEIL – Ceiling Exposure Limit

STEL – Short Term Exposure Limit

LD50 – Lethal Dose 50

LC50 – Lethal Concentration 50

F – Degree Fahrenheit

MSDS – Material Safety Data Sheet

C – Degree Celsius

CASRN – The Chemical Abstracts Service Registry Number

DAP believes the data and statements contained herein are accurate as of the date hereof. They are offered in good faith as typical values and not as a product specification. **NO WARRANTY OF MERCHANTABILITY, WARRANTY OF FITNESS FOR ANY PARTICULAR PURPOSE OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, IS MADE WITH REGARD TO THE INFORMATION HEREIN PROVIDED OR THE PRODUCT TO WHICH THE INFORMATION REFERS.** Since this document is intended only as a guide to the appropriate use and precautionary handling of the referenced product by a properly trained person, it is therefore the responsibility of the user to (i) review the recommendations with due consideration for the specific context of the intended use and (ii) determine if they are appropriate.

<End of MSDS>

Material Safety Data Sheet

24 Hour Emergency Phone Numbers:**Medical: 1-800-327-3874****1-513-558-5111****Transportation:****1-800-535-5053****1-352-323-3500**

.....
 •NOTE: National Response Center emergency numbers to be used only in
 •the event of chemical emergencies involving a spill, leak, fire, exposure or
 •accident involving chemicals.

IMPORTANT: Provide this information to employees, customers, and users of this product. Read this MSDS before handling or disposing of this product. This product is covered by the OSHA Hazard Communication Standard and this document has been prepared in accordance with requirements of this standard. All abbreviated terms used in this MSDS are further described in Section 16.

Section 1 - Chemical Product / Company Information

This Material Safety Data Sheet is available in Canadian French and Hispanic American Spanish upon request.
 Esta hoja de datos de la seguridad de los materiales está disponible en francés canadiense y en español a su solicitud.
 Los Datos de Seguridad del Producto pueden obtenerse en Espanol si lo requiere.

Product Name: 33 Glazing - All Colors
Product UPC Number: 7079812019 7079812117 7079812120 7079812121
 7079812122 7079812124 7079871090 7079871112
 7079871151

Revision Date: 07/27/2006**Supersedes:** 07/19/1999**Product Use/Class:** Glazing**MSDS Number:** 00010401001

Manufacturer: DAP Inc.
 2400 Boston Street Suite 200
 Baltimore, MD 21224-4723
 888-327-8477 (non-emergency matters)

Section 2 - Composition / Information On Ingredients

Chemical Name	CASRN	WT%	ACGIH TWA	ACGIH STEL	ACGIH CEIL	OSHA TWA	OSHA STEL	OSHA CEIL	Skin
Calcium carbonate	1317-65-3	60-100	10 MGM3	N.E.	N.E.	5 MGM3 (respirable fraction)	N.E.	N.E.	No
Soya oil	8001-22-7	3-7	N.E.	N.E.	N.E.	N.E.	N.E.	N.E.	No
Parrafinic process oil	64742-65-0	1-5	N.E.	N.E.	N.E.	500 PPM	N.E.	N.E.	No
Non-Asbestiform Tremolite	14567-73-8	1-5	10 MGM3	N.E.	N.E.	5 MGM3	N.E.	N.E.	No
Talc, non-asbestiform	14807-96-6	1-5	2 MGM3	N.E.	N.E.	5 MGM3	N.E.	N.E.	No
Antigorite, non-asbestiform	12135-86-3	0.5-1.5	N.E.	N.E.	N.E.	N.E.	N.E.	N.E.	No
Silica, crystalline	14808-60-7	0.1-1.0	0.05 MGM.	N.E.	N.E.	10/(%SiO ₂ + 2) MGM3	N.E.	N.E.	No
Anthophyllite, non-asbestiform	17068-78-9	0.1-1.0	0.1 FIBES/CM3	N.E.	N.E.	0.1 FIBERS/CM3	1.0 FIBERS/CM3	N.E.	No
Titanium dioxide	13463-67-7	0.1-1.0	10 MGM3	N.E.	N.E.	15 MGM3	N.E.	N.E.	No

Exposure Notes:

CASRN	Exposure Note
14807-96-6	The talc (CAS number 14807-96-6) within this product naturally contains a non-fibrous tremolite (CAS number 14567-73-8), non-fibrous serpentine (CAS number 12135-86-3), and non-fibrous anthophyllite (CAS number 17068-78-9). Refer to 29 CFR 1910.1000 Table Z 3 for the permissible exposure limits associated with non-fibrous talc and these naturally occurring incidental constituents.

Important: Listed Permissible Exposure Levels (PEL) are from the U.S. Dept. of Labor OSHA Final Rule Limits (CFR 29 1910.1000); these limits may vary between states.

Note: An employee's skin exposure to substances having a "YES" in the "SKIN" column in the table above shall be prevented or reduced to the extent necessary under the circumstances through the use of gloves, coveralls, goggles or other appropriate personal protective equipment, engineering controls or work practices

Section 3 - Hazards Identification

Emergency Overview: A colored paste product with a little or no odor. **WARNING** May cause eye, skin, nose, throat and respiratory tract irritation. Harmful if swallowed or absorbed through the skin.

Refer to other MSDS sections for other detailed information.

Effects Of Overexposure - Eye Contact: May cause eye irritation.

Effects Of Overexposure - Skin Contact: Harmful if absorbed through the skin. May cause skin irritation.

Effects Of Overexposure - Inhalation: Harmful if inhaled. Inhalation may cause irritation to the respiratory tract (nose, mouth, mucous membranes). Dust from dry sanding may cause eye, skin, nose, throat and respiratory tract irritation.

Effects Of Overexposure - Ingestion: Harmful if swallowed.

Effects Of Overexposure - Chronic Hazards: Prolonged and repeated skin contact may cause irritation and possibly dermatitis. Repeated or prolonged exposure may cause respiratory system damage.

Primary Route(s) Of Entry: Skin Contact, Eye Contact

Medical Conditions which May be Aggravated by Exposure: None known.

Section 4 - First Aid Measures

First Aid - Eye Contact: In case of contact, immediately flush eyes with large quantities of water for at least 15 minutes until irritation subsides. Get medical attention immediately.

First Aid - Skin Contact: Wash off immediately with soap and plenty of water for at least 15 minutes. Get medical aid if symptoms persist. Remove and wash contaminated clothing.

First Aid - Inhalation: If inhaled, remove to fresh air. If breathing is difficult, leave the area to obtain fresh air. If continued breathing difficulty is experienced, get medical attention immediately.

First Aid - Ingestion: If swallowed, DO NOT INDUCE VOMITING. Get medical attention immediately.

Note to Physician: None.

COMMENTS: Call Medical Emergency at 1-800-327-3874 if any irritation or complication arises from any of the above routes of entry.

Section 5 - Fire Fighting Measures

Flash Point, F: Greater than 200
Method: (Seta Closed Cup)

Lower Explosive Limit, %: Not Established
Upper Explosive Limit, %: Not Established

Extinguishing Media: Carbon Dioxide, Dry Chemical, Foam

Unusual Fire And Explosion Hazards: No special protective measures against fire required.

Special Firefighting Procedures: Wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent) and full protective gear. Use water spray to cool exposed surfaces.

Section 6 - Accidental Release Measures

Steps To Be Taken If Material Is Released Or Spilled: Wear proper protective equipment as specified in Section 8. Use absorbent material or scrape up dried material and place in container.

Section 7 - Handling And Storage

Handling: KEEP OUT OF REACH OF CHILDREN DO NOT TAKE INTERNALLY. Use only with adequate ventilation. Avoid breathing vapor and contact with eyes, skin and clothing. Wash thoroughly after handling. Open all windows and doors or use other means to ensure cross-ventilation and fresh air entry during application and drying. Odor is not an adequate warning for hazardous conditions.

Storage: Close container after each use. Store away from caustics and oxidizers. Store containers away from excessive heat and freezing. Do not store at temperatures above 120 degrees F.

Section 8 - Exposure Controls / Personal Protection

Precautionary Measures: Please refer to other sections and subsections of this MSDS.

Engineering Controls: Good general ventilation should be sufficient to control airborne levels. Ensure adequate ventilation, especially in confined areas. Local ventilation of emission sources may be necessary to maintain ambient concentrations below recommended exposure limits.

Respiratory Protection: In case of insufficient ventilation, wear suitable respiratory equipment. A NIOSH-approved air purifying respirator with an organic vapor cartridge or canister may be necessary under certain circumstances where airborne concentrations are expected to exceed exposure limits. A respiratory protection program that meets the OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

Skin Protection: Rubber gloves.

Eye Protection: Goggles or safety glasses with side shields.

Other protective equipment: Not required under normal use.

Hygienic Practices: Remove and wash contaminated clothing before re-use. Wash hands before breaks and at the end of workday.

Section 9 - Physical And Chemical Properties

Boiling Range:	Not Established	Vapor Density:	Heavier Than Air
Odor:	Little or None	Odor Threshold:	Not Established
Appearance:	Colored	Evaporation Rate:	Slower Than n-Butyl Acetate
Solubility in H2O:	Not Established	Specific Gravity:	2.214
Freeze Point:	Not Established	pH:	Between 7.0 and 12.0
Vapor Pressure:	Not Established	Viscosity:	Not Established
Physical State:	Paste		

When reported, vapor pressure of this product has been calculated theoretically based on its constituent makeup and has not been determined experimentally.

(See section 16 for abbreviation legend)

Section 10 - Stability And Reactivity

Conditions To Avoid: Excessive heat and freezing.

Incompatibility: Incompatible with strong bases and oxidizing agents.

Hazardous Decomposition Products: Normal decomposition products, i.e., COx, NOx.

Hazardous Polymerization: Hazardous polymerization will not occur under normal conditions.

Stability: Stable under recommended storage conditions.

Section 11 - Toxicological Information

Product LD50: Not Established

Product LC50: Not Established

Carcinogenicity:

CAS No.	Chemical Name	ACGIH	OSHA	IARC	NTP	WT%
14808-60-7	Silica, crystalline	Suspected human carcinogen.	Not Listed.	Human carcinogen.	Known carcinogen.	0.1-1.0
17068-78-9	Anthophyllite, non-asbestiform	Confirmed human carcinogen.	Cancer hazard.	Human carcinogen.	Known carcinogen.	0.1-1.0
13463-67-7	Titanium dioxide	Not Listed.	Not Listed.	Classification not possible from current data.	Not Listed.	0.1-1.0

Significant Data with Possible Relevance to Humans: None.

Section 12 - Ecological Information

Ecological Information: Ecological injuries are not known or expected under normal use.

Section 13 - Disposal Information

Disposal Information: Dispose of material in accordance with all federal, state and local regulations. State and Local regulations/restrictions are complex and may differ from Federal regulations. Responsibility for proper waste disposal is with the owner of the waste.

EPA Waste Code if Discarded (40 CFR Section 261): none

Section 14 - Transportation Information

DOT Proper Shipping Name: Not Regulated.

Packing Group: N.A.

DOT Technical Name: N.A.

Hazard Subclass: N.A.

DOT Hazard Class: N.A.

DOT UN/NA Number: N.A.

Note: The shipping information provided is applicable for domestic ground transport only. Different categorization may apply if shipped via other modes of transportation and/or to non-domestic destinations.

Section 15 - Regulatory Information

CERCLA - SARA Hazard Category:

This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

Immediate Health Hazard, Chronic Health Hazard

SARA Section 313:

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Chemical Name	CAS Number	WT%
Anthophyllite, non-asbestiform	17068-78-9	0.1-1.0

Toxic Substances Control Act:

All ingredients in this product are either on TSCA inventory list, or otherwise exempt.

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States:

None

U.S. State Regulations**New Jersey Right-to-Know:**

The following materials are non-hazardous, but are among the top five components in this product:

None

Pennsylvania Right-to-Know:

The following non-hazardous ingredients are present in the product at greater than 3%:

None

California Proposition 65:

Warning: The following ingredients present in the product are known to the State of California to cause cancer:

Chemical Name	CAS Number	Definition	Date Listed	WT%
Silica, crystalline	14808-60-7	Carcinogenic.	Listed: October 1, 1988	0.1-1.0
Anthophyllite, non-asbestiform	17068-78-9	Carcinogenic.	Listed: February 27, 1987	0.1-1.0

Warning: The following ingredients present in the product are known to the State of California to cause birth defects or other reproductive harm:

None

Section 16 - Other Information

HMIS Ratings:

Health: 1 Flammability: 1 Reactivity: 0 Personal Protection: X

VOLATILE ORGANIC COMPOUNDS, GR/LTR: 10.7 **LB/GAL:** 0.1 **WT%:** 0.486

REASON FOR REVISION: Periodic Update

Legend:	N.A. – Not Applicable	ACGIH – American Conference of Governmental Industrial Hygienists
	N.E. – Not Established	SARA – Superfund Amendments and Reauthorization Act of 1986
	N.D. – Not Determined	NJRTK – New Jersey Right-to-Know Law
	VOC – Volatile Organic Compound	OSHA – Occupational Safety and Health Administration
	PEL – Permissible Exposure Limit	HMIS – Hazardous Materials Identification System
	TLV – Threshold Limit Value	NTP – National Toxicology Program
	STEL – Short Term Exposure Limit	CEIL – Ceiling Exposure Limit
	LD50 – Lethal Dose 50	LC50 – Lethal Concentration 50
	F – Degree Fahrenheit	C – Degree Celsius
	MSDS – Material Safety Data Sheet	CASRN – The Chemical Abstracts Service Registry Number

DAP believes the data and statements contained herein are accurate as of the date hereof. They are offered in good faith as typical values and not as a product specification. **NO WARRANTY OF MERCHANTABILITY, WARRANTY OF FITNESS FOR ANY PARTICULAR PURPOSE OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, IS MADE WITH REGARD TO THE INFORMATION HEREIN PROVIDED OR THE PRODUCT TO WHICH THE INFORMATION REFERS.** Since this document is intended only as a guide to the appropriate use and precautionary handling of the referenced product by a properly trained person, it is therefore the responsibility of the user to (i) review the recommendations with due consideration for the specific context of the intended use and (ii) determine if they are appropriate.

<End of MSDS>



Material Safety Data Sheet

An **RPM** Company

24 Hour Emergency Phone Numbers:

Medical/Poison Control:

In U.S.: Call 1-800-222-1222

Outside U.S.: Call your local poison control center

Transportation/National Response Center:

1-800-535-5053

1-352-323-3500

•NOTE: The National Response Center emergency numbers to be used only in the event of chemical emergencies involving a spill, leak, fire, exposure or accident involving chemicals.

IMPORTANT: Provide this information to employees, customers, and users of this product. Read this MSDS before handling or disposing of this product. This product is covered by the OSHA Hazard Communication Standard and this document has been prepared in accordance with requirements of this standard. All abbreviated terms used in this MSDS are further described in Section 16.

Section 1 - Chemical Product / Company Information

This Material Safety Data Sheet is available in Canadian French and Hispanic American Spanish upon request.

On peut demander cette fiche signalétique (MSDS) à la langue française-canadienne.

Los Datos de Seguridad del Producto pueden obtenerse en Español si lo requiere.

Product Name:	DAP Alex Painters Acrylic Latex Caulk - All Colors	Revision Date:	04/01/2008
Product UPC Number:	070798180659	Supersedes:	10/29/2004
Product Use/Class:	Latex Caulk	MSDS Number:	00010011001
Manufacturer:	DAP Inc. 2400 Boston Street Suite 200 Baltimore, MD 21224-4723 888-327-8477 (non-emergency matters)		

Section 2 - Hazards Identification

Emergency Overview: A colored paste product with a very slight ammonia odor. **WARNING** May cause eye, skin, nose, throat and respiratory tract irritation. May cause eye or skin irritation. Harmful if swallowed or absorbed through the skin. This product contains ethylene glycol.

Refer to other MSDS sections for other detailed information.

Effects Of Overexposure - Eye Contact: May cause eye irritation.

Effects Of Overexposure - Skin Contact: May cause skin irritation. Harmful if absorbed through the skin.

Effects Of Overexposure - Inhalation: Harmful if inhaled. Inhalation of high concentrations may cause headache, nausea, and dizziness. Inhalation may cause irritation to the respiratory tract (nose, mouth, mucous membranes). Inhalation may cause mild irritation to the respiratory tract (nose, mouth, mucous membranes).

Effects Of Overexposure - Ingestion: Ingestion of ethylene glycol can cause gastrointestinal irritation, nausea, vomiting, diarrhea and if ingested in sufficient quantities, death. Harmful or fatal if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. If ingested, may cause vomiting, diarrhea, and depressed respiration. Ingestion may result in obstruction when material hardens.

Effects Of Overexposure - Chronic Hazards: Repeated or prolonged exposure may cause respiratory system damage.

Prolonged and repeated skin contact may cause irritation and possibly dermatitis.

The International Agency for Research on Cancer (IARC) has determined that crystalline silica in the form of quartz or cristobalite that is inhaled from occupational sources is carcinogenic to humans (Group 1 - carcinogenic to humans). Refer to IARC Monograph 68, Silica, Some Silicates and Organic Fibres (published in June 1997) in conjunction with the use of these materials. The National Toxicology Program (NTP) classifies respirable crystalline silica as "known to be a human carcinogen". Refer to the 9th Report on Carcinogens (2000). The American Conference of Governmental Industrial Hygienists (ACGIH) classifies crystalline silica, quartz, as a suspected human carcinogen (Group A2).

Breathing dust containing respirable crystalline silica may not cause noticeable injury or illness even though permanent lung damage may be occurring. Inhalation of dust may have the following serious chronic health effects: Excessive inhalation of respirable dust can cause pneumoconiosis, a respiratory disease, which can result in delayed, progressive, disabling and sometimes fatal lung injury. Symptoms include cough, shortness of breath, wheezing, non-specific chest illness and reduced pulmonary function. Smoking exacerbates this disease. Individuals with pneumoconiosis are predisposed to develop tuberculosis. There is some evidence that breathing respirable crystalline silica or the disease silicosis is associated with an increased incidence of significant disease endpoints such as scleroderma (an immune system disorder manifested by fibrosis of the lungs, skin and other internal organs) and kidney disease. Prolonged, repeated, or high exposures may cause weakness and depression of the central nervous system. Overexposure may cause kidney, cardiovascular, skin and liver damage.

Formaldehyde vapor is a known animal carcinogen according to OSHA and NTP and is considered possibly carcinogenic to humans by inhalation. The International Agency for Research on Cancer considers formaldehyde to be a human carcinogen.

A mixture of diisodecyl phthalate and diisononyl phthalate has been tested in a two-generation toxicity study in laboratory animals. No effects on reproductive parameters were seen. However, a small but statistically significant increase in early offspring mortality was seen at high oral doses. The significance of this to humans is uncertain.

The mixture of phthalate esters contained within this product has been shown to cause developmental effects at high doses in laboratory animals when administered orally by gavage in a developmental study and developmental and fertility effects when administered at high doses by feed in a two-generation reproduction study. The potential risk from occupational and consumer exposure is considered to be very low, based on limited relevance of the rodent findings to humans and the large safety margins between exposure and the effect levels.

Ethylene Glycol may cause kidney and liver damage upon prolonged and repeated overexposures. Studies have shown that repeated inhalation of ethylene glycol has produced adverse cardiovascular changes in laboratory animals. Ethylene glycol has been shown to cause birth defects in laboratory animals.

Primary Route(s) Of Entry: Skin Contact, Inhalation, Eye Contact

Medical Conditions which May be Aggravated by Exposure: None known.

Carcinogenicity:

CAS No.	Chemical Name	ACGIH	OSHA	IARC	NTP
14808-60-7	Silica, crystalline	Suspected human carcinogen.	Not Listed.	Human carcinogen.	Known carcinogen.
13463-67-7	Titanium dioxide	Not Listed.	Not Listed.	Possible carcinogen.	Not Listed.
50-00-0	Formaldehyde	Suspected human carcinogen.	Potential cancer hazard.	Human carcinogen.	Anticipated carcinogen.

Section 3 - Composition / Information On Ingredients

Chemical Name	CASRN	Wt%
Limestone	1317-65-3	40-70
Branched and linear phthalates	Proprietary	1-5
Stoddard solvent	8052-41-3	0.5-1.5
Ethylene glycol	107-21-1	0.1-1.0
Silica, crystalline	14808-60-7	0.1-1.0
Titanium dioxide	13463-67-7	0.1-1.0
Ammonia	7664-41-7	0.1-1.0
Formaldehyde	50-00-0	<0.009

Section 4 - First Aid Measures

First Aid - Eye Contact: In case of contact, immediately flush eyes with large quantities of water for at least 15 minutes until irritation subsides. Get medical attention immediately.

First Aid - Skin Contact: Wash off immediately with soap and plenty of water for at least 15 minutes. Get medical aid if symptoms persist. If skin irritation persists, call a physician. Remove and wash contaminated clothing. In case of contact, immediately flush skin with plenty of water while removing contaminated clothing and shoes.

First Aid - Inhalation: If inhaled, remove to fresh air. If breathing is difficult, leave the area to obtain fresh air. If continued breathing difficulty is experienced, get medical attention immediately.

First Aid - Ingestion: If swallowed, DO NOT INDUCE VOMITING. Get medical attention immediately. If ingested, drink 2 glasses of water. Immediately see a physician. Never give anything by mouth to an unconscious person.

Note to Physician: None.

COMMENTS: If over-exposure occurs, call your poison control center at 1-800-222-1222.

Section 5 - Fire Fighting Measures

Extinguishing Media: Carbon Dioxide, Dry Chemical, Foam, Water Fog

Unusual Fire And Explosion Hazards: No special protective measures against fire required.

Special Firefighting Procedures: Wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent) and full protective gear. Use water spray to cool exposed surfaces.

Section 6 - Accidental Release Measures

Steps To Be Taken If Material Is Released Or Spilled: Wear proper protective equipment as specified in Section 8. Use absorbent material or scrape up dried material and place in container.

Section 7 - Handling And Storage

Handling: KEEP OUT OF REACH OF CHILDREN DO NOT TAKE INTERNALLY. Avoid breathing vapor and contact with eyes, skin and clothing. Use only with adequate ventilation. Open all windows and doors or use other means to ensure cross-ventilation and fresh air entry during application and drying. Odor is not an adequate warning for hazardous conditions. Wash thoroughly after handling.

Storage: Do not store at temperatures above 120 degrees F. Store containers away from excessive heat and freezing. Close container after each use. Store away from caustics and oxidizers.

Section 8 - Exposure Controls / Personal Protection

Chemical Name	CASRN	ACGIH TWA	ACGIH STEL	ACGIH CEIL	OSHA TWA	OSHA STEL	OSHA CEIL	Skin
Limestone	1317-65-3	10 MGM3	N.E.	N.E.	5 MGM3 (respirable fraction)	N.E.	N.E.	No
Branched and linear phthalates	Proprietary	N.E.	N.E.	N.E.	N.E.	N.E.	N.E.	No
Stoddard solvent	8052-41-3	100 PPM	N.E.	N.E.	500 PPM	N.E.	N.E.	No
Ethylene glycol	107-21-1	N.E.	N.E.	100 MGM3	N.E.	N.E.	N.E.	No
Silica, crystalline	14808-60-7	0.05 MGM3	N.E.	N.E.	10/(%SiO ₂ + 2) MGM3	N.E.	N.E.	No
Titanium dioxide	13463-67-7	10 MGM3	N.E.	N.E.	15 MGM3	N.E.	N.E.	No
Ammonia	7664-41-7	25 PPM	35 PPM	N.E.	50 PPM	N.E.	N.E.	No

Formaldehyde	50-00-0	N.E.	N.E.	0.3 PPM	0.75 PPM	2 PPM	N.E.	No
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Exposure Notes:

14808-60-7 The 2002 ACGIH Threshold Limit Values for Chemical Substances and Physical Agents lists the median Respirable Particulate Mass (RPM) point for crystalline silica at 4.0 microns in terms of the particle's aerodynamic diameter.

The TLVs for crystalline silica represent the respirable fraction.

OSHA PEL TWA for Quartz is calculated using the following formula: $10 \text{ mg/m}^3 / (\% \text{ SiO}_2 + 2)$. Both concentration and percent quartz for the application of this limit are to be determined from the fraction passing a size selector with the following characteristics.

..... Aerodynamic diameter (unit density sphere)	Percent passing selector
2	90.....
2.5	75.....
3.5	50.....
5.0	25.....
10	0.....

50-00-0 Formaldehyde is a specially regulated substance for which an OSHA chemical-specific exposure standard exists. Detailed information regarding this substance may be found in 29 CFR 1910.1048. Medical surveillance information regarding this substance may be found in Appendix C to 29 CFR 1910.1048.

Precautionary Measures: Contact lenses pose a special hazard; soft lenses may absorb and all lenses concentrate irritants.

Engineering Controls: Good general ventilation should be sufficient to control airborne levels. Ensure adequate ventilation, especially in confined areas. Local ventilation of emission sources may be necessary to maintain ambient concentrations below recommended exposure limits.

Respiratory Protection: In case of insufficient ventilation, wear suitable respiratory equipment. A NIOSH-approved air purifying respirator with an organic vapor cartridge or canister may be necessary under certain circumstances where airborne concentrations are expected to exceed exposure limits. A respiratory protection program that meets the OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. National Institute for Occupational Safety and Health (NIOSH) has recommended that the permissible exposure limit be changed to 50 micrograms respirable free silica per cubic meter of air (0.05 mg/m³) as determined by a full shift sample up to 10-hour work shift.

Skin Protection: Rubber gloves. Natural rubber, butyl rubber and polyvinyl chloride gloves are not suitable protection against the phthalates contained within this product; neoprene is recommended.

Eye Protection: Goggles or safety glasses with side shields.

Other protective equipment: Not required under normal use.

Hygienic Practices: Wash hands before breaks and at the end of workday. Remove and wash contaminated clothing before re-use.

Important: Listed Permissible Exposure Levels (PEL) are from the U.S. Dept. of Labor OSHA Final Rule Limits (CFR 29 1910.1000); these limits may vary between states.

Note: An employee's skin exposure to substances having a "YES" in the "SKIN" column in the table above shall be prevented or reduced to the extent necessary under the circumstances through the use of gloves, coveralls, goggles or other appropriate personal protective equipment, engineering controls or work practices.

Section 9 - Physical And Chemical Properties

Boiling Range:	Not Established	Vapor Density:	Heavier Than Air
Odor:	Very Slight Ammonia	Odor Threshold:	Not Established
Color:	Colored	Evaporation Rate:	Slower Than n-Butyl Acetate
Solubility in H₂O:	Not Established	Specific Gravity:	1.6
Freeze Point:	Not Established	pH:	Between 7.0 and 12.0
Vapor Pressure:	Not Established	Viscosity:	Not Established
Physical State:	Paste	Flammability:	Non-Flammable
Flash Point, F:	Greater than 200 degrees Fahrenheit	Method:	(Seta Closed Cup)
Lower Explosive Limit, %:	Not Established	Upper Explosive Limit, %:	Not Established

When reported, vapor pressure of this product has been calculated theoretically based on its constituent makeup and has not been determined experimentally.

(See section 16 for abbreviation legend)

Section 10 - Stability And Reactivity

Conditions To Avoid: Excessive heat and freezing.

Incompatibility: Incompatible with strong bases and oxidizing agents.

Hazardous Decomposition Products: Normal decomposition products, i.e., CO_x, NO_x.

Hazardous Polymerization: Hazardous polymerization will not occur under normal conditions.

Stability: Stable under recommended storage conditions.

Section 11 - Toxicological Information

Product LD₅₀: Not Established

Product LC₅₀: Not Established

CASRN	Chemical Name	LD ₅₀	LC ₅₀
107-21-1	Ethylene glycol	Rat:4700 mg/kg	Rat:10876 mg/kg
7664-41-7	Ammonia	-----	Rat:2000 ppm/4H
50-00-0	Formaldehyde	-----	Rat:203 mg/m ³

Significant Data with Possible Relevance to Humans: This product contains trace amounts of free formaldehyde. OSHA and NTP identify formaldehyde as a potential carcinogen. IARC identifies formaldehyde as a human carcinogen. Formaldehyde has been shown to cause mutations in a variety of in-vitro test systems, the significance of which to humans is unknown. There should be minimal risk when used with ventilation adequate to keep the atmospheric concentration of formaldehyde below the recommended exposure limits. Maintain adequate ventilation to prevent exposure above current OSHA / ACGIH exposure limits. Workplace monitoring of the air to define formaldehyde exposure levels may be necessary. In a two-year inhalation study, rats showed carcinogenic effects in the respiratory system at 15 ppm of formaldehyde.

Section 12 - Ecological Information

Ecological Information: Ecological injuries are not known or expected under normal use.

Section 13 - Disposal Information

Disposal Information: Dispose of material in accordance with all federal, state and local regulations. State and Local regulations/restrictions are complex and may differ from Federal regulations. Responsibility for proper waste disposal is with the owner of the waste.

EPA Waste Code if Discarded (40 CFR Section 261): None

Section 14 - Transportation Information

DOT Proper Shipping Name:	Not Regulated	Packing Group:	N.A.
DOT Technical Name:	N.A.	Hazard Subclass:	N.A.
DOT Hazard Class:	N.A.	DOT UN/NA Number:	N.A.

Note: The shipping information provided is applicable for domestic ground transport only. Different categorization may apply if shipped via other modes of transportation and/or to non-domestic destinations.

Section 15 - Regulatory Information

CERCLA - SARA Hazard Category:

This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

Immediate Health Hazard, Chronic Health Hazard

SARA Section 313:

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

None

Toxic Substances Control Act:

All ingredients in this product are either on TSCA inventory list, or otherwise exempt.

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States:

None

New Jersey Right-to-Know:

The following materials are non-hazardous, but are among the top five components in this product:

Chemical Name	CAS Number
Water	7732-18-5
Non-Hazardous Polymer	Proprietary
Acrylic polymer	Proprietary

Pennsylvania Right-to-Know:

The following non-hazardous ingredients are present in the product at greater than 3%:

Chemical Name	CAS Number
Water	7732-18-5
Non-Hazardous Polymer	Proprietary
Acrylic polymer	Proprietary

California Proposition 65:

WARNING: This product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

Section 16 - Other Information

HMIS Ratings:

Health: 1 Flammability: 1 Reactivity: 0 Personal Protection: X

Volatile Organic Compounds (VOC), less water less exempts: g/L: 56.0 lb/gal: 0.5 wt:wt%: 2.5

Volatile Organic Compounds (VOC), less water less exempts, less LVP-VOCs: wt:wt%: 0.9

REASON FOR REVISION: Periodic Update

Legend:

N.A. – Not Applicable	ACGIH – American Conference of Governmental Industrial Hygienists
N.E. – Not Established	SARA – Superfund Amendments and Reauthorization Act of 1986
N.D. – Not Determined	NJRTK – New Jersey Right-to-Know Law
VOC – Volatile Organic Compound	OSHA – Occupational Safety and Health Administration
PEL – Permissible Exposure Limit	HMIS – Hazardous Materials Identification System
TLV – Threshold Limit Value	NTP – National Toxicology Program
CEIL – Ceiling Exposure Limit	STEL – Short Term Exposure Limit
LD50 – Lethal Dose 50	LC50 – Lethal Concentration 50
F – Degree Fahrenheit	MSDS – Material Safety Data Sheet
C – Degree Celsius	CASRN – The Chemical Abstracts Service Registry Number

DAP believes the data and statements contained herein are accurate as of the date hereof. They are offered in good faith as typical values and not as a product specification. **NO WARRANTY OF MERCHANTABILITY, WARRANTY OF FITNESS FOR ANY PARTICULAR PURPOSE OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, IS MADE WITH REGARD TO THE INFORMATION HEREIN PROVIDED OR THE PRODUCT TO WHICH THE INFORMATION REFERS.** Since this document is intended only as a guide to the appropriate use and precautionary handling of the referenced product by a properly trained person, it is therefore the responsibility of the user to (i) review the recommendations with due consideration for the specific context of the intended use and (ii) determine if they are appropriate.

<End of MSDS>



Material Safety Data Sheet

An **RPM** Company

24 Hour Emergency Phone Numbers:

Medical/Poison Control:

1-800-327-3874

1-513-558-5111

Transportation/National Response Center:

1-800-535-5053

1-352-323-3500

.....
 • NOTE: The National Response Center emergency numbers to
 • be used only in the event of chemical emergencies involving a
 • spill, leak, fire, exposure or accident involving chemicals.
 •
 •

IMPORTANT: Provide this information to employees, customers, and users of this product. Read this MSDS before handling or disposing of this product. This product is covered by the OSHA Hazard Communication Standard and this document has been prepared in accordance with requirements of this standard. All abbreviated terms used in this MSDS are further described in Section 16.

Section 1 - Chemical Product / Company Information

This Material Safety Data Sheet is available in Canadian French and Hispanic American Spanish upon request.

On peut demander cette fiche signalétique (MSDS) à la langue française-canadienne.

Los Datos de Seguridad del Producto pueden obtenerse en Español si lo requiere.

Product Name: DAP 4000 Subfloor & Deck Construction
Adhesive

Product UPC Number: 070798250208, 070798251175

Product Use/Class: Subfloor & Deck Construction Adhesive

Manufacturer: DAP Inc.
2400 Boston Street Suite 200
Baltimore, MD 21224-4723
888-327-8477 (non-emergency matters)

Revision Date: 08/30/2007

Supersedes: 05/31/2000

MSDS Number: 00010303001

Section 2 - Hazards Identification

Emergency Overview: A tan paste product with a strong solvent odor. DANGER Extremely flammable liquid and vapor. Vapors may cause flash fire or explosion. Vapors may ignite explosively. Keep away from heat, sparks and flame. Do not breathe vapors. Do not breathe dust, vapors or spray mist. Use only with adequate ventilation. Prevent build-up of vapors by opening all windows and doors to achieve cross-ventilation. Aspiration hazard if swallowed. Aspiration may cause pulmonary edema and pneumonitis.

Refer to other MSDS sections for other detailed information.

Effects Of Overexposure - Eye Contact: Causes eye irritation.

Effects Of Overexposure - Skin Contact: Causes skin irritation. Prolonged and repeated skin contact may cause dermatitis, drying and defatting due to the solvent properties.

Effects Of Overexposure - Inhalation: Vapor harmful. May affect the brain or nervous system causing dizziness, headache or nausea. Inhalation causes irritation to the respiratory tract (nose, mouth, throat, mucous membranes). Aspiration into lungs may cause pulmonary edema and chemical pneumonitis. Can cause nerve damage to arms and legs. Effects may be permanent.

Effects Of Overexposure - Ingestion: Harmful or fatal if swallowed. If ingested, may cause vomiting, diarrhea, and depressed respiration.

Effects Of Overexposure - Chronic Hazards: NOTICE: Reports have associated repeated and prolonged occupational

overexposure to solvents with permanent brain and nervous system damage. Symptoms include: loss of memory, loss of intellectual ability and loss of coordination. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. Overexposure or misuse of toluene can cause liver, kidney, and brain damage as well as cardiac abnormalities. There have been cases of aplastic anemia from toluene in industrial exposures (ACGIH, 1992). Increased coagulation time and reduced clotting factors have also been found, which are indicators of damage to the bone marrow (Clayton & Clayton, 1994).

n-Hexane exposure can cause nerve damage to arms and legs causing numbness of the fingers and toes, effect may be permanent. Symptoms include: loss of memory, loss of intellectual ability and loss of coordination.

Primary Route(s) Of Entry: Skin Contact, Inhalation, Ingestion, Eye Contact

Medical Conditions which May be Aggravated by Exposure: None known.

Carcinogenicity:

CAS No.	Chemical Name	ACGIH	OSHA	IARC	NTP
13463-67-7	Titanium dioxide	Not Listed.	Not Listed.	Possible carcinogen.	Not Listed.

Section 3 - Composition / Information On Ingredients		
Chemical Name	CASRN	Wt%
Calcium Carbonate	471-34-1	10-30
Kaolin	1332-58-7	10-30
n-Hexane	110-54-3	7-13
Toluene	108-88-3	5-10
2-Methylpentane	107-83-5	5-10
3-Methylpentane	96-14-0	3-7
Magnesite	546-93-0	1-5
Methyleyclopentane	96-37-7	1-5
Isoheptane	591-76-4	0.5-1.5
Titanium dioxide	13463-67-7	0.1-1.0

Section 4 - First Aid Measures

First Aid - Eye Contact: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.

First Aid - Skin Contact: Wash off immediately with soap and plenty of water.

First Aid - Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

First Aid - Ingestion: If swallowed, DO NOT INDUCE VOMITING. Get medical attention immediately.

Note to Physician: None.

COMMENTS: Call Medical Emergency at 1-800-327-3874 if any irritation or complication arises from any of the above routes of entry.

Section 5 - Fire Fighting Measures

Extinguishing Media: Carbon Dioxide, Dry Chemical, Foam

Unusual Fire And Explosion Hazards: Material will readily ignite at room temperature. Extremely Flammable Do not smoke. Extinguish all flames and pilot lights, and turn off stoves, heaters, electric motors and other sources of ignition during use and until all vapors are gone. Closed containers may burst if exposed to extreme heat or fire. Vapors may form explosive mixtures with air. Vapors can flow along surfaces to a distant ignition source and flash back.

Special Firefighting Procedures: Wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent) and full protective gear. Use water spray to cool exposed surfaces.

Section 6 - Accidental Release Measures

Steps To Be Taken If Material Is Released Or Spilled: Wear proper protective equipment as specified in Section 8. Immediately eliminate sources of ignition. Dike to prevent entering any sewer or waterway. Absorb with suitable chemical absorbent.

Section 7 - Handling And Storage

Handling: KEEP OUT OF REACH OF CHILDREN Vapors are heavier than air and will collect in low areas. Check all low areas (basements, sumps, etc.) for vapor before entering. Avoid breathing vapors. Intentional misuse by deliberately concentrating and inhaling vapors may be harmful or fatal. Use in well ventilated area. Do not get in eyes, on skin or clothing. Wash thoroughly after handling. Turn off stoves, heaters, electric motors or other sources of ignition during use and until all vapors are gone. Vapors may travel long distances to a source of ignition and flash back.

Construction and repair activities can adversely affect indoor air quality. Consult with occupants or a representative (i.e. maintenance, building manager, industrial hygienist, or safety officer) to determine ways to minimize impact.

Storage: Keep away from heat and sources of ignition. Do not store at temperatures above 120 degrees F. Store containers away from excessive heat and freezing. Close container after each use. Keep tightly closed in a dry and cool place. Store away from caustics and oxidizers.

Section 8 - Exposure Controls / Personal Protection

Chemical Name	CASRN	ACGIH TWA	ACGIH STEL	ACGIH CEIL	OSHA TWA	OSHA STEL	OSHA CEIL	Skin
Calcium Carbonate	471-34-1	10 MGM3	N.E.	N.E.	5 MGM3 (respirable fraction)	N.E.	N.E.	No
Kaolin	1332-58-7	2 MGM3	N.E.	N.E.	15 MGM3	N.E.	N.E.	No
n-Hexane	110-54-3	50 PPM	N.E.	N.E.	500 PPM	N.E.	N.E.	Yes
Toluene	108-88-3	50 PPM	N.E.	N.E.	200 PPM	N.E.	300 PPM	Yes
2-Methylpentane	107-83-5	500 PPM	1000 PPM	N.E.	N.E.	N.E.	N.E.	No
3-Methylpentane	96-14-0	500 PPM	1000 PPM	N.E.	N.E.	N.E.	N.E.	No
Magnesite	546-93-0	10 MGM3	N.E.	N.E.	5 MGM3	N.E.	N.E.	No
Methylcyclopentane	96-37-7	N.E.	N.E.	N.E.	N.E.	N.E.	N.E.	No
Isoheptane	591-76-4	400 PPM	500 PPM	N.E.	500 PPM	N.E.	N.E.	No
Titanium dioxide	13463-67-7	10 MGM3	N.E.	N.E.	15 MGM3	N.E.	N.E.	No

Exposure Notes: None.

Precautionary Measures: Please refer to other sections and subsections of this MSDS.

Engineering Controls: Local ventilation of emission sources may be necessary to maintain ambient concentrations below recommended exposure limits. Ensure fresh air entry during application and drying. If you experience eye watering, headache or dizziness or if air monitoring demonstrates vapor/mist levels are above applicable limits, wear an appropriate, properly fitted respirator (NIOSH approved) during and after application. Follow respirator manufacturer's directions for respirator use.

Respiratory Protection: If concentrations exceed the exposure limits specified, use of a NIOSH-approved supplied air respirator is recommended. Where the protection factor is exceeded, use of a Self Contained Breathing Apparatus (SCBA) may be necessary.

Skin Protection: Solvent-resistant gloves.

Eye Protection: Goggles or safety glasses with side shields.

Other protective equipment: Safety shower and eyewash station should be located in immediate work area. Provide eyewash and solvent impervious apron if body contact may occur.

Hygienic Practices: Remove and wash contaminated clothing before re-use.

Important: Listed Permissible Exposure Levels (PEL) are from the U.S. Dept. of Labor OSHA Final Rule Limits (CFR 29 1910.1000); these limits may vary between states.

Note: An employee's skin exposure to substances having a "YES" in the "SKIN" column in the table above shall be prevented or reduced to the extent necessary under the circumstances through the use of gloves, coveralls, goggles or other appropriate personal protective equipment, engineering controls or work practices.

Section 9 - Physical And Chemical Properties

Boiling Range:	130 F – 180 F	Vapor Density:	Heavier Than Air
Odor:	Strong Solvent	Odor Threshold:	Not Established
Color:	Tan	Evaporation Rate:	Faster Than n-Butyl Acetate
Solubility in H2O:	Neqligible	Specific Gravity:	1.1
Freeze Point:	Not Established	pH:	Between 7.0 and 12.9
Vapor Pressure:	100 mm Hg 68 F	Viscosity:	170,000 - 250,000 cPs
Physical State:	Paste	Flammability:	Flammable
Flash Point, F:	75 Degrees F	Method:	(Seta Closed Cup)
Lower Explosive Limit, %:	Not Established	Upper Explosive Limit, %:	Not Established

When reported, vapor pressure of this product has been calculated theoretically based on its constituent makeup and has not been determined experimentally.

(See section 16 for abbreviation legend)

Section 10 - Stability And Reactivity

Conditions To Avoid: Excessive heat and freezing.

Incompatibility: Strong oxidizers, alkali metals and alkaline earth metals may cause fires or explosions.

Hazardous Decomposition Products: Normal decomposition products, i.e., COx, NOx.

Hazardous Polymerization: Hazardous polymerization will not occur under normal conditions.

Stability: Stable under recommended storage conditions.

Section 11 - Toxicological Information

Product LD50: Not Established

Product LC50: Not Established

CASRN	Chemical Name	LD50	LC50
471-34-1	Calcium Carbonate	Rat:6450 mg/kg	-----
110-54-3	n-Hexane	Rat:28710 mg/kg	Rat:48000 ppm/4H
108-88-3	Toluene	-----	Rat:49 gm/m3/4H

Significant Data with Possible Relevance to Humans: None.

Section 12 - Ecological Information

Ecological Information: Ecological injuries are not known or expected under normal use.

Section 13 - Disposal Information

Disposal Information: Do not re-use empty containers. Liquids cannot be disposed of in a landfill. Dispose of material in accordance with all federal, state and local regulations. After recovery of solvent dispose of by special waste incineration in compliance with the Environment Protection Act 1990 (Process Guidance Note IPR5/1). State and Local regulations/restrictions are complex and may differ from Federal regulations. Responsibility for proper waste disposal is with the owner of the waste.

EPA Waste Code if Discarded (40 CFR Section 261): D001

Section 14 - Transportation Information

DOT Proper Shipping Name:	Consumer Commodity	Packing Group:	None (III if not domestic by ground)
DOT Technical Name:	N.A.	Hazard Subclass:	N.A.
DOT Hazard Class:	None (3 for non-domestic / or air)	DOT UN/NA Number:	None (UN1133 when not domestic ground)

Note: The shipping information provided is applicable for domestic ground transport only. Different categorization may apply if shipped via other modes of transportation and/or to non-domestic destinations.

Section 15 - Regulatory Information**CERCLA - SARA Hazard Category:**

This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

Immediate Health Hazard, Chronic Health Hazard, Fire

SARA Section 313:

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Chemical Name	CAS Number
n-Hexane	110-54-3
Toluene	108-88-3

Toxic Substances Control Act:

All ingredients in this product are either on TSCA inventory list, or otherwise exempt.

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States:

Chemical Name	CAS Number
Isoheptane	591-76-4

New Jersey Right-to-Know:

The following materials are non-hazardous, but are among the top five components in this product:

Chemical Name	CAS Number

Butadiene-styrene copolymer	TSRN 618608-5037P
Hydrocarbons, C9 unsaturated, polymerize	TSRN 618608-5036P

Pennsylvania Right-to-Know:

The following non-hazardous ingredients are present in the product at greater than 3%:

Chemical Name	CAS Number
Butadiene-styrene copolymer	Proprietary
Hydrocarbons, C9 unsaturated, polymerize	Proprietary

California Proposition 65:

WARNING: This product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

Section 16 - Other Information

HMIS Ratings:

Health: 2	Flammability: 3	Reactivity: 0	Personal Protection: X
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Volatile Organic Compounds (VOC), less water less exempts: g/L: 427.4 lb/gal: 3.6 wt:wt%: 38.7

Volatile Organic Compounds (VOC), less water less exempts, less LVP-VOCs: wt:wt%: 38.7

REASON FOR REVISION: Periodic Update

Legend:	N.A. – Not Applicable	ACGIH – American Conference of Governmental Industrial Hygienists
	N.E. – Not Established	SARA – Superfund Amendments and Reauthorization Act of 1986
	N.D. – Not Determined	NJRTK – New Jersey Right-to-Know Law
	VOC – Volatile Organic Compound	OSHA – Occupational Safety and Health Administration
	PEL – Permissible Exposure Limit	HMIS – Hazardous Materials Identification System
	TLV – Threshold Limit Value	NTP – National Toxicology Program
	CEIL – Ceiling Exposure Limit	STEL – Short Term Exposure Limit
	LD50 – Lethal Dose 50	LC50 – Lethal Concentration 50
	F – Degree Fahrenheit	MSDS – Material Safety Data Sheet
	C – Degree Celsius	CASRN – The Chemical Abstracts Service Registry Number

DAP believes the data and statements contained herein are accurate as of the date hereof. They are offered in good faith as typical values and not as a product specification. **NO WARRANTY OF MERCHANTABILITY, WARRANTY OF FITNESS FOR ANY PARTICULAR PURPOSE OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, IS MADE WITH REGARD TO THE INFORMATION HEREIN PROVIDED OR THE PRODUCT TO WHICH THE INFORMATION REFERS.** Since this document is intended only as a guide to the appropriate use and precautionary handling of the referenced product by a properly trained person, it is therefore the responsibility of the user to (i) review the recommendations with due consideration for the specific context of the intended use and (ii) determine if they are appropriate.

<End of MSDS>



Material Safety Data Sheet

An **RPM** Company

24 Hour Emergency Phone Numbers:
Medical/Poison Control:
 In U.S.: Call 1-800-222-1222
 Outside U.S.: Call your local poison control center
Transportation/National Response Center:
 1-800-535-5053
 1-352-323-3500

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 • NOTE: The National Response Center emergency numbers to
 • be used only in the event of chemical emergencies involving a
 • spill, leak, fire, exposure or accident involving chemicals.

IMPORTANT: Provide this information to employees, customers, and users of this product. Read this MSDS before handling or disposing of this product. This product is covered by the OSHA Hazard Communication Standard and this document has been prepared in accordance with requirements of this standard. All abbreviated terms used in this MSDS are further described in Section 16.

Section 1 - Chemical Product / Company Information

This Material Safety Data Sheet is available in American Spanish upon request.
 Los Datos de Seguridad del Producto pueden obtenerse en Espanol si lo requiere.

Product Name:	Window, Door & Siding 100% Silicone Rubber Sealant White	Revision Date:	07/18/2013
Product UPC Number:	070798086463	Supersedes:	03/04/2011
Product Use/Class:	Caulk	MSDS Number:	00008646001
Manufacturer:	DAP Products Inc. 2400 Boston Street Suite 200 Baltimore, MD 21224-4723 888-327-8477 (non-emergency matters)		

Section 2 - Hazards Identification

Emergency Overview: A(n) white paste product with a acetic acid odor. **WARNING** May cause eye, skin, nose, throat and respiratory tract irritation. May be harmful if swallowed. Remove contact lenses before using.

Refer to other MSDS sections for other detailed information.

Effects Of Overexposure - Eye Contact: Direct contact may cause mild irritation. May cause eye irritation. Signs and symptoms may include: pain, tears, swelling, redness and blurred vision.

Effects Of Overexposure - Skin Contact: May cause skin irritation. May cause mild irritation.

Effects Of Overexposure - Inhalation: Inhalation may cause irritation to the respiratory tract (nose, mouth, mucous membranes). Material is not likely to present an inhalation hazard at ambient conditions. However, if material is heated or high vapor concentration is attained, central nervous system depression may occur, which is characterized by drowsiness, dizziness, confusion or loss of coordination.

Effects Of Overexposure - Ingestion: Low ingestion hazard in normal use. Harmful if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Ingestion may result in obstruction when material hardens.

Effects Of Overexposure - Chronic Hazards: Prolonged or repeated contact with skin can cause defatting of the skin, which may lead to dermatitis.

Primary Route(s) Of Entry: Skin Contact, Inhalation, Ingestion, Eye Contact

Medical Conditions which May be Aggravated by Exposure: No known applicable information.

Carcinogenicity:

CAS No.	Chemical Name	ACGIH	OSHA	IARC	NTP
64742-46-7	Hydrotreated middle distillate	Suspected human carcinogen.	Not Listed.	Not classifiable as to carcinogenicity to humans.	Not Listed.
13463-67-7	Titanium dioxide	Not Listed.	Not Listed.	Possibly carcinogenic to humans.	Not Listed.

Section 3 - Composition / Information On Ingredients

Chemical Name	CASRN	Wt%
Dimethylsiloxane, hydroxy term	51721300-5110P	40-70
Hydrotreated middle distillate	64742-46-7	10-30
Silica, amorphous	7631-86-9	7-13
Silanetriol, methyl-, triaceta	4253-34-3	3-7
Ethyltriacetoxysilane	17689-77-9	3-7
Titanium dioxide	13463-67-7	0.5-1.5

Section 4 - First Aid Measures

First Aid - Eye Contact: Immediately flush the contaminated eye(s) with lukewarm, gently flowing water for 5 minutes while holding the eyelid(s) open. Obtain medical attention.

First Aid - Skin Contact: Remove contaminated clothing, shoes and leather goods (e.g. watchbands, belts). Quickly and gently blot or brush away excess chemical. Flush with lukewarm gently flowing water for 15 minutes. If irritation persists, repeat flushing. If irritation persists, obtain medical advice.

First Aid - Inhalation: Material is not likely to present an inhalation hazard at ambient conditions. If material is heated or vapor is generated, care should be taken to prevent inhalation. In case of exposure to vapor, move to fresh air.

First Aid - Ingestion: If irritation or discomfort occur, obtain medical advice.

Note to Physician: Treat according to person's condition and specifics of exposure.

COMMENTS: If over-exposure occurs, call your poison control center at 1-800-222-1222.

Section 5 - Fire Fighting Measures

Extinguishing Media: Carbon Dioxide, Dry Chemical, Foam, Water Fog

Unusual Fire And Explosion Hazards: None.

Special Firefighting Procedures: Self-contained breathing apparatus and protective clothing should be worn in fighting large fires involving chemicals. Determine the need to evacuate or isolate the area according to your local emergency plan. Use water spray to keep fire exposed containers cool.

Section 6 - Accidental Release Measures

Steps To Be Taken If Material Is Released Or Spilled: Wear proper protective equipment as specified in Section 8. Observe all personal protection equipment recommendations described in Sections 5 and 8. Wipe up or scrape up and contain for salvage or disposal. Clean area as appropriate since spilled materials, even in small quantities, may present a

slip hazard. Final cleaning may require use of steam, solvents or detergents. Dispose of saturated absorbant or cleaning materials appropriately, since spontaneous heating may occur. Local, state and federal laws and regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which federal, state and local laws and regulations are applicable. Sections 13 and 15 of this MSDS provide information regarding certain federal and state requirements.

Note: See Section 8 for Personal Protective Equipment for Spills.

Section 7 - Handling And Storage

Handling: Use with adequate ventilation. Product evolves acetic acid (HOAc) when exposed to water or humid air. Provide ventilation during use to control HOAc within exposure guidelines or use respiratory protection. Avoid eye contact. Avoid breathing vapor, mist, dust, or fumes. Keep container closed. Avoid skin contact.

Storage: Use reasonable care and store away from oxidizing materials. Keep container closed and store away from water or moisture. This material in its finely divided form presents an explosion hazard. Follow NFPA 654 (for chemical dusts) or 484 (for metal dusts) as appropriate for managing dust hazards to minimize secondary explosion potential.

Section 8 - Exposure Controls / Personal Protection

Chemical Name	CASRN	ACGIH TWA	ACGIH STEL	ACGIH CEIL	OSHA TWA	OSHA STEL	OSHA CEIL	Skin
Dimethylsiloxane, hydroxy term	51721300-5110P	N.E.	N.E.	N.E.	N.E.	N.E.	N.E.	No
Hydrotreated middle distillate	64742-46-7	5 MGM3	N.E.	N.E.	5 MGM3	N.E.	N.E.	No
Silica, amorphous	7631-86-9	10 MGM3	N.E.	N.E.	5 MGM3	N.E.	N.E.	No
Silanetriol, methyl-, triaceta	4253-34-3	N.E.	N.E.	N.E.	N.E.	N.E.	N.E.	No
Ethyltriacetoxysilane	17689-77-9	N.E.	N.E.	N.E.	N.E.	N.E.	N.E.	No
Titanium dioxide	13463-67-7	10 MGM3	N.E.	N.E.	15 MGM3	N.E.	N.E.	No

Important: Listed Permissible Exposure Levels (PEL) are from the U.S. Dept. of Labor OSHA Final Rule Limits (CFR 29 1910.1000); these limits may vary between states.

Note: An employee's skin exposure to substances having a "YES" in the "SKIN" column in the table above shall be prevented or reduced to the extent necessary under the circumstances through the use of gloves, coveralls, goggles or other appropriate personal protective equipment, engineering controls or work practices.

Exposure Notes:

Consult local authorities for acceptable provincial values.

Acetic acid is formed upon contact with water or humid air. Provide adequate ventilation to control exposures within guidelines of OSHA PEL: TWA 10 ppm and ACGIH TLV: TWA 10 ppm, STEL 15 ppm.

Precautionary Measures: Avoid eye contact. Avoid breathing vapor, mist, dust, or fumes. Keep container closed. Avoid skin contact. Use reasonable care.

Comments: Product evolves acetic acid (HOAc) when exposed to water or humid air. Provide ventilation during use to control HOAc within exposure guidelines or use respiratory protection.

Note: These precautions are for room temperature handling. Use at elevated temperature or aerosol/spray applications may require added precautions.

Engineering Controls: Local Ventilation: Recommended.
General Ventilation: Recommended.

Respiratory Protection: Personal Protective Equipment for Routine Handling:

Inhalation:

Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines. IH personnel can assist in judging the adequacy of existing engineering controls.

Suitable Respirator:

Respiratory protection is not needed under ambient conditions. If vapor is generated when material is heated or handled, the following is advised. General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators.

Personal Protective Equipment for Spills:
-----**Inhalation/Suitable Respirator:**

Respiratory protection recommended. Follow OSHA Respirator Regulations (29 CFR 1910.134) and use NIOSH/MHSA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection.

Skin Protection: Personal Protective Equipment for Routine Handling:

Wash at mealtime and end of shift. Contaminated clothing and shoes should be removed as soon as practical and thoroughly cleaned before reuse. Chemical protective gloves are recommended.

Suitable Gloves:

Avoid skin contact by implementing good industrial hygiene practices and procedures. Select and use gloves and/or protective clothing to further minimize the potential for skin contact. Consult with your glove and/or personnel protective equipment manufacturer for selection of appropriate compatible materials.

Personal Protective Equipment for Spills:

Wash at mealtime and end of shift. Contaminated clothing and shoes should be removed as soon as practical and thoroughly cleaned before reuse. Chemical protective gloves are recommended.

Eye Protection: Personal Protective Equipment for Routine Handling:

Use proper protection - safety glasses as a minimum.

Personal Protective Equipment for Spills:

Use full face respirator.

Other protective equipment: None.

Hygienic Practices: Wash hands before breaks and at the end of workday. Remove and wash contaminated clothing and gloves, including the inside, before re-use.

Section 9 - Physical And Chemical Properties

Boiling Range:	Not Established	Vapor Density:	Heavier Than Air
Odor:	Acetic Acid	Odor Threshold:	Not Established
Color:	White	Evaporation Rate:	Slower Than n-Butyl Acetate
Solubility in H2O:	Not Established	Specific Gravity:	0.96 - 0.96
Freeze Point:	Not Established	pH:	Not Applicable
Vapor Pressure:	Not Established	Viscosity:	Not Established
Physical State:	Paste	Flammability:	Non-Flammable
Flash Point, F:	Greater than 200	Method:	(Seta Closed Cup)
Lower Explosive Limit, %:	Not Determined	Upper Explosive Limit, %:	Not Determined

When reported, vapor pressure of this product has been calculated theoretically based on its constituent makeup and has not been determined experimentally.

(See section 16 for abbreviation legend)

Section 10 - Stability And Reactivity

Conditions To Avoid: Excessive heat and freezing.

Incompatibility: Oxidizing material can cause a reaction. Water, moisture, or humid air can cause hazardous vapors to form as described in Section 8. Incompatible with strong bases and oxidizing agents.

Hazardous Decomposition Products: Thermal breakdown of this product during fire or very high heat conditions may evolve the following decomposition products: Carbon oxides and traces of incompletely burned carbon compounds. Silicon dioxide. Formaldehyde.

Hazardous Polymerization: Hazardous polymerization will not occur under normal conditions.

Stability: Stable under recommended storage conditions.

Section 11 - Toxicological Information

Product LD50: Not Established

Product LC50: Not Established

No toxicological information is available.

Significant Data with Possible Relevance to Humans: None.

Section 12 - Ecological Information

Ecological Information: Ecological injuries are not known or expected under normal use.

Section 13 - Disposal Information

Disposal Information: Dispose of material in accordance with all federal, state and local regulations. State and Local regulations/restrictions are complex and may differ from Federal regulations. Responsibility for proper waste disposal is with the owner of the waste.

EPA Waste Code if Discarded (40 CFR Section 261): None.

Section 14 - Transportation Information

DOT Proper Shipping Name:	Not Regulated.	Packing Group:	N.A.
DOT Technical Name:	N.A.	Hazard Subclass:	N.A.
DOT Hazard Class:	N.A.	DOT UN/NA Number:	N.A.

Section 15 - Regulatory Information

CERCLA - SARA Hazard Category:

This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

Immediate Health Hazard, Chronic Health Hazard

SARA Section 313:

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

None

Toxic Substances Control Act:

All ingredients in this product are either on TSCA inventory list, or otherwise exempt.

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States:

None

New Jersey Right-to-Know:

The following materials are non-hazardous, but are among the top five components in this product:

None

Pennsylvania Right-to-Know:

The following non-hazardous ingredients are present in the product at greater than 3%:

None

California Proposition 65:

None.

Section 16 - Other Information

HMIS Ratings:

Health: 1	Flammability: 1	Reactivity: 0	Personal Protection: X
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Volatile Organic Compounds (VOC), less water less exempts: g/L: 28.8 lb/gal: 0.24 wt:wt%: 3.0

Volatile Organic Compounds (VOC), less water less exempts, less LVP-VOCs: wt:wt%: 3.0

REASON FOR REVISION: Periodic Update

Legend:

N.A. – Not Applicable

ACGIH – American Conference of Governmental Industrial Hygienists

N.E. – Not Established

SARA – Superfund Amendments and Reauthorization Act of 1986

N.D. – Not Determined

NJRTK – New Jersey Right-to-Know Law

VOC – Volatile Organic Compound

OSHA – Occupational Safety and Health Administration

PEL – Permissible Exposure Limit

HMIS – Hazardous Materials Identification System

TLV – Threshold Limit Value

NTP – National Toxicology Program

CEIL – Ceiling Exposure Limit

STEL – Short Term Exposure Limit

LD50 – Lethal Dose 50

LC50 – Lethal Concentration 50

F – Degree Fahrenheit

MSDS – Material Safety Data Sheet

C – Degree Celsius

CASRN – The Chemical Abstracts Service Registry Number

DAP believes the data and statements contained herein are accurate as of the date hereof. They are offered in good faith as typical values and not as a product specification. **NO WARRANTY OF MERCHANTABILITY, WARRANTY OF FITNESS FOR ANY PARTICULAR PURPOSE OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, IS MADE WITH REGARD TO THE INFORMATION HEREIN PROVIDED OR THE PRODUCT TO WHICH THE INFORMATION REFERS.** Since this document is intended only as a guide to the appropriate use and precautionary handling of the referenced product by a properly trained person, it is therefore the responsibility of the user to (i) review the recommendations with due consideration for the specific context of the intended use and (ii) determine if they are appropriate.

<End of MSDS>

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MSDS Name **DEVCON® 2 Ton® Epoxy [1:1]**
Manufacturer Name ITW Devcon
Stock No.: 14260
Kit MSDS Revision Date 10/17/2012
KIT MSDS Revision Notes Name Change

Components	
	2-TON EPOXY RESIN
	2-TON EPOXY HARDENER
ITW Devcon Product Code : 14260	

SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

Product Name: **2-TON EPOXY RESIN**
Manufacturer Name: ITW Devcon
Address: 30 Endicott Street
 Danvers, MA 01923
General Phone Number: (978) 777-1100
Emergency Phone Number: (800) 424-9300
CHEMTREC: For emergencies in the US, call CHEMTREC: 800-424-9300
MSDS Revision Date: 06/30/2012

HMIS	
Health Hazard	2*
Fire Hazard	1
Reactivity	1
Personal Protection	x

* Chronic Health Effects

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS#	Ingredient Percent
Bisphenol A diglycidyl ether resin	25068-38-6	60 - 100 by weight

SECTION 3 - HAZARDS IDENTIFICATION

Emergency Overview: WARNING! Potential Sensitizer. Irritant.
Route of Exposure: Eyes. Skin. Inhalation. Ingestion.
Potential Health Effects:
Eye: Can cause moderate irritation, burning sensation, tearing, redness, and swelling. Overexposure may cause lacrimation, conjunctivitis, corneal damage and permanent injury..
Skin: Can cause skin irritation; itching, redness, rashes, hives, burning, and swelling. Allergic reactions are possible. May cause skin sensitization, an allergic reaction, which becomes evident on reexposure to this material.
Inhalation: Respiratory tract irritant. High concentration may cause dizziness, headache, and anesthetic effects. May cause respiratory sensitization with asthma-like symptoms in susceptible individuals.
Ingestion: Causes irritation, a burning sensation of the mouth, throat and gastrointestinal tract and abdominal pain.
Chronic Health Effects: Prolonged skin contact may lead to burning associated with severe reddening, swelling, and possible tissue destruction. Overexposure can cause headaches, dizziness, nausea, and vomiting.
Signs/Symptoms: Eyes. Skin. Respiratory system. Digestive system.
Target Organs: Eyes. Skin. Respiratory system. Digestive system.
Aggravation of Pre-Existing Conditions: Individuals with pre-existing skin disorders, asthma, allergies or known sensitization may be more susceptible to the effects of this product.

SECTION 4 - FIRST AID MEASURES

Eye Contact: Immediately flush eyes with plenty of water for at least 15 to 20 minutes. Ensure adequate flushing of the eyes by separating the eyelids with fingers. Get immediate medical attention.

Skin Contact:	Immediately wash skin with plenty of soap and water for 15 to 20 minutes, while removing contaminated clothing and shoes. Get medical attention if irritation develops or persists.
Inhalation:	If inhaled, remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Seek immediate medical attention.
Ingestion:	If swallowed, do NOT induce vomiting. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.

SECTION 5 - FIRE FIGHTING MEASURES

Flash Point:	>400°F (204.4°C)
Flash Point Method:	Pensky-Martens Closed Cup
Auto Ignition Temperature:	Not determined.
Lower Flammable/Explosive Limit:	Not determined.
Upper Flammable/Explosive Limit:	Not determined.
Fire Fighting Instructions:	Evacuate area of unprotected personnel. Use cold water spray to cool fire exposed containers to minimize risk of rupture. Do not enter confined fire space without full protective gear. If possible, contain fire run-off water.
Extinguishing Media:	Use carbon dioxide (CO2) or dry chemical when fighting fires involving this material.
Unsuitable Media:	Water or foam may cause frothing.
Protective Equipment:	As in any fire, wear Self-Contained Breathing Apparatus (SCBA), MSHA/NIOSH (approved or equivalent) and full protective gear.
Unusual Fire Hazards:	Sealed containers at elevated temperatures may rupture explosively and spread fire due to polymerization.. Heating above 300 deg F in the presence of air may cause slow oxidative decomposition and above 500 deg F may cause polymerization.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Spill Cleanup Measures:	Absorb spill with inert material (e.g., dry sand or earth), then place in a chemical waste container. Provide ventilation. Clean up spills immediately observing precautions in the protective equipment section. After removal, flush spill area with soap and water to remove trace residue. Avoid personal contact and breathing vapors or mists. Ventilate area. Use proper personal protective equipment as listed in section 8.
Personnel Precautions:	Evacuate area and keep unnecessary and unprotected personnel from entering the spill area.
Environmental Precautions:	Avoid runoff into storm sewers, ditches, and waterways.
Other Precautions:	Pump or shovel to storage/salvage vessels.

SECTION 7 - HANDLING and STORAGE

Handling:	Use with adequate ventilation. Avoid breathing vapor, aerosol or mist.
Storage:	Store in a cool, dry, well ventilated area away from sources of heat and incompatible materials. Keep container tightly closed when not in use.
Special Handling Procedures:	Provide appropriate ventilation/respiratory protection against decomposition products (see Section 10) during welding/flame cutting operations and to protect against dust during sanding/grinding of cured product.
Hygiene Practices:	Wash thoroughly after handling.

SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION - EXPOSURE GUIDELINES

Engineering Controls:	Use appropriate engineering control such as process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Good general ventilation should be sufficient to control airborne levels. Where such systems are not effective wear suitable personal protective equipment, which performs satisfactorily and meets OSHA or other recognized standards. Consult with local procedures for selection, training, inspection and maintenance of the personal protective equipment.
Eye/Face Protection:	Wear appropriate protective glasses or splash goggles as described by 29 CFR 1910.133, OSHA eye and face protection regulation, or the European standard EN 166.
Skin Protection Description:	Wear appropriate protective gloves and other protective apparel to prevent skin contact. Consult manufacturer's data for permeability data.
Respiratory Protection:	A NIOSH approved air-purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.
Other Protective:	Facilities storing or utilizing this material should be equipped with an eyewash and a deluge shower safety station.

EXPOSURE GUIDELINES

Notes :	Only established PEL and TLV values for the ingredients are listed.
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SECTION 9 - PHYSICAL and CHEMICAL PROPERTIES

Physical State Appearance:	Viscous. Liquid..
Color:	Clear.
Odor:	slight odor
Boiling Point:	>500°F (260°C)
Melting Point:	Not determined.
Specific Gravity:	1.17
Solubility:	negligible
Vapor Density:	>1 (air = 1)
Vapor Pressure:	0.03 mmHg @171°F
Percent Volatile:	0
Evaporation Rate:	<<1 (butyl acetate = 1)
pH:	Neutral.
Molecular Formula:	Mixture
Molecular Weight:	Mixture
Flash Point:	>400°F (204.4°C)
Flash Point Method:	Pensky-Martens Closed Cup
Auto Ignition Temperature:	Not determined.
VOC Content:	0 g/L
Percent Solids by Weight	100

SECTION 10 - STABILITY and REACTIVITY

Chemical Stability:	Stable under normal temperatures and pressures.
Hazardous Polymerization:	Not reported.
Conditions to Avoid:	Extreme heat, sparks, and open flame. Incompatible materials, oxidizers and oxidizing conditions. Heating resin above 300 F in the presence of air may cause slow oxidative decomposition.
Incompatible Materials:	Strong Lewis or mineral acids, strong oxidizing agents, strong mineral and organic bases (especially primary and secondary aliphatic amines).

SECTION 11 - TOXICOLOGICAL INFORMATION

Bisphenol A diglycidyl ether resin:

RTECS Number:	SL6480000
Skin:	Administration onto the skin - Rat LD : >2 gm/kg [Nutritional and Gross Metabolic - Other changes]

SECTION 12 - ECOLOGICAL INFORMATION

Ecotoxicity:	No ecotoxicity data was found for the product.
Environmental Fate:	No environmental information found for this product.

SECTION 13 - DISPOSAL CONSIDERATIONS

Waste Disposal:	Consult with the US EPA Guidelines listed in 40 CFR Part 261.3 for the classifications of hazardous waste prior to disposal. Furthermore, consult with your state and local waste requirements or guidelines, if applicable, to ensure compliance. Arrange disposal in accordance to the EPA and/or state and local guidelines.
RCRA Number:	None.

SECTION 14 - TRANSPORT INFORMATION

DOT Shipping Name:	Non regulated.
DOT UN Number:	N/A
DOT Hazard Class:	Not applicable.
DOT Packing Group:	Not applicable.
IATA Shipping Name:	Non regulated.

SECTION 15 - REGULATORY INFORMATION

Bisphenol A diglycidyl ether resin:

TSCA Inventory Status:	Listed
Canada DSL:	Listed
Canadian Regulations:	WHMIS Hazard Class(es): D2B All components of this product are on the Canadian Domestic Substances

SECTION 16 - ADDITIONAL INFORMATION

HMIS Fire Hazard: 1
 HMIS Health Hazard: 2*
 HMIS Reactivity: 1
 HMIS Personal Protection: x
 MSDS Revision Date: 06/30/2012
 MSDS Author: Actio Corporation
 Disclaimer: This Health and Safety Information is correct to the best of our knowledge and belief at the date of its publication but we cannot accept liability for any loss, injury or damage which may result from its use. The information given in the Data Sheet is designed only as a guidance for safe handling, storage and the use of the substance. It is not a specification nor does it guarantee any specific properties. All chemicals should be handled only by competent personnel, within a controlled environment.

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SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

Product Name: **2-TON EPOXY HARDENER**
 Manufacturer Name: ITW Devcon
 Address: 30 Endicott Street
 Danvers, MA 01923
 General Phone Number: (978) 777-1100
 Emergency Phone Number: (800) 424-9300
 CHEMTREC: For emergencies in the US, call CHEMTREC: 800-424-9300
 MSDS Revision Date: 06/30/2012

HMIS	
Health Hazard	3*
Fire Hazard	1
Reactivity	0
Personal Protection	x

* Chronic Health Effects

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS#	Ingredient Percent
Nonylphenol	25154-52-3	60 - 100 by weight
Aminoethylpiperazine	140-31-8	10 - 30 by weight

SECTION 3 - HAZARDS IDENTIFICATION

Emergency Overview: DANGER! Corrosive. Toxic. Potential Sensitizer. Irritant.
 Route of Exposure: Eyes. Skin. Inhalation. Ingestion.
 Potential Health Effects:
 Eye: Corrosive. Will cause eye burns, permanent tissue damage, and blindness.
 Skin: Corrosive causes severe skin burns. may cause permanent skin damage. Allergic reactions are possible. May cause skin sensitization, an allergic reaction, which becomes evident on reexposure to this material.
 Inhalation: May cause severe respiratory system irritation. May cause respiratory sensitization with asthma-like symptoms in susceptible individuals.
 Ingestion: Harmful if swallowed. Corrosive to the gastrointestinal tract.
 Chronic Health Effects: Prolonged skin contact causes burns. Repeated or prolonged inhalation may cause toxic effects.
 Signs/Symptoms: Depending on solution concentration, material may be corrosive to skin, mucous membranes and eyes. Vapors may cause respiratory irritation.
 Target Organs: Eyes. Skin. Respiratory system. Digestive system.
 Aggravation of Pre-Existing Conditions: Individuals with pre-existing skin disorders, asthma, allergies or known sensitization may be more susceptible to the effects of this product.

SECTION 4 - FIRST AID MEASURES

Eye Contact: Immediately flush eyes with plenty of water for at least 15 to 20 minutes. Ensure adequate flushing of the eyes by separating the eyelids with fingers. Get immediate medical attention.
 Skin Contact: Immediately wash skin with plenty of soap and water for 15 to 20 minutes, while removing contaminated clothing and shoes. Get medical attention if irritation develops or persists.
 Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Seek immediate medical attention.
 Ingestion: If swallowed, do NOT induce vomiting. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious

	person.
Other First Aid:	Due to possible aspiration into the lungs, DO NOT induce vomiting if ingested. Provide a glass of water to dilute the material in the stomach. If vomiting occurs naturally, have the person lean forward to reduce the risk of aspiration.

SECTION 5 - FIRE FIGHTING MEASURES

Flammable Properties:	Class III B.
Flash Point:	213.8°F (101°C)
Flash Point Method:	Closed Cup.
Auto Ignition Temperature:	Not determined.
Lower Flammable/Explosive Limit:	Not determined.
Upper Flammable/Explosive Limit:	Not determined.
Fire Fighting Instructions:	Evacuate area of unprotected personnel. Use cold water spray to cool fire exposed containers to minimize risk of rupture. Do not enter confined fire space without full protective gear. If possible, contain fire run-off water.
Extinguishing Media:	Use carbon dioxide (CO2) or dry chemical when fighting fires involving this material.
Unsuitable Media:	Water or foam may cause frothing.
Protective Equipment:	As in any fire, wear Self-Contained Breathing Apparatus (SCBA), MSHA/NIOSH (approved or equivalent) and full protective gear.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Spill Cleanup Measures:	Absorb spill with inert material (e.g., dry sand or earth), then place in a chemical waste container. Provide ventilation. Clean up spills immediately observing precautions in the protective equipment section. After removal, flush spill area with soap and water to remove trace residue. Corrosive. Avoid personal contact and breathing vapors or mists. Ventilate area. Use proper personal protective equipment as listed in section 8.
Personnel Precautions:	Evacuate area and keep unnecessary and unprotected personnel from entering the spill area.
Environmental Precautions:	Avoid runoff into storm sewers, ditches, and waterways.
Other Precautions:	Pump or shovel to storage/salvage vessels.

SECTION 7 - HANDLING and STORAGE

Handling:	Use with adequate ventilation. Avoid breathing vapor, aerosol or mist. Avoid contact with eyes and skin. Do not reuse containers without proper cleaning or reconditioning.
Storage:	Store in a cool, dry, well ventilated area away from sources of heat and incompatible materials. Keep container tightly closed when not in use. Do not store in reactive metal containers. Keep away from acids, oxidizers.
Special Handling Procedures:	Provide appropriate ventilation/respiratory protection against decomposition products (see Section 10) during welding/flame cutting operations and to protect against dust during sanding/grinding of cured product.
Hygiene Practices:	Wash thoroughly after handling.

SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION - EXPOSURE GUIDELINES

Engineering Controls:	Use appropriate engineering control such as process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Good general ventilation should be sufficient to control airborne levels. Where such systems are not effective wear suitable personal protective equipment, which performs satisfactorily and meets OSHA or other recognized standards. Consult with local procedures for selection, training, inspection and maintenance of the personal protective equipment.
Eye/Face Protection:	Wear appropriate protective glasses or splash goggles as described by 29 CFR 1910.133, OSHA eye and face protection regulation, or the European standard EN 166.
Skin Protection Description:	Chemical-resistant gloves and chemical goggles, face-shield and synthetic apron or coveralls should be used to prevent contact with eyes, skin or clothing.
Respiratory Protection:	A NIOSH approved air-purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.
Other Protective:	Facilities storing or utilizing this material should be equipped with an eyewash and a deluge shower safety station.

EXPOSURE GUIDELINES

Notes :	Only established PEL and TLV values for the ingredients are listed.
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SECTION 9 - PHYSICAL and CHEMICAL PROPERTIES

Physical State Appearance:	Liquid..
Color:	Amber.
Odor:	Ammonia like fishy.
Boiling Point:	>392°F (200°C)
Melting Point:	Not determined.
Specific Gravity:	0.97
Solubility:	completely miscible
Vapor Density:	>1 (air = 1)
Vapor Pressure:	<1 mmHg @70°F
Percent Volatile:	0
Evaporation Rate:	<1 (butyl acetate = 1)
pH:	alkaline
Molecular Formula:	Mixture
Molecular Weight:	Mixture
Flash Point:	213.8°F (101°C)
Flash Point Method:	Closed Cup.
Auto Ignition Temperature:	Not determined.
VOC Content:	0 g/L
Percent Solids by Weight	100

SECTION 10 - STABILITY and REACTIVITY

Chemical Stability:	Stable under normal temperatures and pressures.
Hazardous Polymerization:	Not reported.
Conditions to Avoid:	Extreme heat, sparks, and open flame. Incompatible materials, oxidizers and oxidizing conditions. Product may slowly corrode copper, aluminum, zinc and galvanized surfaces.
Incompatible Materials:	Oxidizers, acids, and chlorinated organic compounds. Reactive metals (e.g. sodium, calcium, zinc). Sodium/calcium hypochlorite. Nitrous acid/oxide, nitrites. Peroxides. Materials reactive with hydroxyl compounds.

SECTION 11 - TOXICOLOGICAL INFORMATION

<u>Nonylphenol:</u>	
RTECS Number:	SM5600000
Skin:	Administration onto the skin - Rabbit : 2140 uL/kg [Details of toxic effects not reported other than lethal dose value] Administration onto the skin - Rabbit : 2140 mg/kg [Details of toxic effects not reported other than lethal dose value] Administration onto the skin - Rabbit : 500 mg
Ingestion:	Oral - Rat LD50: 580 mg/kg [Details of toxic effects not reported other than lethal dose value] Oral - Mouse LD50: 1231 mg/kg [Details of toxic effects not reported other than lethal dose value] Oral - Mouse LD50: 75.63 mL/kg [Details of toxic effects not reported other than lethal dose value]
<u>Aminoethylpiperazine:</u>	
RTECS Number:	TK8050000
Eye:	Eye - Rabbit Standard Draize test.: 20 mg/24H [Moderate]
Skin:	Administration onto the skin - Rabbit LD50 : 880 uL/kg [Details of toxic effects not reported other than lethal dose value] Administration onto the skin - Rabbit Open irritation test: 100 ug/24H Administration onto the skin - Rabbit Standard Draize test.: 5 mg/24H [severe]
Ingestion:	Oral - Rat LD50 : 2140 uL/kg [Details of toxic effects not reported other than lethal dose value]

SECTION 12 - ECOLOGICAL INFORMATION

Ecotoxicity:	No ecotoxicity data was found for the product.
Environmental Fate:	No environmental information found for this product.

SECTION 13 - DISPOSAL CONSIDERATIONS

Waste Disposal:	Consult with the US EPA Guidelines listed in 40 CFR Part 261.3 for the classifications of hazardous waste prior to disposal. Furthermore, consult with your state and local waste requirements or guidelines, if applicable, to ensure compliance. Arrange disposal in accordance to the EPA and/or state and local guidelines.
RCRA Number:	None.

SECTION 14 - TRANSPORT INFORMATION

DOT Shipping Name:	Refer to Bill of Lading
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SECTION 15 - REGULATORY INFORMATION

Nonylphenol:

TSCA Inventory Status: Listed
Massachusetts: Listed: Massachusetts Oil and Hazardous List
Pennsylvania: Listed
Canada DSL: Listed

Aminoethylpiperazine:

TSCA Inventory Status: Listed
Massachusetts: Listed: Massachusetts Oil and Hazardous List
Pennsylvania: Listed
Canada DSL: Listed
Canadian Regulations: WHMIS Hazard Class(es): E;D2B
All components of this product are on the Canadian Domestic Substances List.

SECTION 16 - ADDITIONAL INFORMATION

HMIS Fire Hazard: 1
HMIS Health Hazard: 3*
HMIS Reactivity: 0
HMIS Personal Protection: x
MSDS Revision Date: 06/30/2012
MSDS Author: Actio Corporation
Disclaimer: This Health and Safety Information is correct to the best of our knowledge and belief at the date of its publication but we cannot accept liability for any loss, injury or damage which may result from its use. The information given in the Data Sheet is designed only as a guidance for safe handling, storage and the use of the substance. It is not a specification nor does it guarantee any specific properties. All chemicals should be handled only by competent personnel, within a controlled environment.

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Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME

DEVCON 5 MINUTE EPOXY HARDENER

SYNONYMS

"PART: DS-208"

PRODUCT USE

Hardener component of two part epoxy adhesive.

SUPPLIER

Company: ITW POLYMERS AND FLUIDS
Address:
100 Hassall Street
Wetherill Park
NSW 2164
Australia
Telephone: +61 2 9757 8800
Emergency Tel: 1800 039 008
Emergency Tel: +61 3 9573 3112
Fax: +61 2 9757 3855

Section 2 - HAZARDS IDENTIFICATION

STATEMENT OF HAZARDOUS NATURE

HAZARDOUS SUBSTANCE. NON-DANGEROUS GOODS. According to the Criteria of NOHSC, and the ADG Code.

COMBUSTIBLE LIQUID, regulated under AS1940 for Bulk Storage purposes only.

RISK

- Harmful in contact with skin and if swallowed.
- Irritating to eyes and skin.

SAFETY

- Do not breathe gas/fumes/vapour/spray.
- Avoid contact with skin.
- Avoid contact with eyes.
- Wear suitable protective clothing.
- Wear suitable gloves.
- Wear eye/face protection.
- To clean the floor and all objects contaminated by this material, use water and detergent.
- Keep away from food, drink and animal feeding stuffs.
- In case of contact with eyes, rinse with plenty of water and contact Doctor or Poisons Information Centre.
- If swallowed, IMMEDIATELY contact Doctor or Poisons Information Centre. (show this container or label).

continued...

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Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

NAME	CAS RN	%
2, 4, 6- tris[(dimethylamino)methyl]phenol	90-72-2	10-30
ingredients nonhazardous		balance

Section 4 - FIRST AID MEASURES

SWALLOWED

- If swallowed do NOT induce vomiting.
- If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.
- Observe the patient carefully.
- Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.

EYE

- If this product comes in contact with the eyes:
- Wash out immediately with fresh running water.
- Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.
- Seek medical attention without delay; if pain persists or recurs seek medical attention.
- Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

SKIN

- If skin contact occurs:
- Immediately remove all contaminated clothing, including footwear.
- Flush skin and hair with running water (and soap if available).
- Seek medical attention in event of irritation.

INHALED

- If fumes, aerosols or combustion products are inhaled remove from contaminated area.
- Other measures are usually unnecessary.

NOTES TO PHYSICIAN

Treat symptomatically.

Section 5 - FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

- Foam.
- Dry chemical powder.
- BCF (where regulations permit).
- Carbon dioxide.

FIRE FIGHTING

- Alert Fire Brigade and tell them location and nature of hazard.
- Wear breathing apparatus plus protective gloves.
- Prevent, by any means available, spillage from entering drains or water course.
- Use water delivered as a fine spray to control fire and cool adjacent area.

FIRE/EXPLOSION HAZARD

- Combustible.
 - Slight fire hazard when exposed to heat or flame.
 - Heating may cause expansion or decomposition leading to violent rupture of containers.
 - On combustion, may emit toxic fumes of carbon monoxide (CO).
- Combustion products include: carbon dioxide (CO₂), nitrogen oxides (NO_x), other pyrolysis products typical of burning organic material.
- May emit poisonous fumes.

FIRE INCOMPATIBILITY

- Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result.

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Section 5 - FIRE FIGHTING MEASURES

HAZCHEM

None

Section 6 - ACCIDENTAL RELEASE MEASURES

MINOR SPILLS

- Remove all ignition sources.
- Clean up all spills immediately.
- Avoid breathing vapours and contact with skin and eyes.
- Control personal contact with the substance, by using protective equipment.

MAJOR SPILLS

Moderate hazard.

- Clear area of personnel and move upwind.
- Alert Fire Brigade and tell them location and nature of hazard.
- Wear breathing apparatus plus protective gloves.
- Prevent, by any means available, spillage from entering drains or water course.

Personal Protective Equipment advice is contained in Section 8 of the MSDS.

Section 7 - HANDLING AND STORAGE

PROCEDURE FOR HANDLING

- DO NOT allow clothing wet with material to stay in contact with skin.
- Avoid all personal contact, including inhalation.
- Wear protective clothing when risk of exposure occurs.
- Use in a well-ventilated area.
- Prevent concentration in hollows and sumps.

SUITABLE CONTAINER

- Metal can or drum
- Packaging as recommended by manufacturer.
- Check all containers are clearly labelled and free from leaks.

STORAGE INCOMPATIBILITY

- Avoid strong acids, acid chlorides, acid anhydrides and chloroformates.
- Avoid contact with copper, aluminium and their alloys.
- Avoid reaction with oxidising agents.

STORAGE REQUIREMENTS

- Store in original containers.
- Keep containers securely sealed.
- No smoking, naked lights or ignition sources.
- Store in a cool, dry, well-ventilated area.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE CONTROLS

The following materials had no OELs on our records

- 2, 4, 6- tris[(dimethylamino)methyl]phenol:

CAS:90- 72- 2

MATERIAL DATA

DEVCON 5 MINUTE EPOXY HARDENER:

Not available

2,4,6-TRIS[(DIMETHYLAMINO)METHYL]PHENOL:

Odour Threshold Value for phenol: 0.060 ppm (detection)

NOTE: Detector tubes for phenol, measuring in excess of 1 ppm, are commercially available.

Systemic absorption by all routes may induce convulsions with damage to the lungs and central nervous system. />.

Exposure limits with "skin" notation indicate that vapour and liquid may be absorbed through intact skin. Absorption by skin

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Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

may readily exceed vapour inhalation exposure. Symptoms for skin absorption are the same as for inhalation. Contact with eyes and mucous membranes may also contribute to overall exposure and may also invalidate the exposure standard.

CEL TWA: 5 ppm, 54 mg/m3

SKIN

[Rohm & Haas]

PERSONAL PROTECTION

RESPIRATOR

•Type AK-P Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

EYE

- Safety glasses with side shields.
- Chemical goggles.
- Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lens or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59], [AS/NZS 1336 or national equivalent].

HANDS/FEET

- Wear chemical protective gloves, e.g. PVC.
- Wear safety footwear or safety gumboots, e.g. Rubber.

NOTE:

- The material may produce skin sensitisation in predisposed individuals. Care must be taken, when removing gloves and other protective equipment, to avoid all possible skin contact.
- Contaminated leather items, such as shoes, belts and watch-bands should be removed and destroyed.

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice.

Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include:

OTHER

- Overalls.
- P.V.C. apron.
- Barrier cream.
- Skin cleansing cream.

ENGINEERING CONTROLS

■ Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection.

The basic types of engineering controls are:

Process controls which involve changing the way a job activity or process is done to reduce the risk.

Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment.

Refer also to protective measures for the other component used with the product. Read both MSDS before using; store and attach MSDS together.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE

Viscous amber liquid with amine odour; does not mix with water.

PHYSICAL PROPERTIES

Liquid.

Does not mix with water.

Sinks in water.

State	Liquid	Molecular Weight	Not Applicable
Melting Range (°C)	Not Available	Viscosity	13000 cSt 25°C
Boiling Range (°C)	Not Available	Solubility in water (g/L)	Immiscible
Flash Point (°C)	>100	pH (1% solution)	9.5 (conc. soln.)

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Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Decomposition Temp (°C)	Not Available	pH (as supplied)	Not Available
Autoignition Temp (°C)	Not Available	Vapour Pressure (kPa)	Negligible
Upper Explosive Limit (%)	Not Available	Specific Gravity (water=1)	1.13
Lower Explosive Limit (%)	Not Available	Relative Vapour Density (air=1)	Not Available
Volatile Component (%vol)	Not Available	Evaporation Rate	Not Available

Section 10 - STABILITY AND REACTIVITY

CONDITIONS CONTRIBUTING TO INSTABILITY

- Presence of incompatible materials.
- Product is considered stable.
- Hazardous polymerisation will not occur.

For incompatible materials - refer to Section 7 - Handling and Storage.

Section 11 - TOXICOLOGICAL INFORMATION

POTENTIAL HEALTH EFFECTS

ACUTE HEALTH EFFECTS

SWALLOWED

■ Accidental ingestion of the material may be harmful; animal experiments indicate that ingestion of less than 150 gram may be fatal or may produce serious damage to the health of the individual.

Amines without benzene rings when swallowed are absorbed throughout the gut. Corrosive action may cause damage throughout the gastrointestinal tract. They are removed through the liver, kidney and intestinal mucosa by enzyme breakdown.

Ingestion of amine epoxy-curing agents (hardeners) may cause severe abdominal pain, nausea, vomiting or diarrhoea. The vomitus may contain blood and mucous. If death does not occur within 24 hours there may be an improvement in the patients condition for 2-4 days only to be followed by the sudden onset of abdominal pain, boardlike abdominal rigidity or hypo-tension; this indicates that delayed gastric or oesophageal corrosive damage has occurred.

EYE

■ Vapours of volatile amines irritate the eyes, causing excessive secretion of tears, inflammation of the conjunctiva and slight swelling of the cornea, resulting in "halos" around lights. This effect is temporary, lasting only for a few hours. However this condition can reduce the efficiency of undertaking skilled tasks, such as driving a car. Direct eye contact with liquid volatile amines may produce eye damage, permanent for the lighter species.

There is evidence that material may produce eye irritation in some persons and produce eye damage 24 hours or more after instillation. Severe inflammation may be expected with pain. There may be damage to the cornea. Unless treatment is prompt and adequate there may be permanent loss of vision. Conjunctivitis can occur following repeated exposure.

SKIN

■ Skin contact with the material may be harmful; systemic effects may result following absorption.

The material may accentuate any pre-existing dermatitis condition.

Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects.

Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.

Amine epoxy-curing agents (hardeners) may produce primary skin irritation and sensitisation dermatitis in predisposed individuals. Cutaneous reactions include erythema, intolerable itching and severe facial swelling. Blistering, with weeping of serous fluid, and crusting and scaling may also occur. Individuals exhibiting "amine dermatitis" may experience a dramatic reaction upon re-exposure to minute quantities. Highly sensitive persons may even react to cured resins containing trace amounts of unreacted amine hardener. Minute quantities of air-borne amine may precipitate intense dermatological symptoms in sensitive individuals. Prolonged or repeated exposure may produce tissue necrosis.

Volatile amine vapours produce irritation and inflammation of the skin. Direct contact can cause burns. They may be absorbed through the skin and cause similar effects to swallowing, leading to death. The skin may exhibit whiteness, redness and wheals.

INHALED

■ There is some evidence to suggest that the material can cause respiratory irritation in some persons. The body's response to such irritation can cause further lung damage.

Inhalation of epoxy resin amine hardeners (including polyamines and amine adducts) may produce bronchospasm and coughing episodes lasting several days after cessation of the exposure. Even faint traces of these vapours may trigger an intense reaction in individuals showing "amine asthma". The literature records several instances of systemic intoxications following the use of amines in epoxy resin systems.

CHRONIC HEALTH EFFECTS

■ Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure.

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Section 11 - TOXICOLOGICAL INFORMATION

There is some evidence that inhaling this product is more likely to cause a sensitisation reaction in some persons compared to the general population.

There is limited evidence that, skin contact with this product is more likely to cause a sensitisation reaction in some persons compared to the general population.

TOXICITY AND IRRITATION

No data for this material.

Section 12 - ECOLOGICAL INFORMATION

No data

Ecotoxicity

Ingredient	Persistence: Water/Soil	Persistence: Air	Bioaccumulation	Mobility
2, 4, 6-tris[(dimethylamino)methyl]phenol	HIGH	No Data Available	LOW	LOW

Section 13 - DISPOSAL CONSIDERATIONS

- Recycle wherever possible or consult manufacturer for recycling options.
- Consult State Land Waste Management Authority for disposal.
- Material may be disposed of by controlled burning in an approved incinerator or buried in an approved landfill.
- Prior to disposal in a landfill the material should be mixed with the other component and reacted to render the material inert.

Section 14 - TRANSPORTATION INFORMATION

Labels Required: COMBUSTIBLE LIQUID, regulated under AS1940 for Bulk Storage purposes only.

HAZCHEM:

None (ADG7)

NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS: UN, IATA, IMDG

Section 15 - REGULATORY INFORMATION

Indications of Danger:

Xn Harmful

POISONS SCHEDULE

None

REGULATIONS

Regulations for ingredients

2, 4, 6-tris[(dimethylamino)methyl]phenol (CAS: 90-72-2) is found on the following regulatory lists;

"Australia Hazardous Substances", "Australia Inventory of Chemical Substances (AICS)", "Australia National Pollutant Inventory", "International Council of Chemical Associations (ICCA) - High Production Volume List", "OECD List of High Production Volume (HPV) Chemicals"

No data for Devcon 5 Minute Epoxy Hardener (CW: 02-0813)

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Section 16 - OTHER INFORMATION

■ Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

A list of reference resources used to assist the committee may be found at:

www.chemwatch.net/references.

■ The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings.

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This is the end of the MSDS.



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Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME

DEVCON 5 MINUTE EPOXY RESIN

SYNONYMS

"PART: DS-208"

PROPER SHIPPING NAME

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(contains bisphenol A/ epichlorohydrin resin, liquid)

PRODUCT USE

Base or Part A of a 2 pack.
epoxy adhesive.

Requires that the two parts be mixed by hand or mixer before use, in accordance with manufacturers directions. Mix only as much as is required. Do not return the mixed material to the original containers.

NOTE: The product is unregulated for Road and Rail transport when transported in (a) packagings; (b) IBCs; or (c) any other receptacle not exceeding 500 kg(L).

SUPPLIER

Company: ITW Polymers & Fluids

Address:
100 Hassall Street
Wetherill Park
NSW, 2164
Australia

Telephone: +61 2 9757 8800
Emergency Tel: 1800 039 008
Emergency Tel: +61 3 9573 3112
Fax: +61 2 9757 3855

Section 2 - HAZARDS IDENTIFICATION

STATEMENT OF HAZARDOUS NATURE

HAZARDOUS SUBSTANCE. DANGEROUS GOODS. According to the Criteria of NOHSC, and the ADG Code.

RISK

- Irritating to eyes and skin.
- May cause SENSITISATION by skin contact.
- Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

SAFETY

- Do not breathe gas/fumes/vapour/spray.
- Avoid contact with skin.
- Avoid contact with eyes.

- Wear suitable gloves.
- Wear eye/face protection.
- Do not empty into drains.
- To clean the floor and all objects contaminated by this material, use water and detergent.
- This material and its container must be disposed of in a safe way.

continued...

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Section 2 - HAZARDS IDENTIFICATION

- In case of contact with eyes, rinse with plenty of water and contact Doctor or Poisons Information Centre.
- If swallowed, IMMEDIATELY contact Doctor or Poisons Information Centre. (show this container or label).
- Use appropriate container to avoid environmental contamination.
- Avoid release to the environment. Refer to special instructions/Safety data sheets.
- This material and its container must be disposed of as hazardous waste.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

NAME	CAS RN	%
bisphenol A/ epichlorohydrin resin, liquid	25068-38-6	>60

Section 4 - FIRST AID MEASURES

SWALLOWED

- If swallowed do NOT induce vomiting.
- If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.
- Observe the patient carefully.
- Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.

EYE

- If this product comes in contact with the eyes:
- Wash out immediately with fresh running water.
- Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.
- Seek medical attention without delay; if pain persists or recurs seek medical attention.
- Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

SKIN

- If skin contact occurs:
- Immediately remove all contaminated clothing, including footwear.
- Flush skin and hair with running water (and soap if available).
- Seek medical attention in event of irritation.

INHALED

- If fumes or combustion products are inhaled remove from contaminated area.
- Lay patient down. Keep warm and rested.
- Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.
- Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.

NOTES TO PHYSICIAN

Treat symptomatically.

Section 5 - FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

- Foam.
- Dry chemical powder.
- BCF (where regulations permit).
- Carbon dioxide.

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Section 5 - FIRE FIGHTING MEASURES

FIRE FIGHTING

- Alert Fire Brigade and tell them location and nature of hazard.
- Wear full body protective clothing with breathing apparatus.
- Prevent, by any means available, spillage from entering drains or water course.
- Use water delivered as a fine spray to control fire and cool adjacent area.

FIRE/EXPLOSION HAZARD

- Combustible.
- Slight fire hazard when exposed to heat or flame.
- Heating may cause expansion or decomposition leading to violent rupture of containers.
- On combustion, may emit toxic fumes of carbon monoxide (CO).

Combustion products include: carbon dioxide (CO₂), aldehydes, other pyrolysis products typical of burning organic material.

FIRE INCOMPATIBILITY

- Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result.

HAZCHEM

•3Z

Section 6 - ACCIDENTAL RELEASE MEASURES

MINOR SPILLS

Environmental hazard - contain spillage.

- Clean up all spills immediately.
- Avoid breathing vapours and contact with skin and eyes.
- Control personal contact with the substance, by using protective equipment.
- Contain and absorb spill with sand, earth, inert material or vermiculite.

MAJOR SPILLS

Environmental hazard - contain spillage.

Moderate hazard.

- Clear area of personnel and move upwind.
- Alert Fire Brigade and tell them location and nature of hazard.
- Wear breathing apparatus plus protective gloves.
- Prevent, by any means available, spillage from entering drains or water course.

Personal Protective Equipment advice is contained in Section 8 of the MSDS.

Section 7 - HANDLING AND STORAGE

PROCEDURE FOR HANDLING

- DO NOT allow clothing wet with material to stay in contact with skin.
- Avoid all personal contact, including inhalation.
- Wear protective clothing when risk of exposure occurs.
- Use in a well-ventilated area.
- Prevent concentration in hollows and sumps.

SUITABLE CONTAINER

- Metal can or drum
- Packaging as recommended by manufacturer.
- Check all containers are clearly labelled and free from leaks.

STORAGE INCOMPATIBILITY

- Avoid cross contamination between the two liquid parts of product (kit).
- If two part products are mixed or allowed to mix in proportions other than manufacturer's recommendation, polymerisation with gelation and evolution of heat (exotherm) may occur.
- This excess heat may generate toxic vapour.
- Avoid reaction with amines, mercaptans, strong acids and oxidising agents.

STORAGE REQUIREMENTS

- Store in original containers.
- Keep containers securely sealed.

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Section 7 - HANDLING AND STORAGE

- No smoking, naked lights or ignition sources.
- Store in a cool, dry, well-ventilated area.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE CONTROLS

The following materials had no OELs on our records

- bisphenol A/ epichlorohydrin resin, liquid:

CAS:25068- 38- 6 CAS:25085- 99- 8

MATERIAL DATA

DEVCON 5 MINUTE EPOXY RESIN:

Not available

BISPHENOL A/ EPICHLOROHYDRIN RESIN, LIQUID:

Sensory irritants are chemicals that produce temporary and undesirable side-effects on the eyes, nose or throat. Historically occupational exposure standards for these irritants have been based on observation of workers' responses to various airborne concentrations.

For epichlorohydrin

Odour Threshold Value: 0.08 ppm

NOTE: Detector tubes for epichlorohydrin, measuring in excess of 5 ppm, are commercially available.

Exposure at or below the recommended TLV-TWA is thought to minimise the potential for adverse respiratory, liver, kidney effects.

Odour Safety Factor (OSF)

OSF=0.54 (EPICHLOROHYDRIN).

PERSONAL PROTECTION

RESPIRATOR

- Type A-P Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

EYE

- Safety glasses with side shields.
- Chemical goggles.
- Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lens or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59], [AS/NZS 1336 or national equivalent].

HANDS/FEET

- When handling liquid-grade epoxy resins wear chemically protective gloves (e.g nitrile or nitrile-butadiene rubber), boots and aprons.
- DO NOT use cotton or leather (which absorb and concentrate the resin), polyvinyl chloride, rubber or polyethylene gloves (which absorb the resin).
- DO NOT use barrier creams containing emulsified fats and oils as these may absorb the resin; silicone-based barrier creams should be reviewed prior to use.

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice.

Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include:.

NOTE:

- The material may produce skin sensitisation in predisposed individuals. Care must be taken, when removing gloves and other protective equipment, to avoid all possible skin contact.
- Contaminated leather items, such as shoes, belts and watch-bands should be removed and destroyed.

OTHER

- Overalls.
- P.V.C. apron.
- Barrier cream.
- Skin cleansing cream.

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Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS

■ Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection.

The basic types of engineering controls are:

Process controls which involve changing the way a job activity or process is done to reduce the risk.

Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment.

Refer also to protective measures for the other component used with the product. Read both MSDS before using; store and attach MSDS together.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE

Colourless to pale yellow liquid with slight odour; slightly soluble in water.

PHYSICAL PROPERTIES

State	Liquid	Molecular Weight	Not Applicable
Melting Range (°C)	Not Available	Viscosity	Not Available
Boiling Range (°C)	>200	Solubility in water (g/L)	Partly Miscible
Flash Point (°C)	>150	pH (1% solution)	7 (Conc. Soln.)
Decomposition Temp (°C)	Not Available	pH (as supplied)	Not Applicable
Autoignition Temp (°C)	>300	Vapour Pressure (kPa)	Negligible
Upper Explosive Limit (%)	Not Available	Specific Gravity (water=1)	1.147
Lower Explosive Limit (%)	Not Available	Relative Vapour Density (air=1)	>1
Volatile Component (%vol)	Not Available	Evaporation Rate	Not Applicable

Section 10 - STABILITY AND REACTIVITY

CONDITIONS CONTRIBUTING TO INSTABILITY

- Presence of incompatible materials.
- Product is considered stable.
- Hazardous polymerisation will not occur.

For incompatible materials - refer to Section 7 - Handling and Storage.

Section 11 - TOXICOLOGICAL INFORMATION

POTENTIAL HEALTH EFFECTS

ACUTE HEALTH EFFECTS

SWALLOWED

- Accidental ingestion of the material may be damaging to the health of the individual.

EYE

- This material may produce eye irritation in some persons and produce eye damage 24 hours or more after instillation. Moderate inflammation may be expected with redness; conjunctivitis may occur with prolonged exposure.

SKIN

- Skin contact with the material may damage the health of the individual; systemic effects may result following absorption.

This material can cause inflammation of the skin on contact in some persons.

Epoxy materials may cause allergic and/or contact dermatitis responses, which may occur on exposure or may become apparent only after repeated exposures. Sensitisation is possible.

The material may accentuate any pre-existing dermatitis condition.

INHALED

- Not normally a hazard due to non-volatile nature of product.

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Section 11 - TOXICOLOGICAL INFORMATION

CHRONIC HEALTH EFFECTS

■ Skin contact with the material is more likely to cause a sensitisation reaction in some persons compared to the general population.
Sensitisation may give severe responses to very low levels of exposure, i.e. hypersensitivity. Sensitised persons should not be allowed to work in situations where exposure may occur.

TOXICITY AND IRRITATION

■ Contact allergies quickly manifest themselves as contact eczema, more rarely as urticaria or Quincke's oedema. The pathogenesis of contact eczema involves a cell-mediated (T lymphocytes) immune reaction of the delayed type. Other allergic skin reactions, e.g. contact urticaria, involve antibody-mediated immune reactions. The significance of the contact allergen is not simply determined by its sensitisation potential: the distribution of the substance and the opportunities for contact with it are equally important. A weakly sensitising substance which is widely distributed can be a more important allergen than one with stronger sensitising potential with which few individuals come into contact. From a clinical point of view, substances are noteworthy if they produce an allergic test reaction in more than 1% of the persons tested.

Section 12 - ECOLOGICAL INFORMATION

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
This material and its container must be disposed of as hazardous waste.
Avoid release to the environment.
Refer to special instructions/ safety data sheets.

Ecotoxicity

Ingredient	Persistence: Water/Soil	Persistence: Air	Bioaccumulation	Mobility
bisphenol A/ epichlorohydrin resin, liquid	HIGH	No Data Available	LOW	HIGH

Section 13 - DISPOSAL CONSIDERATIONS

- Recycle wherever possible or consult manufacturer for recycling options.
- Consult State Land Waste Management Authority for disposal.
- Material may be disposed of by controlled burning in an approved incinerator or buried in an approved landfill.
- Prior to disposal in a landfill the material should be mixed with the other component and reacted to render the material inert.

Section 14 - TRANSPORTATION INFORMATION



■ *Environmentally Hazardous Substances meeting the descriptions of UN 3077 or UN 3082 are not subject to this Code when transported by road or rail in;*

(a) packagings;

(b) IBCs; or

(c) any other receptacle not exceeding 500 kg(L).

- Australian Special Provisions (SP AU01) - ADG Code 7th Ed.

Labels Required: MISCELLANEOUS

HAZCHEM:

•3Z (ADG7)

Land Transport UNDG:

Class or division:	9	Subsidiary risk:	None
UN No.:	3082	UN packing group:	III
Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains bisphenol A/ epichlorohydrin resin, liquid)			

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Section 14 - TRANSPORTATION INFORMATION

Air Transport IATA:

ICAO/IATA Class:	9	ICAO/IATA Subrisk:	None
UN/ID Number:	3082	Packing Group:	III
Special provisions:	A97		

Shipping name:ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(contains bisphenol A/ epichlorohydrin resin, liquid)

Maritime Transport IMDG:

IMDG Class:	9	IMDG Subrisk:	None
UN Number:	3082	Packing Group:	III
EMS Number:	F-A,S-F	Special provisions:	274 335
Limited Quantities:	5 L	Marine Pollutant:	Yes

Shipping name:ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(contains bisphenol A/ epichlorohydrin resin, liquid)

Section 15 - REGULATORY INFORMATION

Indications of Danger:

N Dangerous for the environment
Xi Irritant

POISONS SCHEDULE

S5

REGULATIONS

Regulations for ingredients

bisphenol A/ epichlorohydrin resin, liquid (CAS: 25068-38-6, 25085-99-8) is found on the following regulatory lists;

"Australia - Victoria Occupational Health and Safety Regulations - Schedule 9: Materials at Major Hazard Facilities (And Their Threshold Quantity) Table 2", "Australia Hazardous Substances", "Australia High Volume Industrial Chemical List (HVICL)", "Australia Inventory of Chemical Substances (AICS)", "Australia National Pollutant Inventory", "Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix E (Part 2)", "Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix F (Part 3)", "Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 5", "OECD List of High Production Volume (HPV) Chemicals", "OSPAR National List of Candidates for Substitution – United Kingdom"

No data for Devcon 5 Minute Epoxy Resin (CW: 02-0814)

Section 16 - OTHER INFORMATION

INGREDIENTS WITH MULTIPLE CAS NUMBERS

Ingredient Name	CAS
bisphenol A/ epichlorohydrin resin, liquid	25068-38-6, 25085-99-8

■ Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

A list of reference resources used to assist the committee may be found at:
www.chemwatch.net/references.

■ The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings.

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Section 16 - OTHER INFORMATION

This is the end of the MSDS.



DEVCON PLASTIC STEEL EPOXY (S5) HARDENER

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Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME

DEVCON PLASTIC STEEL EPOXY (S5) HARDENER

PRODUCT USE

Hardener component of two part epoxy system.

SUPPLIER

Company: ITW Polymers & Fluids
Address:
100 Hassall Street
Wetherill Park
NSW, 2164
Australia
Telephone: +61 2 9757 8800
Emergency Tel: 1800 039 008
Emergency Tel: +61 3 9573 3112
Fax: +61 2 9757 3855

Section 2 - HAZARDS IDENTIFICATION

STATEMENT OF HAZARDOUS NATURE

HAZARDOUS SUBSTANCE. NON-DANGEROUS GOODS. According to the Criteria of NOHSC, and the ADG Code.

COMBUSTIBLE LIQUID, regulated under AS1940 for Bulk Storage purposes only.

RISK

- Harmful if swallowed.
- Irritating to respiratory system and skin.
- Risk of serious damage to eyes.
- May cause SENSITISATION by skin contact.
- Harmful to aquatic organisms, may cause long- term adverse effects in the aquatic environment.
- May cause harm to the unborn child.
- Possible risk of impaired fertility.

SAFETY

- Keep locked up.
- Do not breathe gas/fumes/vapour/spray.
- Avoid contact with skin.
- Avoid contact with eyes.
- Wear suitable protective clothing.
- In case of insufficient ventilation, wear suitable respiratory equipment.
- Wear suitable gloves.
- Wear eye/face protection.
- Avoid exposure - obtain special instructions before use.
- To clean the floor and all objects contaminated by this material, use water and detergent.
- This material and its container must be disposed of in a safe way.
- Keep away from food, drink and animal feeding stuffs.
- In case of contact with eyes, rinse with plenty of water and contact Doctor or Poisons Information Centre.

continued...

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

NAME	CAS RN	%
tall oil/ tetraethylenepentamine polyamides	68513-05-3	10-20
pacm oligomers		5-10
benzyl alcohol	100-51-6	1-5
tetraethylenepentamine	112-57-2	1-5
nonylphenol	25154-52-3	1-5
4- nonylphenol, branched	84852-15-3	1-5
2, 4, 6- tris[(dimethylamino)methyl]phenol	90-72-2	1-5
silica crystalline - quartz	14808-60-7	1
ingredients proprietary nonhazardous		balance

Section 4 - FIRST AID MEASURES

SWALLOWED

- If swallowed do NOT induce vomiting.
- If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.
- Observe the patient carefully.
- Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.

EYE

- If this product comes in contact with the eyes:
- Immediately hold eyelids apart and flush the eye continuously with running water.
- Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.
- Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes.
- Transport to hospital or doctor without delay.

SKIN

- If skin contact occurs:
- Immediately remove all contaminated clothing, including footwear.
- Flush skin and hair with running water (and soap if available).
- Seek medical attention in event of irritation.

INHALED

- If fumes or combustion products are inhaled remove from contaminated area.
- Lay patient down. Keep warm and rested.
- Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.
- Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.

NOTES TO PHYSICIAN

For acute or short-term repeated exposures to highly alkaline materials:

- Respiratory stress is uncommon but present occasionally because of soft tissue edema.
- Unless endotracheal intubation can be accomplished under direct vision, cricothyroidotomy or tracheotomy may be necessary.
- Oxygen is given as indicated.
- The presence of shock suggests perforation and mandates an intravenous line and fluid administration.

Section 5 - FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

- Foam.
- Dry chemical powder.
- BCF (where regulations permit).
- Carbon dioxide.

FIRE FIGHTING

- Alert Fire Brigade and tell them location and nature of hazard.
- Wear full body protective clothing with breathing apparatus.
- Prevent, by any means available, spillage from entering drains or water course.
- Use water delivered as a fine spray to control fire and cool adjacent area.

FIRE/EXPLOSION HAZARD

- Combustible.
 - Slight fire hazard when exposed to heat or flame.
 - Heating may cause expansion or decomposition leading to violent rupture of containers.
 - On combustion, may emit toxic fumes of carbon monoxide (CO).
- Combustion products include: carbon dioxide (CO₂), nitrogen oxides (NO_x), hydrogen chloride, other pyrolysis products typical of burning organic material.
- May emit poisonous fumes.
- May emit corrosive fumes.

FIRE INCOMPATIBILITY

- Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result.

HAZCHEM

None

Section 6 - ACCIDENTAL RELEASE MEASURES

MINOR SPILLS

- Remove all ignition sources.
- Clean up all spills immediately.
- Avoid breathing vapours and contact with skin and eyes.
- Control personal contact with the substance, by using protective equipment.

MAJOR SPILLS

Moderate hazard.

- Clear area of personnel and move upwind.
- Alert Fire Brigade and tell them location and nature of hazard.
- Wear breathing apparatus plus protective gloves.
- Prevent, by any means available, spillage from entering drains or water course.

Personal Protective Equipment advice is contained in Section 8 of the MSDS.

Section 7 - HANDLING AND STORAGE

PROCEDURE FOR HANDLING

- DO NOT allow clothing wet with material to stay in contact with skin.
- Avoid all personal contact, including inhalation.
- Wear protective clothing when risk of exposure occurs.
- Use in a well-ventilated area.
- Prevent concentration in hollows and sumps.

SUITABLE CONTAINER

- Metal can or drum
- Packaging as recommended by manufacturer.
- Check all containers are clearly labelled and free from leaks.

STORAGE INCOMPATIBILITY

- Avoid strong acids, acid chlorides, acid anhydrides and chloroformates.
- Avoid contact with copper, aluminium and their alloys.
- Avoid reaction with oxidising agents.

STORAGE REQUIREMENTS

- Store in original containers.
- Keep containers securely sealed.
- No smoking, naked lights or ignition sources.
- Store in a cool, dry, well-ventilated area.

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Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE CONTROLS

Source	Material	TWA ppm	TWA mg/m ³	STEL ppm	STEL mg/m ³	Peak ppm	Peak mg/m ³	TWA F/CC	Notes
Australia Exposure Standards	silica crystalline - quartz (Silica - Crystalline Quartz)		0.1						(see Chapter 14)

The following materials had no OELs on our records

- tall oil/ tetraethylenepentamine polyamides: CAS:68513- 05- 3 CAS:68953- 36- 6 CAS:68555- 22- 6
- benzyl alcohol: CAS:1226892- 45- 0
- tetraethylenepentamine: CAS:100- 51- 6
- nonylphenol: CAS:112- 57- 2
- 4- nonylphenol, branched: CAS:25154- 52- 3 CAS:84852- 15- 3 CAS:139- 84- 4
- 2, 4, 6- tris[(dimethylamino)methyl]phenol: CAS:136- 83- 4
- CAS:84852- 15- 3
- CAS:90- 72- 2

MATERIAL DATA

4-NONYLPHENOL, BRANCHED:
BENZYL ALCOHOL:
NONYLPHENOL:
TETRAETHYLENEPENTAMINE:

Sensory irritants are chemicals that produce temporary and undesirable side-effects on the eyes, nose or throat. Historically occupational exposure standards for these irritants have been based on observation of workers' responses to various airborne concentrations.

2,4,6-TRIS[(DIMETHYLAMINO)METHYL]PHENOL:
BENZYL ALCOHOL:

Exposure limits with "skin" notation indicate that vapour and liquid may be absorbed through intact skin. Absorption by skin may readily exceed vapour inhalation exposure. Symptoms for skin absorption are the same as for inhalation. Contact with eyes and mucous membranes may also contribute to overall exposure and may also invalidate the exposure standard.

DEVCON PLASTIC STEEL EPOXY (S5) HARDENER:
Not available

TALL OIL/ TETRAETHYLENEPENTAMINE POLYAMIDES:

Polyamide hardeners have much reduced volatility, toxicity and are much less irritating to the skin and eyes than amine hardeners. However commercial polyamides may contain a percentage of residual unreacted amine and all unnecessary contact should be avoided.

No exposure limits set by NOHSC or ACGIH.

BENZYL ALCOHOL:

OEL STEL (Russia): 5 mg/m³ Skin
Odour Threshold: 5.5 ppm

2,4,6-TRIS[(DIMETHYLAMINO)METHYL]PHENOL:

Odour Threshold Value for phenol: 0.060 ppm (detection)

NOTE: Detector tubes for phenol, measuring in excess of 1 ppm, are commercially available.

Systemic absorption by all routes may induce convulsions with damage to the lungs and central nervous system. />.

CEL TWA: 5 ppm, 54 mg/m³ SKIN [Rohm & Haas]

SILICA CRYSTALLINE - QUARTZ:

The concentration of dust, for application of respirable dust limits, is to be determined from the fraction that penetrates a separator whose size collection efficiency is described by a cumulative log-normal function with a median aerodynamic diameter of 4.0 µm (+-) 0.3 µm and with a geometric standard deviation of 1.5 µm (+-) 0.1 µm, i.e..generally less than 5 µm.

Because the margin of safety of the quartz TLV is not known with certainty and given the associated link between silicosis and lung cancer it is recommended that quartz concentrations be maintained as far below the TLV as prudent practices will allow.

WARNING: For inhalation exposure ONLY:

This substance has been classified by the ACGIH as A2 Suspected Human Carcinogen.

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Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

PERSONAL PROTECTION

RESPIRATOR

• Type BKAX-P Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

EYE

- Safety glasses with side shields.
- Chemical goggles.
- Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lens or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59], [AS/NZS 1336 or national equivalent].

HANDS/FEET

- Wear chemical protective gloves, e.g. PVC.
- Wear safety footwear or safety gumboots, e.g. Rubber.

NOTE:

- The material may produce skin sensitisation in predisposed individuals. Care must be taken, when removing gloves and other protective equipment, to avoid all possible skin contact.
 - Contaminated leather items, such as shoes, belts and watch-bands should be removed and destroyed.
- The selection of the suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
- The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice.
- Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include:

OTHER

- Overalls.
- P.V.C. apron.
- Barrier cream.
- Skin cleansing cream.

ENGINEERING CONTROLS

■ Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection.

The basic types of engineering controls are:

Process controls which involve changing the way a job activity or process is done to reduce the risk.

Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment.

Refer also to protective measures for the other component used with the product. Read both MSDS before using; store and attach MSDS together.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE

Amber liquid with ammonia-like, fishy odour.

PHYSICAL PROPERTIES

Liquid.
Alkaline.

State	Liquid	Molecular Weight	Not Applicable
Melting Range (°C)	Not Available	Viscosity	Not Available
Boiling Range (°C)	Not Available	Solubility in water (g/L)	Not Available
Flash Point (°C)	131	pH (1% solution)	>10 (5% slurry)
Decomposition Temp (°C)	Not Available	pH (as supplied)	Not Available
Autoignition Temp (°C)	Not Available	Vapour Pressure (kPa)	Not Available
Upper Explosive Limit (%)	Not Available	Specific Gravity (water=1)	1.016
Lower Explosive Limit (%)	Not Available	Relative Vapour Density (air=1)	>1

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Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Volatile Component (%vol)	Not Available	Evaporation Rate	Not Available
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Section 10 - STABILITY AND REACTIVITY

CONDITIONS CONTRIBUTING TO INSTABILITY

- Presence of incompatible materials.
- Product is considered stable.
- Hazardous polymerisation will not occur.

For incompatible materials - refer to Section 7 - Handling and Storage.

Section 11 - TOXICOLOGICAL INFORMATION

POTENTIAL HEALTH EFFECTS

ACUTE HEALTH EFFECTS

SWALLOWED

■ Accidental ingestion of the material may be harmful; animal experiments indicate that ingestion of less than 150 gram may be fatal or may produce serious damage to the health of the individual.
Ingestion may result in nausea, abdominal irritation, pain and vomiting.

EYE

■ The material may produce severe irritation to the eye causing pronounced inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.

SKIN

■ This material can cause inflammation of the skin on contact in some persons.
The material may accentuate any pre-existing dermatitis condition.
Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects.
Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.

INHALED

■ The material can cause respiratory irritation in some persons. The body's response to such irritation can cause further lung damage.
Inhalation of epoxy resin amine hardeners (including polyamines and amine adducts) may produce bronchospasm and coughing episodes lasting several days after cessation of the exposure. Even faint traces of these vapours may trigger an intense reaction in individuals showing "amine asthma". The literature records several instances of systemic intoxications following the use of amines in epoxy resin systems.

CHRONIC HEALTH EFFECTS

■ Long-term exposure to respiratory irritants may result in disease of the airways involving difficult breathing and related systemic problems.
Skin contact with the material is more likely to cause a sensitisation reaction in some persons compared to the general population.
Ample evidence from experiments exists that there is a suspicion this material directly reduces fertility.
Based on experience with animal studies, exposure to the material may result in toxic effects to the development of the foetus, at levels which do not cause significant toxic effects to the mother.
There has been some concern that this material can cause cancer or mutations but there is not enough data to make an assessment.
Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure.
There is some evidence that inhaling this product is more likely to cause a sensitisation reaction in some persons compared to the general population.
Sensitisation may give severe responses to very low levels of exposure, i.e. hypersensitivity. Sensitised persons should not be allowed to work in situations where exposure may occur.

TOXICITY AND IRRITATION

■ Not available. Refer to individual constituents.

CARCINOGEN

silica crystalline -
quartz

International Agency for
Research on Cancer (IARC) -
Agents Reviewed by the IARC
Monographs

Group

1

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Section 11 - TOXICOLOGICAL INFORMATION

SKIN

benzyl alcohol	GESAMP/EHS Composite List - GESAMP Hazard Profiles	D1: skin irritation/corrosion	2
tetraethylenepentamine	GESAMP/EHS Composite List - GESAMP Hazard Profiles	D1: skin irritation/corrosion	3
nonylphenol	GESAMP/EHS Composite List - GESAMP Hazard Profiles	D1: skin irritation/corrosion	3

Section 12 - ECOLOGICAL INFORMATION

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Ecotoxicity

Ingredient	Persistence: Water/Soil	Persistence: Air	Bioaccumulation	Mobility
tall oil/ tetraethylenepentamine	No Data	No Data	No Data	No Data
polyamides	Available	Available	Available	Available
benzyl alcohol	LOW	No Data	LOW	HIGH
tetraethylenepentamine	LOW	Available	LOW	MED
nonylphenol	HIGH	No Data	LOW	LOW
4- nonylphenol, branched	HIGH	Available	LOW	LOW
2, 4, 6- tris[(dimethylamino)methyl]phenol	HIGH	No Data	LOW	LOW
silica crystalline - quartz	No Data	Available	No Data	No Data
	Available	Available	Available	Available

Section 13 - DISPOSAL CONSIDERATIONS

- Recycle wherever possible or consult manufacturer for recycling options.
- Consult State Land Waste Management Authority for disposal.
- Material may be disposed of by controlled burning in an approved incinerator or buried in an approved landfill.
- Prior to disposal in a landfill the material should be mixed with the other component and reacted to render the material inert.

Section 14 - TRANSPORTATION INFORMATION

Labels Required: COMBUSTIBLE LIQUID, regulated under AS1940 for Bulk Storage purposes only.

HAZCHEM:

None (ADG7)

NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS: UN, IATA, IMDG

Section 15 - REGULATORY INFORMATION

Indications of Danger:

T Toxic

POISONS SCHEDULE

None

REGULATIONS

Regulations for ingredients

tall oil/ tetraethylenepentamine polyamides (CAS: 68513-05-3, 68953-36-6, 68555-22-6, 1226892-45-0) is found on the following regulatory lists;

"Australia Inventory of Chemical Substances (AICS)", "OECD List of High Production Volume (HPV) Chemicals", "OSPAR National List of Candidates for Substitution – United Kingdom"

benzyl alcohol (CAS: 100-51-6) is found on the following regulatory lists;

"Australia - Victoria Occupational Health and Safety Regulations - Schedule 9: Materials at Major Hazard Facilities (And Their Threshold Quantity) Table 2", "Australia Hazardous Substances", "Australia High Volume Industrial Chemical List (HVICL)", "Australia Inventory of Chemical Substances (AICS)", "GESAMP/EHS Composite List - GESAMP Hazard Profiles", "IMO IBC Code Chapter 17: Summary of minimum requirements", "IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk", "International Council of Chemical Associations (ICCA) - High Production Volume List", "International Fragrance Association (IFRA) Standards Restricted", "International Fragrance Association (IFRA) Survey: Transparency List", "International Fragrance Association IFRA Standards Annex I", "OECD List of High Production Volume (HPV) Chemicals"

tetraethylenepentamine (CAS: 112-57-2) is found on the following regulatory lists;

"Australia Hazardous Substances", "Australia Inventory of Chemical Substances (AICS)", "Australia National Pollutant Inventory", "Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix E (Part 2)", "Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix F (Part 3)", "Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 5", "FisherTransport Information", "GESAMP/EHS Composite List - GESAMP Hazard Profiles", "IMO IBC Code Chapter 17: Summary of minimum requirements", "IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk", "International Council of Chemical Associations (ICCA) - High Production Volume List", "OECD List of High Production Volume (HPV) Chemicals", "OSPAR National List of Candidates for Substitution – Norway", "OSPAR National List of Candidates for Substitution – United Kingdom"

nonylphenol (CAS: 25154-52-3, 84852-15-3, 139-84-4, 136-83-4) is found on the following regulatory lists;

"Australia Hazardous Substances", "Australia Inventory of Chemical Substances (AICS)", "Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix E (Part 2)", "Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix F (Part 3)", "Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 2", "GESAMP/EHS Composite List - GESAMP Hazard Profiles", "IMO IBC Code Chapter 17: Summary of minimum requirements", "IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk", "International Chemical Secretariat (ChemSec) SIN List (Substitute It Now)", "International Fragrance Association (IFRA) Survey: Transparency List", "OECD List of High Production Volume (HPV) Chemicals", "OSPAR List of Substances of Possible Concern", "United Nations Consolidated List of Products Whose Consumption and/or Sale Have Been Banned, Withdrawn, Severely Restricted or Not Approved by Governments"

4-nonylphenol, branched (CAS: 84852-15-3) is found on the following regulatory lists;

"Australia Hazardous Substances", "Australia Inventory of Chemical Substances (AICS)", "Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix E (Part 2)", "Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix F (Part 3)", "Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 2", "GESAMP/EHS Composite List - GESAMP Hazard Profiles", "IMO IBC Code Chapter 17: Summary of minimum requirements", "International Chemical Secretariat (ChemSec) SIN List (Substitute It Now)", "International Fragrance Association (IFRA) Survey: Transparency List", "OECD List of High Production Volume (HPV) Chemicals", "OSPAR List of Substances of Possible Concern", "United Nations Consolidated List of Products Whose Consumption and/or Sale Have Been Banned, Withdrawn, Severely Restricted or Not Approved by Governments"

2, 4, 6-tris[(dimethylamino)methyl]phenol (CAS: 90-72-2) is found on the following regulatory lists;

"Australia Hazardous Substances", "Australia Inventory of Chemical Substances (AICS)", "Australia National Pollutant Inventory", "International Council of Chemical Associations (ICCA) - High Production Volume List", "OECD List of High Production Volume (HPV) Chemicals"

silica crystalline - quartz (CAS: 14808-60-7, 122304-48-7, 122304-49-8, 12425-26-2, 1317-79-9, 70594-95-5, 87347-84-0) is found on the following regulatory lists;

"Australia - New South Wales Hazardous Substances Prohibited for Specific Uses", "Australia - New South Wales Hazardous Substances Requiring Health Surveillance", "Australia - Queensland Workplace Health and Safety Regulation - Hazardous substances for which health surveillance must be supplied", "Australia - South Australia - Hazardous Substances Requiring Health Surveillance", "Australia - Tasmania Hazardous Substances Prohibited for Specified Uses", "Australia - Tasmania Hazardous Substances Requiring Health Surveillance", "Australia - Western Australia Hazardous Substances Prohibited for Specified Uses or Methods of Handling", "Australia - Western Australia Hazardous Substances Requiring Health Surveillance", "Australia Australian Safety and Compensation Council (ASCC) Draft National Code of Practice for the Control of Workplace Hazardous Chemicals - Schedule 4 Hazardous chemicals Requiring Health Surveillance", "Australia Exposure Standards", "Australia Hazardous Substances", "Australia Hazardous Substances Requiring Health Surveillance", "Australia High Volume Industrial Chemical List (HVICL)", "Australia Inventory of Chemical Substances (AICS)", "Australia Occupational Health and Safety (Commonwealth Employment) (National Standards) Regulations 1994 - Hazardous Substances Requiring Health Surveillance", "Australia Work Health and Safety Regulations 2011 - Hazardous chemicals (other than lead) requiring health monitoring", "Australia Work Health and Safety Regulations 2011 - Restricted hazardous chemicals", "FisherTransport Information", "International Agency for Research on Cancer (IARC) - Agents Reviewed by the IARC Monographs", "International Fragrance Association (IFRA) Survey: Transparency List", "OECD

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Section 15 - REGULATORY INFORMATION

List of High Production Volume (HPV) Chemicals", "United Nations Consolidated List of Products Whose Consumption and/or Sale Have Been Banned, Withdrawn, Severely Restricted or Not Approved by Governments"

No data for Devcon Plastic Steel Epoxy (S5) Hardener (CW: 02-0802)

Section 16 - OTHER INFORMATION

Denmark Advisory list for selfclassification of dangerous substances

Substance	CAS	Suggested codes
nonylphenol	25154- 52- 3	AUTOID
nonylphenol	139- 84- 4	AUTOID
nonylphenol	136- 83- 4	AUTOID

INGREDIENTS WITH MULTIPLE CAS NUMBERS

Ingredient Name	CAS
tall oil/ tetraethylenepentamine polyamides	68513-05-3, 68953-36-6, 68555-22-6, 1226892-45-0
nonylphenol	25154-52-3, 84852-15-3, 139-84-4, 136-83-4
silica crystalline - quartz	14808-60-7, 122304-48-7, 122304-49-8, 12425-26-2, 1317-79-9, 70594-95-5, 87347-84-0

■ Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

A list of reference resources used to assist the committee may be found at:

www.chemwatch.net/references.

■ The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings.

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This is the end of the MSDS.



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Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME

DEVCON PLASTIC STEEL EPOXY (S5) RESIN

SYNONYMS

"PART: DS-5"

PROPER SHIPPING NAME

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(contains bisphenol A/ epichlorohydrin resin, liquid)

PRODUCT USE

Resin component of two part epoxy system.

NOTE: The product is unregulated for Road and Rail transport when transported in (a) packagings; (b) IBCs; or (c) any other receptacle not exceeding 500 kg(L).

SUPPLIER

Company: ITW Polymers & Fluids

Address:

100 Hassall Street

Wetherill Park

NSW, 2164

Australia

Telephone: +61 2 9757 8800

Emergency Tel: 1800 039 008

Emergency Tel: +61 3 9573 3112

Fax: +61 2 9757 3855

Section 2 - HAZARDS IDENTIFICATION

STATEMENT OF HAZARDOUS NATURE

HAZARDOUS SUBSTANCE. DANGEROUS GOODS. According to the Criteria of NOHSC, and the ADG Code.

RISK

- Irritating to eyes and skin.
- May cause SENSITISATION by skin contact.
- Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

SAFETY

- Avoid contact with skin.
- Avoid contact with eyes.
- Wear suitable gloves.

- Wear eye/face protection.
- Do not empty into drains.
- To clean the floor and all objects contaminated by this material, use water and detergent.
- This material and its container must be disposed of in a safe way.
- In case of contact with eyes, rinse with plenty of water and contact Doctor or Poisons Information Centre.
- If swallowed, IMMEDIATELY contact Doctor or Poisons Information Centre. (show this container or label).

continued...

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Section 2 - HAZARDS IDENTIFICATION

- Use appropriate container to avoid environmental contamination.
- Avoid release to the environment. Refer to special instructions/Safety data sheets.
- This material and its container must be disposed of as hazardous waste.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

NAME	CAS RN	%
bisphenol A/ epichlorohydrin resin, liquid	25068-38-6	30-60
iron	7439-89-6	1-10
benzyl alcohol	100-51-6	1-5
silicon powder amorphous	7440-21-3	1-5
silica crystalline - quartz	14808-60-7	0.1-1
ingredients nonhazardous		balance

Section 4 - FIRST AID MEASURES

SWALLOWED

- If swallowed do NOT induce vomiting.
- If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.
- Observe the patient carefully.
- Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.

EYE

- If this product comes in contact with the eyes:
- Wash out immediately with fresh running water.
- Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.
- Seek medical attention without delay; if pain persists or recurs seek medical attention.
- Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

SKIN

- If skin contact occurs:
- Immediately remove all contaminated clothing, including footwear.
- Flush skin and hair with running water (and soap if available).
- Seek medical attention in event of irritation.

INHALED

- If fumes or combustion products are inhaled remove from contaminated area.
- Lay patient down. Keep warm and rested.
- Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.
- Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.

NOTES TO PHYSICIAN

Treat symptomatically.

Section 5 - FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

- Foam.
- Dry chemical powder.
- BCF (where regulations permit).
- Carbon dioxide.

FIRE FIGHTING

- Alert Fire Brigade and tell them location and nature of hazard.
- Wear full body protective clothing with breathing apparatus.

-
- Prevent, by any means available, spillage from entering drains or water course.
 - Use water delivered as a fine spray to control fire and cool adjacent area.

FIRE/EXPLOSION HAZARD

- Combustible.
 - Slight fire hazard when exposed to heat or flame.
 - Heating may cause expansion or decomposition leading to violent rupture of containers.
 - On combustion, may emit toxic fumes of carbon monoxide (CO).
- Combustion products include: carbon dioxide (CO₂), aldehydes, other pyrolysis products typical of burning organic material.

FIRE INCOMPATIBILITY

- Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result.

HAZCHEM

•3Z

Section 6 - ACCIDENTAL RELEASE MEASURES

MINOR SPILLS

Environmental hazard - contain spillage.

- Clean up all spills immediately.
- Avoid breathing vapours and contact with skin and eyes.
- Control personal contact with the substance, by using protective equipment.
- Contain and absorb spill with sand, earth, inert material or vermiculite.

MAJOR SPILLS

Environmental hazard - contain spillage.

Moderate hazard.

- Clear area of personnel and move upwind.
- Alert Fire Brigade and tell them location and nature of hazard.
- Wear breathing apparatus plus protective gloves.
- Prevent, by any means available, spillage from entering drains or water course.

Personal Protective Equipment advice is contained in Section 8 of the MSDS.

Section 7 - HANDLING AND STORAGE

PROCEDURE FOR HANDLING

- DO NOT allow clothing wet with material to stay in contact with skin.
- Avoid all personal contact, including inhalation.
- Wear protective clothing when risk of exposure occurs.
- Use in a well-ventilated area.
- Prevent concentration in hollows and sumps.

SUITABLE CONTAINER

- Metal can or drum
- Packaging as recommended by manufacturer.
- Check all containers are clearly labelled and free from leaks.

STORAGE INCOMPATIBILITY

- Avoid cross contamination between the two liquid parts of product (kit).
- If two part products are mixed or allowed to mix in proportions other than manufacturer's recommendation, polymerisation with gelation and evolution of heat (exotherm) may occur.
- This excess heat may generate toxic vapour.
- Avoid reaction with amines, mercaptans, strong acids and oxidising agents.

STORAGE REQUIREMENTS

- Store in original containers.
- Keep containers securely sealed.
- No smoking, naked lights or ignition sources.
- Store in a cool, dry, well-ventilated area.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE CONTROLS

Source	Material	TWA ppm	TWA mg/m ³	STEL ppm	STEL mg/m ³	Peak ppm	Peak mg/m ³	TWA F/CC	Notes
Australia Exposure Standards	iron (Inspirable dust (not otherwise classified))		10						
Australia Exposure Standards	silicon powder amorphous (Silicon (a))		10						(see Chapter 14)
Australia Exposure Standards	silica crystalline - quartz (Silica - Crystalline Quartz)		0.1						(see Chapter 14)

The following materials had no OELs on our records

- bisphenol A/ epichlorohydrin resin, liquid:
- benzyl alcohol:

CAS:25068- 38- 6 CAS:25085- 99- 8
CAS:100- 51- 6

MATERIAL DATA

BENZYL ALCOHOL:

BISPHENOL A/ EPICHLOROHYDRIN RESIN, LIQUID:

DEVCON PLASTIC STEEL EPOXY (S5) RESIN:

IRON:

Sensory irritants are chemicals that produce temporary and undesirable side-effects on the eyes, nose or throat. Historically occupational exposure standards for these irritants have been based on observation of workers' responses to various airborne concentrations.

SILICA CRYSTALLINE - QUARTZ:

SILICON POWDER AMORPHOUS:

The concentration of dust, for application of respirable dust limits, is to be determined from the fraction that penetrates a separator whose size collection efficiency is described by a cumulative log-normal function with a median aerodynamic diameter of 4.0 µm (+-) 0.3 µm and with a geometric standard deviation of 1.5 µm (+-) 0.1 µm, i.e..generally less than 5 µm.

BISPHENOL A/ EPICHLOROHYDRIN RESIN, LIQUID:

For epichlorohydrin

Odour Threshold Value: 0.08 ppm

NOTE: Detector tubes for epichlorohydrin, measuring in excess of 5 ppm, are commercially available.

Exposure at or below the recommended TLV-TWA is thought to minimise the potential for adverse respiratory, liver, kidney effects.

Odour Safety Factor (OSF)

OSF=0.54 (EPICHLOROHYDRIN).

IRON:

The recommended TLV is thought to reduce the likelihood of respiratory irritation and skin irritation from exposure to aerosols and mists of soluble iron salts.

BENZYL ALCOHOL:

Exposure limits with "skin" notation indicate that vapour and liquid may be absorbed through intact skin. Absorption by skin may readily exceed vapour inhalation exposure. Symptoms for skin absorption are the same as for inhalation. Contact with eyes and mucous membranes may also contribute to overall exposure and may also invalidate the exposure standard.

OEL STEL (Russia): 5 mg/m³ Skin

Odour Threshold: 5.5 ppm

SILICON POWDER AMORPHOUS:

For silicon

CEL TWA: 5 mg/m³

(CEL = Chemwatch Exposure Limit)

NOTE: The CEL TWA is consistent with the value recommended in the Norwegian ferro-alloy industry (furnace room dust/mixed dust).

Silicon dust appears to have little adverse effect on the lungs and is not implicated in the genesis of organic disease or in the production of toxic effects.

SILICA CRYSTALLINE - QUARTZ:

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Because the margin of safety of the quartz TLV is not known with certainty and given the associated link between silicosis and lung cancer it is recommended that quartz concentrations be maintained as far below the TLV as prudent practices will allow.

WARNING: For inhalation exposure ONLY:

This substance has been classified by the ACGIH as A2 Suspected Human Carcinogen.

PERSONAL PROTECTION

RESPIRATOR

• Type AX-P Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

EYE

- Safety glasses with side shields.
- Chemical goggles.
- Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lens or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59], [AS/NZS 1336 or national equivalent].

HANDS/FEET

- When handling liquid-grade epoxy resins wear chemically protective gloves (e.g nitrile or nitrile-butadiene rubber), boots and aprons.
- DO NOT use cotton or leather (which absorb and concentrate the resin), polyvinyl chloride, rubber or polyethylene gloves (which absorb the resin).
- DO NOT use barrier creams containing emulsified fats and oils as these may absorb the resin; silicone-based barrier creams should be reviewed prior to use.

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice.

Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include:.

NOTE:

- The material may produce skin sensitisation in predisposed individuals. Care must be taken, when removing gloves and other protective equipment, to avoid all possible skin contact.
- Contaminated leather items, such as shoes, belts and watch-bands should be removed and destroyed.

OTHER

- Overalls.
- P.V.C. apron.
- Barrier cream.
- Skin cleansing cream.

ENGINEERING CONTROLS

■ Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection.

The basic types of engineering controls are:

Process controls which involve changing the way a job activity or process is done to reduce the risk.

Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment.

Refer also to protective measures for the other component used with the product. Read both MSDS before using; store and attach MSDS together.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE

Dark grey paste with slight odour; insoluble in water.

PHYSICAL PROPERTIES

State	Non Slump Paste	Molecular Weight	Not Applicable
Melting Range (°C)	Not Available	Viscosity	Not Available

DEVCON PLASTIC STEEL EPOXY (S5) RESIN

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Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Boiling Range (°C)	232	Solubility in water (g/L)	Partly Miscible
Flash Point (°C)	Not Available	pH (1% solution)	7 (5% slurry)
Decomposition Temp (°C)	Not Available	pH (as supplied)	Not Applicable
Autoignition Temp (°C)	Not Available	Vapour Pressure (kPa)	Negligible
Upper Explosive Limit (%)	Not Available	Specific Gravity (water=1)	1.62
Lower Explosive Limit (%)	Not Available	Relative Vapour Density (air=1)	>1
Volatile Component (%vol)	VOC 0	Evaporation Rate	Not Applicable

Section 10 - STABILITY AND REACTIVITY

CONDITIONS CONTRIBUTING TO INSTABILITY

- Presence of incompatible materials.
 - Product is considered stable.
 - Hazardous polymerisation will not occur.
- For incompatible materials - refer to Section 7 - Handling and Storage.*

Section 11 - TOXICOLOGICAL INFORMATION

POTENTIAL HEALTH EFFECTS

ACUTE HEALTH EFFECTS

SWALLOWED

- Accidental ingestion of the material may be damaging to the health of the individual.

EYE

- This material may produce eye irritation in some persons and produce eye damage 24 hours or more after instillation. Moderate inflammation may be expected with redness; conjunctivitis may occur with prolonged exposure.

SKIN

- Skin contact with the material may damage the health of the individual; systemic effects may result following absorption. This material can cause inflammation of the skin on contact in some persons. Epoxy materials may cause allergic and/or contact dermatitis responses, which may occur on exposure or may become apparent only after repeated exposures. Sensitisation is possible. The material may accentuate any pre-existing dermatitis condition.

INHALED

- Not normally a hazard due to non-volatile nature of product.

CHRONIC HEALTH EFFECTS

- Skin contact with the material is more likely to cause a sensitisation reaction in some persons compared to the general population. Sensitisation may give severe responses to very low levels of exposure, i.e. hypersensitivity. Sensitised persons should not be allowed to work in situations where exposure may occur.

TOXICITY AND IRRITATION

- Contact allergies quickly manifest themselves as contact eczema, more rarely as urticaria or Quincke's oedema. The pathogenesis of contact eczema involves a cell-mediated (T lymphocytes) immune reaction of the delayed type. Other allergic skin reactions, e.g. contact urticaria, involve antibody-mediated immune reactions. The significance of the contact allergen is not simply determined by its sensitisation potential: the distribution of the substance and the opportunities for contact with it are equally important. A weakly sensitising substance which is widely distributed can be a more important allergen than one with stronger sensitising potential with which few individuals come into contact. From a clinical point of view, substances are noteworthy if they produce an allergic test reaction in more than 1% of the persons tested.

CARCINOGEN

silica crystalline -
quartz

International Agency for
Research on Cancer (IARC) -
Agents Reviewed by the IARC
Monographs

Group 1

SKIN

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Section 11 - TOXICOLOGICAL INFORMATION

benzyl alcohol	GESAMP/EHS Composite List - GESAMP Hazard Profiles	D1: skin irritation/corrosion	2
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Section 12 - ECOLOGICAL INFORMATION

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
This material and its container must be disposed of as hazardous waste.
Avoid release to the environment.
Refer to special instructions/ safety data sheets.

Ecotoxicity

Ingredient	Persistence: Water/Soil	Persistence: Air	Bioaccumulation	Mobility
bisphenol A/ epichlorohydrin resin, liquid	HIGH	No Data Available	LOW	HIGH
iron	No Data Available	No Data Available	LOW	No Data Available
benzyl alcohol	LOW	No Data Available	LOW	HIGH
silicon powder amorphous	No Data Available	No Data Available	No Data Available	No Data Available
silica crystalline - quartz	No Data Available	No Data Available	No Data Available	No Data Available

Section 13 - DISPOSAL CONSIDERATIONS

- Recycle wherever possible or consult manufacturer for recycling options.
- Consult State Land Waste Management Authority for disposal.
- Material may be disposed of by controlled burning in an approved incinerator or buried in an approved landfill.
- Prior to disposal in a landfill the material should be mixed with the other component and reacted to render the material inert.

Section 14 - TRANSPORTATION INFORMATION



■ *Environmentally Hazardous Substances meeting the descriptions of UN 3077 or UN 3082 are not subject to this Code when transported by road or rail in;*
(a) *packagings;*
(b) *IBCs; or*
(c) *any other receptacle not exceeding 500 kg(L).*
- Australian Special Provisions (SP AU01) - ADG Code 7th Ed.
Labels Required: MISCELLANEOUS

HAZCHEM:

•3Z (ADG7)

Land Transport UNDG:

Class or division:	9	Subsidiary risk:	None
UN No.:	3082	UN packing group:	III

Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(contains bisphenol A/ epichlorohydrin resin, liquid)

Air Transport IATA:

ICAO/IATA Class:	9	ICAO/IATA Subrisk:	None
UN/ID Number:	3082	Packing Group:	III

Special provisions: A97

Shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains bisphenol A/ epichlorohydrin resin, liquid)

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Section 14 - TRANSPORTATION INFORMATION

Maritime Transport IMDG:

IMDG Class:	9	IMDG Subrisk:	None
UN Number:	3082	Packing Group:	III
EMS Number:	F-A,S-F	Special provisions:	274 335
Limited Quantities:	5 L	Marine Pollutant:	Yes

Shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains bisphenol A/ epichlorohydrin resin, liquid)

Section 15 - REGULATORY INFORMATION

Indications of Danger:

N Dangerous for the environment
Xi Irritant

POISONS SCHEDULE

S5

REGULATIONS

Regulations for ingredients

bisphenol A/ epichlorohydrin resin, liquid (CAS: 25068-38-6, 25085-99-8) is found on the following regulatory lists;

"Australia - Victoria Occupational Health and Safety Regulations - Schedule 9: Materials at Major Hazard Facilities (And Their Threshold Quantity) Table 2", "Australia Hazardous Substances", "Australia High Volume Industrial Chemical List (HVICL)", "Australia Inventory of Chemical Substances (AICS)", "Australia National Pollutant Inventory", "Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix E (Part 2)", "Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix F (Part 3)", "Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 5", "OECD List of High Production Volume (HPV) Chemicals", "OSPAR National List of Candidates for Substitution - United Kingdom"

iron (CAS: 7439-89-6) is found on the following regulatory lists;

"Australia - Australian Capital Territory - Environment Protection Regulation: Ambient environmental standards (AQUA/1 to 6 - inorganic chemicals)", "Australia - Australian Capital Territory - Environment Protection Regulation: Ambient environmental standards (Domestic water supply - inorganic chemicals)", "Australia - Australian Capital Territory - Environment Protection Regulation: Ambient environmental standards (IRRIG - inorganic chemicals)", "Australia - Australian Capital Territory - Environment Protection Regulation: Ambient environmental standards (STOCK - inorganic chemicals)", "Australia - Australian Capital Territory - Environment Protection Regulation: Pollutants entering waterways taken to cause environmental harm - Domestic water supply quality", "Australia - Australian Capital Territory - Environment Protection Regulation: Pollutants entering waterways taken to cause environmental harm (Aquatic habitat)", "Australia - Australian Capital Territory - Environment Protection Regulation: Pollutants entering waterways taken to cause environmental harm (IRRIG)", "Australia - Australian Capital Territory - Environment Protection Regulation: Pollutants entering waterways taken to cause environmental harm (STOCK)", "Australia Drinking Water Guideline Values For Physical and Chemical Characteristics", "Australia Exposure Standards", "Australia High Volume Industrial Chemical List (HVICL)", "Australia Inventory of Chemical Substances (AICS)", "Australia National Pollutant Inventory", "FisherTransport Information", "OECD List of High Production Volume (HPV) Chemicals", "WHO Guidelines for Drinking-water Quality - Chemicals for which guideline values have not been established"

benzyl alcohol (CAS: 100-51-6) is found on the following regulatory lists;

"Australia - Victoria Occupational Health and Safety Regulations - Schedule 9: Materials at Major Hazard Facilities (And Their Threshold Quantity) Table 2", "Australia Hazardous Substances", "Australia High Volume Industrial Chemical List (HVICL)", "Australia Inventory of Chemical Substances (AICS)", "GESAMP/EHS Composite List - GESAMP Hazard Profiles", "IMO IBC Code Chapter 17: Summary of minimum requirements", "IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk", "International Council of Chemical Associations (ICCA) - High Production Volume List", "International Fragrance Association (IFRA) Standards Restricted", "International Fragrance Association (IFRA) Survey: Transparency List", "International Fragrance Association IFRA Standards Annex I", "OECD List of High Production Volume (HPV) Chemicals"

silicon powder amorphous (CAS: 7440-21-3) is found on the following regulatory lists;

"Australia Exposure Standards", "Australia High Volume Industrial Chemical List (HVICL)", "Australia Inventory of Chemical Substances (AICS)", "Australia National Pollutant Inventory", "FisherTransport Information", "OECD List of High Production Volume (HPV) Chemicals"

silica crystalline - quartz (CAS: 14808-60-7, 122304-48-7, 122304-49-8, 12425-26-2, 1317-79-9, 70594-95-5, 87347-84-0) is found on the following regulatory lists;

"Australia - New South Wales Hazardous Substances Prohibited for Specific Uses", "Australia - New South Wales Hazardous Substances Requiring Health Surveillance", "Australia - Queensland Workplace Health and Safety Regulation - Hazardous substances for which health surveillance must be supplied", "Australia - South Australia - Hazardous Substances Requiring Health

Surveillance", "Australia - Tasmania Hazardous Substances Prohibited for Specified Uses", "Australia - Tasmania Hazardous Substances Requiring Health Surveillance", "Australia - Western Australia Hazardous Substances Prohibited for Specified Uses or Methods of Handling", "Australia - Western Australia Hazardous Substances Requiring Health Surveillance", "Australia Australian Safety and Compensation Council (ASCC) Draft National Code of Practice for the Control of Workplace Hazardous Chemicals - Schedule 4 Hazardous chemicals Requiring Health Surveillance", "Australia Exposure Standards", "Australia Hazardous Substances", "Australia Hazardous Substances Requiring Health Surveillance", "Australia High Volume Industrial Chemical List (HVICL)", "Australia Inventory of Chemical Substances (AICS)", "Australia Occupational Health and Safety (Commonwealth Employment) (National Standards) Regulations 1994 - Hazardous Substances Requiring Health Surveillance", "Australia Work Health and Safety Regulations 2011 - Hazardous chemicals (other than lead) requiring health monitoring", "Australia Work Health and Safety Regulations 2011 - Restricted hazardous chemicals", "FisherTransport Information", "International Agency for Research on Cancer (IARC) - Agents Reviewed by the IARC Monographs", "International Fragrance Association (IFRA) Survey: Transparency List", "OECD List of High Production Volume (HPV) Chemicals", "United Nations Consolidated List of Products Whose Consumption and/or Sale Have Been Banned, Withdrawn, Severely Restricted or Not Approved by Governments"

No data for Devcon Plastic Steel Epoxy (S5) Resin (CW: 02-0801)

Section 16 - OTHER INFORMATION

INGREDIENTS WITH MULTIPLE CAS NUMBERS

Ingredient Name	CAS
bisphenol A/ epichlorohydrin resin, liquid	25068-38-6, 25085-99-8
silica crystalline - quartz	14808-60-7, 122304-48-7, 122304-49-8, 12425-26-2, 1317-79-9, 70594-95-5, 87347-84-0

■ Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

A list of reference resources used to assist the committee may be found at:
www.chemwatch.net/references.

■ The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings.

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Issue Date: 19-Oct-2012
Print Date: 9-Jan-2013

This is the end of the MSDS.

MATERIAL SAFETY DATA SHEET

5623
01 00

DATE OF PREPARATION
Jan 6, 2014

SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER

5623

PRODUCT NAME

Evaporative Cooler Paint, All Purpose Tan (Almond Beige)

MANUFACTURER'S NAME

Dial Manufacturing, Inc.

Phoenix, AZ 85043

Telephone Numbers and Websites

Product Information	(602) 278-1100 www.dialmfg.com
Regulatory Information	(216) 566-2902
Medical Emergency	(216) 566-2917
Transportation Emergency*	(800) 424-9300
*for Chemical Emergency ONLY (spill, leak, fire, exposure, or accident)	

SECTION 2 — COMPOSITION/INFORMATION ON INGREDIENTS

% by Weight	CAS Number	Ingredient	Units	Vapor Pressure
17	74-98-6	Propane		
		ACGIH TLV	1000 PPM	760 mm
		OSHA PEL	1000 PPM	
8	106-97-8	Butane		
		ACGIH TLV	1000 PPM	760 mm
		OSHA PEL	800 PPM	
7	108-88-3	Toluene		
		ACGIH TLV	20 PPM	22 mm
		OSHA PEL	100 ppm (Skin)	
		OSHA PEL	150 ppm (Skin) STEL	
0.6	100-41-4	Ethylbenzene		
		ACGIH TLV	20 PPM	7.1 mm
		OSHA PEL	100 PPM	
		OSHA PEL	125 PPM STEL	
4	1330-20-7	Xylene		
		ACGIH TLV	100 PPM	5.9 mm
		ACGIH TLV	150 PPM STEL	
		OSHA PEL	100 PPM	
		OSHA PEL	150 PPM STEL	
40	67-64-1	Acetone		
		ACGIH TLV	500 PPM	180 mm
		ACGIH TLV	750 PPM STEL	
		OSHA PEL	1000 PPM	
3	78-93-3	Methyl Ethyl Ketone		
		ACGIH TLV	200 PPM	90.6 mm
		ACGIH TLV	300 PPM STEL	
		OSHA PEL	200 PPM	
		OSHA PEL	300 PPM STEL	
5	108-10-1	Methyl Isobutyl Ketone		
		ACGIH TLV	50 PPM	16 mm
		ACGIH TLV	75 PPM STEL	
		OSHA PEL	50 PPM	
		OSHA PEL	75 PPM STEL	
5	108-65-6	1-Methoxy-2-Propanol Acetate		
		ACGIH TLV	Not Available	1.8 mm
		OSHA PEL	Not Available	
2	13463-67-7	Titanium Dioxide		
		ACGIH TLV	10 mg/m3 as Dust	
		OSHA PEL	10 mg/m3 Total Dust	
		OSHA PEL	5 mg/m3 Respirable Fraction	

SECTION 3 — HAZARDS IDENTIFICATION

ROUTES OF EXPOSURE

INHALATION of vapor or spray mist.

EYE or SKIN contact with the product, vapor or spray mist.

EFFECTS OF OVEREXPOSURE

EYES: Irritation.

SKIN: Prolonged or repeated exposure may cause irritation.

INHALATION: Irritation of the upper respiratory system.

May cause nervous system depression. Extreme overexposure may result in unconsciousness and possibly death.

Prolonged overexposure to hazardous ingredients in Section 2 may cause adverse chronic effects to the following organs or systems:

- the liver
- the urinary system
- the hematopoietic (blood-forming) system
- the cardiovascular system
- the reproductive system

SIGNS AND SYMPTOMS OF OVEREXPOSURE

Headache, dizziness, nausea, and loss of coordination are indications of excessive exposure to vapors or spray mists.

Redness and itching or burning sensation may indicate eye or excessive skin exposure.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

None generally recognized.

CANCER INFORMATION

For complete discussion of toxicology data refer to Section 11.

HMIS Codes

Health	2*
Flammability	3
Reactivity	0

SECTION 4 — FIRST AID MEASURES

EYES: Flush eyes with large amounts of water for 15 minutes. Get medical attention.

SKIN: Wash affected area thoroughly with soap and water.
Remove contaminated clothing and laundry before re-use.

INHALATION: If affected, remove from exposure. Restore breathing. Keep warm and quiet.

INGESTION: Do not induce vomiting. Get medical attention immediately.

SECTION 5 — FIRE FIGHTING MEASURES

FLASH POINT

Propellant < 0 °F

LEL

1.0

UEL

13.1

EXTINGUISHING MEDIA

Carbon Dioxide, Dry Chemical, Foam

UNUSUAL FIRE AND EXPLOSION HAZARDS

Containers may explode when exposed to extreme heat.

Application to hot surfaces requires special precautions.

During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIRE FIGHTING PROCEDURES

Full protective equipment including self-contained breathing apparatus should be used.

Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

SECTION 6 — ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Remove all sources of ignition. Ventilate the area.

Remove with inert absorbent.

SECTION 7 — HANDLING AND STORAGE

STORAGE CATEGORY

Not Available

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Keep away from heat, sparks, and open flame. Vapors will accumulate readily and may ignite explosively.

During use and until all vapors are gone: Keep area ventilated - Do not smoke - Extinguish all flames, pilot lights, and heaters - Turn off stoves, electric tools and appliances, and any other sources of ignition.

Consult NFPA Code. Use approved Bonding and Grounding procedures.

Contents under pressure. Do not puncture, incinerate, or expose to temperature above 120F. Heat from sunlight, radiators, stoves, hot water, and other heat sources could cause container to burst. Do not take internally. Keep out of the reach of children.

SECTION 8 — EXPOSURE CONTROLS/PERSONAL PROTECTION

PRECAUTIONS TO BE TAKEN IN USE

Use only with adequate ventilation.

Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.

Wash hands after using.

This coating may contain materials classified as nuisance particulates (listed "as Dust" in Section 2) which may be present at hazardous levels only during sanding or abrading of the dried film. If no specific dusts are listed in Section 2, the applicable limits for nuisance dusts are ACGIH TLV 10 mg/m³ (total dust), 3 mg/m³ (respirable fraction), OSHA PEL 15 mg/m³ (total dust), 5 mg/m³ (respirable fraction).

VENTILATION

Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

RESPIRATORY PROTECTION

If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2.

When sanding or abrading the dried film, wear a dust/mist respirator approved by NIOSH/MSHA for dust which may be generated from this product, underlying paint, or the abrasive.

PROTECTIVE GLOVES

None required for normal application of aerosol products where minimal skin contact is expected. For long or repeated contact, wear chemical resistant gloves.

EYE PROTECTION

Wear safety spectacles with unperforated sideshields.

OTHER PRECAUTIONS

Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT WEIGHT	6.24 lb/gal	747 g/l
SPECIFIC GRAVITY	0.75	
BOILING POINT	<0 - 302 °F	<-18 - 150 °C
MELTING POINT	Not Available	
VOLATILE VOLUME	94%	
EVAPORATION RATE	Faster than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	Not Available	
pH	7.0	
VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)		
	Volatile Weight 49.28%	Less Water and Federally Exempt Solvents

SECTION 10 — STABILITY AND REACTIVITY

STABILITY — Stable

CONDITIONS TO AVOID

None known.

INCOMPATIBILITY

None known.

HAZARDOUS DECOMPOSITION PRODUCTS

By fire: Carbon Dioxide, Carbon Monoxide

HAZARDOUS POLYMERIZATION

Will not occur

SECTION 11 — TOXICOLOGICAL INFORMATION

CHRONIC HEALTH HAZARDS

Methyl Ethyl Ketone may increase the nervous system effects of other solvents.

Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

Ethylbenzene is classified by IARC as possibly carcinogenic to humans (2B) based on inadequate evidence in humans and sufficient evidence in laboratory animals. Lifetime inhalation exposure of rats and mice to high ethylbenzene concentrations resulted in increases in certain types of cancer, including kidney tumors in rats and lung and liver tumors in mice. These effects were not observed in animals exposed to lower concentrations. There is no evidence that ethylbenzene causes cancer in humans.

IARC's Monograph No. 93 reports there is sufficient evidence of carcinogenicity in experimental rats exposed to titanium dioxide but inadequate evidence for carcinogenicity in humans and has assigned a Group 2B rating. In addition, the IARC summary concludes, "No significant exposure to titanium dioxide is thought to occur during the use of products in which titanium is bound to other materials, such as paint."

TOXICOLOGY DATA

CAS No.	Ingredient Name			
74-98-6	Propane	LC50 RAT LD50 RAT	4HR	Not Available Not Available
106-97-8	Butane	LC50 RAT LD50 RAT	4HR	Not Available Not Available
108-88-3	Toluene	LC50 RAT LD50 RAT	4HR	4000 ppm 5000 mg/kg
100-41-4	Ethylbenzene	LC50 RAT LD50 RAT	4HR	Not Available 3500 mg/kg
1330-20-7	Xylene	LC50 RAT LD50 RAT	4HR	5000 ppm 4300 mg/kg
67-64-1	Acetone	LC50 RAT LD50 RAT	4HR	Not Available 5800 mg/kg
78-93-3	Methyl Ethyl Ketone	LC50 RAT LD50 RAT	4HR	Not Available 2740 mg/kg
108-10-1	Methyl Isobutyl Ketone	LC50 RAT LD50 RAT	4HR	Not Available 2080 mg/kg
108-65-6	1-Methoxy-2-Propanol Acetate	LC50 RAT LD50 RAT	4HR	Not Available 8500 mg/kg
13463-67-7	Titanium Dioxide	LC50 RAT LD50 RAT	4HR	Not Available Not Available

SECTION 12 — ECOLOGICAL INFORMATION**ECOTOXICOLOGICAL INFORMATION**

No data available.

SECTION 13 — DISPOSAL CONSIDERATIONS**WASTE DISPOSAL METHOD**

Waste from this product may be hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.

Waste must be tested for ignitability to determine the applicable EPA hazardous waste numbers.

Do not incinerate. Depressurize container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

SECTION 14 — TRANSPORT INFORMATION

Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (ocean, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport.

US Ground (DOT)

May be classed as LTD. QTY. OR ORM-D

UN1950, AEROSOLS, 2.1, LIMITED QUANTITY, (ERG#126)

Canada (TDG)

May be classed as LTD. QTY. OR ORM-D

UN1950, AEROSOLS, CLASS 2.1, LIMITED QUANTITY, (ERG#126)

IMO

May be shipped as Limited Quantity

UN1950, AEROSOLS, CLASS 2.1, LIMITED QUANTITY, EmS F-D, S-U

IATA/ICAO

UN1950, AEROSOLS, FLAMMABLE, 2.1, LIMITED QUANTITY

SECTION 15 — REGULATORY INFORMATION

SARA 313 (40 CFR 372.65C) SUPPLIER NOTIFICATION

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element
108-88-3	Toluene	7	
100-41-4	Ethylbenzene	0.6	
1330-20-7	Xylene	4	
108-10-1	Methyl Isobutyl Ketone	5	

CALIFORNIA PROPOSITION 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

TSCA CERTIFICATION

All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

SECTION 16 — OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

MATERIAL SAFETY DATA SHEET

5324/5328
03 00

DATE OF PREPARATION
Dec 2, 2008

SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER

5324/5328

PRODUCT NAME

Submarine Cooler Coating Evaporative Cooler Undercoating and Sealer Rust and Corrosion Inhibitor

MANUFACTURER'S NAME

Dial Manufacturing, Inc.
25 S. 51st Avenue
Phoenix, AZ 85043

Telephone Numbers and Websites

Product Information	(602) 278-1100
Regulatory Information	(216) 566-2902
Medical Emergency	(216) 566-2917
Transportation Emergency*	(800) 424-9300
<i>*for Chemical Emergency ONLY (spill, leak, fire, exposure, or accident)</i>	

SECTION 2 — COMPOSITION/INFORMATION ON INGREDIENTS

% by Weight	CAS Number	Ingredient	Units	Vapor Pressure
11	74-98-6	Propane		
		ACGIH TLV	2500 PPM	760 mm
		OSHA PEL	1000 PPM	
11	106-97-8	Butane		
		ACGIH TLV	800 PPM	760 mm
		OSHA PEL	800 PPM	
10	64741-65-7	Mineral Spirits (Odorless)		
		ACGIH TLV	100 PPM	1 mm
		OSHA PEL	100 PPM	
0.5	100-41-4	Ethylbenzene		
		ACGIH TLV	100 PPM	7.1 mm
		ACGIH TLV	125 PPM STEL	
		OSHA PEL	100 PPM	
		OSHA PEL	125 PPM STEL	
3	1330-20-7	Xylene		
		ACGIH TLV	100 PPM	5.9 mm
		ACGIH TLV	150 PPM STEL	
		OSHA PEL	100 PPM	
		OSHA PEL	150 PPM STEL	
2	67-56-1	Methanol		
		ACGIH TLV	200 ppm (Skin)	92 mm
		ACGIH TLV	250 ppm (Skin) STEL	
		OSHA PEL	200 ppm (Skin)	
		OSHA PEL	250 ppm (Skin) STEL	
12	8052-42-4	Asphalt (Petroleum)		
		ACGIH TLV	Not Available	
		OSHA PEL	Not Available	
19	1332-58-7	Kaolin		
		ACGIH TLV	2 mg/m3 as Resp. Dust	
		OSHA PEL	10 mg/m3 Total Dust	
		OSHA PEL	5 mg/m3 Respirable Fraction	
12	471-34-1	Calcium Carbonate		
		ACGIH TLV	10 mg/m3 as Dust	
		OSHA PEL	15 mg/m3 Total Dust	
		OSHA PEL	5 mg/m3 Respirable Fraction	

SECTION 3 — HAZARDS IDENTIFICATION

ROUTES OF EXPOSURE

INHALATION of vapor or spray mist.

EYE or SKIN contact with the product, vapor or spray mist.

EFFECTS OF OVEREXPOSURE

EYES: Irritation.

SKIN: Prolonged or repeated exposure may cause irritation.

INHALATION: Irritation of the upper respiratory system.

May cause nervous system depression. Extreme overexposure may result in unconsciousness and possibly death.

Prolonged overexposure to solvent ingredients in Section 2 may cause adverse effects to the liver, urinary and reproductive systems.

SIGNS AND SYMPTOMS OF OVEREXPOSURE

Headache, dizziness, nausea, and loss of coordination are indications of excessive exposure to vapors or spray mists.

Redness and itching or burning sensation may indicate eye or excessive skin exposure.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

None generally recognized.

CANCER INFORMATION

For complete discussion of toxicology data refer to Section 11.

HMIS Codes

Health	3*
Flammability	2
Reactivity	0

SECTION 4 — FIRST AID MEASURES

EYES: Flush eyes with large amounts of water for 15 minutes. Get medical attention.

SKIN: Wash affected area thoroughly with soap and water.

Remove contaminated clothing and launder before re-use.

INHALATION: If affected, remove from exposure. Restore breathing. Keep warm and quiet.

INGESTION: Do not induce vomiting. Get medical attention immediately.

SECTION 5 — FIRE FIGHTING MEASURES**FLASH POINT**

Propellant < 0° F

LEL

1.0

UEL

36.5

EXTINGUISHING MEDIA

Carbon Dioxide, Dry Chemical, Alcohol Foam

UNUSUAL FIRE AND EXPLOSION HAZARDS

Closed containers may explode (due to the build-up of pressure) when exposed to extreme heat.

Application to hot surfaces requires special precautions.

During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIRE FIGHTING PROCEDURES

Full protective equipment including self-contained breathing apparatus should be used.

Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

SECTION 6 — ACCIDENTAL RELEASE MEASURES**STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED**

- Remove all sources of ignition. Ventilate the area.
- Remove with inert absorbent.

SECTION 7 — HANDLING AND STORAGE**STORAGE CATEGORY**

Not Available

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Keep away from heat, sparks, and open flame. Vapors will accumulate readily and may ignite explosively.

During use and until all vapors are gone: Keep area ventilated - Do not smoke - Extinguish all flames, pilot lights, and heaters - Turn off stoves, electric tools and appliances, and any other sources of ignition.

Consult NFPA Code. Use approved Bonding and Grounding procedures.

Contents under pressure. Do not puncture, incinerate, or expose to temperature above 120F. Heat from sunlight, radiators, stoves, hot water, and other heat sources could cause container to burst. Do not take internally. Keep out of the reach of children.

SECTION 8 — EXPOSURE CONTROLS/PERSONAL PROTECTION**PRECAUTIONS TO BE TAKEN IN USE**

Use only with adequate ventilation.

Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.

Wash hands after using.

VENTILATION

Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits.

Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

RESPIRATORY PROTECTION

If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2.

PROTECTIVE GLOVES

None required for normal application of aerosol products where minimal skin contact is expected. For long or repeated contact, wear chemical resistant gloves.

EYE PROTECTION

Wear safety spectacles with unperforated sideshields.

OTHER PRECAUTIONS

Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT WEIGHT	7.38 lb/gal	884 g/l
SPECIFIC GRAVITY	0.89	
BOILING POINT	<0 - 412° F	<-18 - 211° C
MELTING POINT	Not Available	
VOLATILE VOLUME	70%	
EVAPORATION RATE	Faster than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	N.A.	
VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)		
	Volatile Weight 36.82%	Less Water and Federally Exempt Solvents

SECTION 10 — STABILITY AND REACTIVITY
--

STABILITY — Stable**CONDITIONS TO AVOID**

None known.

INCOMPATIBILITY

None known.

HAZARDOUS DECOMPOSITION PRODUCTS

By fire: Carbon Dioxide, Carbon Monoxide

HAZARDOUS POLYMERIZATION

Will not occur

SECTION 11 — TOXICOLOGICAL INFORMATION

CHRONIC HEALTH HAZARDS

Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

Ethylbenzene is classified by IARC as possibly carcinogenic to humans (2B) based on inadequate evidence in humans and sufficient evidence in laboratory animals. Lifetime inhalation exposure of rats and mice to high ethylbenzene concentrations resulted in increases in certain types of cancer, including kidney tumors in rats and lung and liver tumors in mice. These effects were not observed in animals exposed to lower concentrations. There is no evidence that ethylbenzene causes cancer in humans.

Some animal studies with poor controls have indicated that Bitumens (Asphalt) cause tumors, however, there is inadequate evidence that Bitumens alone are carcinogenic to humans.

TOXICOLOGY DATA

CAS No.	Ingredient Name			
74-98-6	Propane	LC50 RAT LD50 RAT	4HR	Not Available Not Available
106-97-8	Butane	LC50 RAT LD50 RAT	4HR	Not Available Not Available
64741-65-7	Mineral Spirits (Odorless)	LC50 RAT LD50 RAT	4HR	Not Available Not Available
100-41-4	Ethylbenzene	LC50 RAT LD50 RAT	4HR	Not Available 3500 mg/kg
1330-20-7	Xylene	LC50 RAT LD50 RAT	4HR	5000 ppm 4300 mg/kg
67-56-1	Methanol	LC50 RAT LD50 RAT	4HR	64000 ppm 5630 mg/kg
8052-42-4	Asphalt (Petroleum)	LC50 RAT LD50 RAT	4HR	Not Available Not Available
1332-58-7	Kaolin	LC50 RAT LD50 RAT	4HR	Not Available Not Available
471-34-1	Calcium Carbonate	LC50 RAT LD50 RAT	4HR	Not Available Not Available

SECTION 12 — ECOLOGICAL INFORMATION**ECOTOXICOLOGICAL INFORMATION**

No data available.

SECTION 13 — DISPOSAL CONSIDERATIONS**WASTE DISPOSAL METHOD**

Waste from this product may be hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.

Waste must be tested for ignitability to determine the applicable EPA hazardous waste numbers.

Do not incinerate. Depressurize container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

SECTION 14 — TRANSPORT INFORMATION**US Ground (DOT)**

May be classed as Consumer Commodity, ORM-D

UN1950, AEROSOLS, 2.1, LIMITED QUANTITY, (ERG#126)

Canada (TDG)

May be classed as Consumer Commodity, ORM-D

UN1950, AEROSOLS, CLASS 2.1, LIMITED QUANTITY, (ERG#126)

IMO

May be shipped as Limited Quantity

UN1950, AEROSOLS, CLASS 2.1, LIMITED QUANTITY, EmS F-D, S-U

SECTION 15 — REGULATORY INFORMATION**SARA 313 (40 CFR 372.65C) SUPPLIER NOTIFICATION**

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element
100-41-4	Ethylbenzene	0.4	
1330-20-7	Xylene	3	
67-56-1	Methanol	2	

CALIFORNIA PROPOSITION 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

TSCA CERTIFICATION

All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

SECTION 16 — OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.



THE #1 CHOICE OF
PAINTING PROFESSIONALS®

MATERIAL SAFETY DATA SHEET

MSDS FORM B: WATERBORNE LATEX COATINGS

The following Material Safety Data Sheet (MSDS) is being provided pursuant to requirements of the Fed/OSHA (29 CFR 1910.1200) and Cal/OSHA (8 CCR 5194) Hazard Communication Standards. The health and hazards information given here is based on data believed to be accurate by Dunn-Edwards Corporation; we do not, however, assume any liability for the accuracy or completeness of this information. We neither suggest nor guarantee that any hazards mentioned are the only ones that may exist. All persons intending to rely on any recommendation, or to use any technique, equipment, or material mentioned should first satisfy themselves that they can meet all applicable safety and health standards.

The following MSDS supersedes any previously issued MSDS for each product covered. The reader is advised to destroy any obsolete MSDS and refer only to this MSDS. As permitted by OSHA, each MSDS may apply to a class of products which have similar hazards and contents.

Products covered by this MSDS are listed below:

ACHS30-0: ACRI-HUES Eggshell
ACHS50-0: ACRI-HUES Semi-Gloss
ESPR00-0: EFF-STOP Premium
ESSL00-0: EFF-STOP Select
EVSH40-1: EVERSIELD Low Sheen (AZ)
EVSH50-1: EVERSIELD Semi-Gloss (AZ)
EVSH50-2: EVERSIELD Semi-Gloss
EVSH60-0: EVERSIELD Gloss
EVSH60-1: EVERSIELD Gloss (AZ)
EZPR00-0: EZ-PRIME Premium
FPSL00-0: FLEX-PRIME Select
FTXS10-0: FLEX-TEX Smooth
IKPR00-0: INTER-KOTE Premium
MBPR00-0: Medium BLOCFIL Premium
SBPR00-0: Smooth BLOCFIL Premium
SBSL00-0: Smooth BLOCFIL Select
SBSL00-1: Smooth BLOCFIL Select
SSHL40-0: SPARTASHIELD Low Sheen
SSHL50-0: SPARTASHIELD Semi-Gloss
SSHL60-0: SPARTASHIELD Gloss
UGPR00-0: ULTRA-GRIP Premium
VNPL00-0: VINYLASTIC Plus
VNPR00-0: VINYLASTIC Premium
W 101: VINYLASTIC
W 101V: VINYLASTIC
W 102: PROSEAL
W 203: ENDURA-COAT
W 203V: ENDURA-COAT

W 304: BLOCFIL Medium
W 305: BLOCFIL Smooth
W 315: Concrete Block Filler Smooth
W 321: FLEX-TEX Smooth
W 322: FLEX-TEX Medium
W 323: FLEX-TEX Coarse
W 350: Interior W/B Acrylic Clear Finish
W 401: DECOVEL
W 410: COVER KOTE II
W 411: SUPREMA
W 411E: SUPREMA
W 420: WALLTONE
W 440: DECOSHEEN
W 440V: DECOSHEEN
W 450: DECOGLO
W 450V: DECOGLO
W 701: EVERSIELD
W 704: ACRI-FLAT
W 704V: ACRI-FLAT
W 705: ENDURACRYL
W 707: UNIKOTE
W 707V: UNIKOTE
W 708: E-Z PRIME
W 709: EFF-STOP
W 801: VIN-L-STRIPE
W 810: TUFF-FLOOR

continued

MSDS FORM B: WATERBORNE LATEX COATINGS *continued*

W 901: PERMASHEEN	W 6230E: VERSAWALL
W 901V: PERMASHEEN CA Formula	W 6230V: VERSAWALL
W 940: PERMASHELL	W 6232: ACRI-LOC
W 940V: PERMASHELL CA Formula	W 6232V: ACRI-LOC
W 960: PERMAGLOSS	W 6250: VERSASATIN
W 960E: PERMAGLOSS CA Formula	W 6250E: VERSASATIN
W 960V: PERMAGLOSS CA Formula	W 6250V: VERSASATIN
W 960X: PERMAGLOSS CA Formula	W 6270: AQUAFALL Eggshell
W 2140: QUIK-WALL III	W 6300: TILT-PRIME
W 2397: Latex Wall Sealer	W 6300V: TILT-PRIME
W 2456: STAY KOOL Roof Coating	W 6305: TILT-KOTE
W 2456V: Latex Roof Coating	W 6315: FLEX-PRIME
W 5824: Elastomeric Acrylic Roof Coating	W 6324: PREP-SEAL
W 5827: High Hide PVA Sealer	W 6325: INTER-KOTE
W 5946: Interior/Exterior Latex Low Sheen Paint	W 6329: Concrete Block Filler Smooth
W 6037: High Hide DECOVEL	W 6400: ULTRA-SCRUB
W 6078: AQUAFALL Low Sheen	W 6401: QUIK-WALL
W 6160: VERSAGLO	W 6402: SUPER-WALL
W 6160E: VERSAGLO	W 6403: SUPER-WALL Ready-To-Use
W 6160V: VERSAGLO	W 7300: SPARTASHEEN
W 6196: Interior Latex Flat Paint	W 7400: SPARTASHELL
W 6198: Interior Washable Latex Flat Paint	W 7500: SPARTAGLO
W 6220E: VERSAGLOSS	W 7600: SPARTAGLOSS
W 6220V: VERSAGLOSS	W 7600V: SPARTAGLOSS
W 6230: VERSAWALL	

MATERIAL SAFETY DATA SHEET

DUNN-EDWARDS CORPORATION
4885 EAST 52ND PLACE
LOS ANGELES, CA 90058-5507

EMERGENCY TELEPHONE NUMBER:
1-800-222-1222 (TOLL-FREE)

DATE OF PREPARATION: 01/17/2014

INFORMATION TELEPHONE NUMBER:
(323) 771-3330, EXTENSION 2663

SECTION I - PRODUCT IDENTIFICATION

MSDS FORM B:

HMIS CODES: H F R PP
 1 0 0 E

WATERBORNE LATEX COATINGS
(SEE COVER PAGE FOR LIST OF PRODUCTS COVERED)

U.S. DOT SHIPPING DESCRIPTION: (Non-Regulated)

SECTION II - HAZARDOUS INGREDIENTS

INGREDIENT	CAS NUMBER	%WT	ACGIH	OSHA EXPOSURE LIMITS				VAPOR PRESS mmHg @ TEMP
			TLV/TWA PPM	TWA PPM	MG/M ³	STEL PPM	MG/M ³	
Propylene Glycol	00057-55-6	<5%	-	-	-	-	-	0.1 @ 68°F
Texanol Ester Alcohol	25265-77-4	<5%	-	-	-	-	-	0.1 @ 68°F

SECTION III - PHYSICAL AND CHEMICAL DATA

BOILING RANGE: 200-225°F
SPECIFIC GRAVITY (H₂O=1): 1.4
SOLUBILITY IN WATER: Partly soluble.
APPEARANCE AND ODOR: Liquid dispersion with mild odor.

EVAPORATION RATE: Slower Than Ether.
VAPOR DENSITY: Heavier Than Air.
VOLATILE VOLUME: 60%

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY CLASSIFICATION: N/A
FLASH POINT: N/A LEL: N/A UEL: N/A
EXTINGUISHING MEDIA: Foam, Alcohol Foam, CO₂, Dry Chemical, Water Fog.
UNUSUAL FIRE AND EXPLOSION HAZARDS: Liquid material is non-combustible, but dried films are capable of supporting combustion when in contact with open flames. Closed containers can develop internal pressure and may rupture when subjected to extreme heat.
SPECIAL FIREFIGHTING PROCEDURES: Use self-contained breathing apparatus in confined spaces. Observe recommended procedures for handling ordinary combustible materials.

SECTION V - HEALTH HAZARD DATA

POTENTIAL ROUTES OF ENTRY / SIGNS AND SYMPTOMS OF EXPOSURE
INHALATION: Exposure to high vapor concentration may irritate mucous membranes and respiratory tract. Extreme overexposure may produce dizziness, headache, and nausea.
EYE CONTACT: Direct contact may cause eye irritation, redness, and tearing.
SKIN CONTACT: Prolonged contact may cause transient reddening of the skin.
SKIN ABSORPTION: Available information provides no evidence of adverse effects.
INGESTION: May cause gastrointestinal irritation, nausea, vomiting, and diarrhea.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: Pre-existing eye, skin, and respiratory system disorders, and unusual allergic sensitivity.

CHRONIC OR DELAYED HEALTH HAZARDS: Available information provides no evidence of chronic or delayed health hazards associated with exposure to this product.

CARCINOGENICITY: NTP? NO. IARC MONOGRAPHS? NO. OSHA REGULATED? NO. PROP 65? NO.

EMERGENCY AND FIRST AID PROCEDURES: If affected by inhalation of vapor, move victim to fresh air. If not breathing, apply artificial respiration and call emergency medical care. For eye contact, flush eyes with fresh water for at least 15 minutes. If irritation persists, seek medical attention. For skin contact, wash thoroughly with soap and water. Remove any contaminated clothing. If swallowed, have victim drink enough fresh water to ensure dilution. Call emergency medical care.

SECTION VI - REACTIVITY DATA

STABILITY: Stable. HAZARDOUS POLYMERIZATION: Will not occur.
HAZARDOUS DECOMPOSITION PRODUCTS: Combustion can produce carbon monoxide and/or carbon dioxide.
CONDITIONS TO AVOID: Avoid storage or use at temperatures below 40°F. Avoid freezing.
INCOMPATIBILITY (MATERIALS TO AVOID): Avoid water-reactive materials, strong oxidizers, acids and alkalis.

SECTION VII - PRECAUTIONS FOR SAFE HANDLING, STORAGE, AND DISPOSAL

PRECAUTIONS FOR HANDLING AND STORAGE: Keep containers closed when not in use. Do not handle or store near heat, flame, or strong oxidizers, acids and alkalis. Store in cool, well-ventilated area. Rotate stock, use older material first. Inspect all containers for leaks.
STEPS TO TAKE IF MATERIAL IS RELEASED OR SPILLED: Dike and absorb spilled liquid with inert material such as clay granules, sand, earth, or sawdust. Use rags to clean up small amounts of spilled material.
WASTE DISPOSAL METHOD: Collect contaminated absorbent material and rags into a suitable container and dispose in accordance with all applicable local, state, and federal regulations.

SECTION VIII - CONTROL MEASURES FOR SAFE USE

RESPIRATORY PROTECTION: For spray application, use particulate filter mask to avoid breathing spray mist. Exposed persons with unusual allergic sensitivity may need organic vapor respirator (NIOSH/MSHA TC 23C or equivalent).
VENTILATION: For interior use, general mechanical ventilation may be sufficient to disperse vapor. Otherwise, open doors and windows or use portable fans to provide local exhaust.
EYE PROTECTION: Use safety glasses, goggles, or face shield to protect eyes.
PROTECTIVE GLOVES: Use waterproof gloves (e.g., latex, vinyl, rubber, neoprene) to avoid skin contact.
OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Waterproof headcovering and general protective clothing are recommended for protection as necessary.
WORK/HYGIENIC PRACTICES: Wash hands and face before eating.

SECTION IX - SPECIAL CAUTIONS

Do not store in areas subject to freezing temperatures. Keep above 40°F at all times. Use only with adequate ventilation or protection. Avoid breathing spray mist or vapor. Do not ingest. Avoid contact with skin. Close container after each use. Keep out of reach of children.

SECTION X - TRANSPORTATION INFORMATION

Shipping Requirements: Products covered by this MSDS are not subject to DOT, IATA/ICAO, or IMO/IMDG transportation regulations. Acceptable for air transport as non-hazardous goods.

***** DISCLAIMER *****

THE INFORMATION CONVEYED ABOVE, ALTHOUGH OBTAINED FROM SOURCES WE CONSIDER RELIABLE, IS FURNISHED BY DUNN-EDWARDS CORPORATION WITHOUT ANY WARRANTY (WHETHER EXPRESS OR IMPLIED) AS TO ITS ACCURACY, ADEQUACY, OR APPLICABILITY TO ANY PARTICULAR NEEDS OR CIRCUMSTANCES.

**DuPont™ Freon® 22 Refrigerant**

Version 2.0

Revision Date 09/09/2014

Ref. 130000024323

This SDS adheres to the standards and regulatory requirements of the United States and may not meet the regulatory requirements in other countries.

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name	:	DuPont™ Freon® 22 Refrigerant
Tradename/Synonym	:	R-22 Freon® 22 CHLORODIFLUOROMETHANE HCFC-22 DYMEL® 22
Product Grade/Type	:	ASHRAE Refrigerant number designation: R-22
Product Use	:	Refrigerant
Restrictions on use	:	For professional users only.
Manufacturer/Supplier	:	DuPont 1007 Market Street Wilmington, DE 19898
Product Information	:	+1-800-441-7515 (outside the U.S. +1-302-774-1000)
Medical Emergency	:	1-800-441-3637 (outside the U.S. 1-302-774-1139)
Transport Emergency	:	CHEMTREC: +1-800-424-9300 (outside the U.S. +1-703-527-3887)

SECTION 2. HAZARDS IDENTIFICATION**Product hazard category**

Gases under pressure

Liquefied gas

DuPont™ Freon® 22 Refrigerant

Version 2.0

Revision Date 09/09/2014

Ref. 130000024323

Label content

Pictogram :



Signal word : Warning

Hazardous warnings : Contains gas under pressure; may explode if heated.

Hazardous prevention measures : Protect from sunlight. Store in a well-ventilated place.

Other hazards

Vapours are heavier than air and can cause suffocation by reducing oxygen available for breathing., Rapid evaporation of the liquid may cause frostbite., Misuse or intentional inhalation abuse may cause death without warning symptoms, due to cardiac effects., May cause cardiac arrhythmia.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS-No.	Concentration
Chlorodifluoromethane (HCFC-22)	75-45-6	100 %

SECTION 4. FIRST AID MEASURES



DuPont™ Freon® 22 Refrigerant

Version 2.0

Revision Date 09/09/2014

Ref. 130000024323

General advice	: Never give anything by mouth to an unconscious person. When symptoms persist or in all cases of doubt seek medical advice.
Inhalation	: Remove from exposure, lie down. Move to fresh air. Keep patient warm and at rest. Artificial respiration and/or oxygen may be necessary. Call a physician.
Skin contact	: Take off all contaminated clothing immediately. Flush area with lukewarm water. Do not use hot water. If frostbite has occurred, call a physician.
Eye contact	: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Call a physician.
Ingestion	: Is not considered a potential route of exposure.
Most important symptoms/effects, acute and delayed	: No applicable data available.
Protection of first-aiders	: No applicable data available.
Notes to physician	: Because of possible disturbances of cardiac rhythm, catecholamine drugs, such as epinephrine, that may be used in situations of emergency life support should be used with special caution.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media	: As appropriate for combustibles in area. Extinguishant for other burning material in area is sufficient to stop burning.
Unsuitable extinguishing media	: No applicable data available.

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Specific hazards	: Cylinders are equipped with pressure and temperature relief devices, but may still rupture under fire conditions. Decomposition may occur. Contact of welding or soldering torch flame with high concentrations of refrigerant can result in visible changes in the size and colour of the torch flame. This flame effect will only occur in concentrations of product well above the recommended exposure limit. Therefore stop all work and ventilate to disperse refrigerant vapors from the work area before using any open flames. This substance is not flammable in air at temperatures up to 100 deg. C (212 deg. F) at atmospheric pressure. However, mixtures of this substance with high concentrations of air at elevated pressure and/or temperature can become combustible in the presence of an ignition source. This substance can also become combustible in an oxygen enriched environment (oxygen concentrations greater than that in air). Whether a mixture containing this substance and air, or this substance in an oxygen enriched atmosphere become combustible depends on the inter-relationship of 1) the temperature 2) the pressure, and 3) the proportion of oxygen in the mixture. In general, this substance should not be allowed to exist with air above atmospheric pressure or at high temperatures; or in an oxygen enriched environment. For example this substance should NOT be mixed with air under pressure for leak testing or other purposes. Experimental data have also been reported which indicate combustibility of this substance in the presence of certain concentrations of chlorine.
Special protective equipment for firefighters	: In the event of fire, wear self-contained breathing apparatus. Wear neoprene gloves during cleaning up work after a fire.
Further information	: Self-contained breathing apparatus (SCBA) is required if containers rupture and contents are released under fire conditions. Cool containers/tanks with water spray. Water runoff should be contained and neutralized prior to release.

SECTION 6. ACCIDENTAL RELEASE MEASURES

NOTE: Review FIRE FIGHTING MEASURES and HANDLING (PERSONNEL) sections before proceeding with clean-up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean-up.

Safeguards (Personnel)	: Evacuate personnel to safe areas. Ventilate the area. Refer to protective measures listed in sections 7 and 8.
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- Environmental precautions : Should not be released into the environment.
- Spill Cleanup : Evaporates.
- Accidental Release Measures : Ventilate area, especially low or enclosed places where heavy vapours might collect. Avoid open flames and high temperatures. Self-contained breathing apparatus (SCBA) is required if a large release occurs.

SECTION 7. HANDLING AND STORAGE

- Handling (Personnel) : Avoid breathing vapours or mist. Avoid contact with skin, eyes and clothing. Provide sufficient air exchange and/or exhaust in work rooms. For personal protection see section 8.
The product should not be mixed with air for leak testing or used with air for any other purpose above atmospheric pressure. Contact with chlorine or other strong oxidizing agents should also be avoided.
Handle in accordance with good industrial hygiene and safety practice.
- Handling (Physical Aspects) : No special protective measures against fire required.
- Dust explosion class : No applicable data available.
- Storage : Valve protection caps and valve outlet threaded plugs must remain in place unless container is secured with valve outlet piped to use point. Do not drag, slide or roll cylinders. Use a suitable hand truck for cylinder movement. Use a pressure reducing regulator when connecting cylinder to lower pressure (<3000 psig) piping or systems. Never attempt to lift cylinder by its cap. Use a check valve or trap in the discharge line to prevent hazardous back flow into the cylinder. Cylinders should be stored upright and firmly secured to prevent falling or being knocked over.
Separate full containers from empty containers. Keep at temperature not exceeding 52°C. Do not store near combustible materials. Avoid area where salt or other corrosive materials are present.
- Storage period : No applicable data available.
- Storage temperature : < 52 °C (< 126 °F)

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

- Engineering controls : Ensure adequate ventilation, especially in confined areas. Local exhaust

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should be used when large amounts are released. Mechanical ventilation should be used in low or enclosed places.

Personal protective equipment

Respiratory protection : Under normal manufacturing conditions, no respiratory protection is required when using this product. For rescue and maintenance work in storage tanks use self-contained breathing apparatus.

Hand protection : Additional protection: Impervious gloves

Hand protection : Additional protection: Protective gloves complying with EN 374., or, US OSHA guidelines

Eye protection : Safety glasses with side-shields Additionally wear a face shield where the possibility exists for face contact due to splashing, spraying or airborne contact with this material.

Protective measures : Self-contained breathing apparatus (SCBA) is required if a large release occurs.

Exposure Guidelines**Exposure Limit Values**

Chlorodifluoromethane

TLV

(ACGIH)

1,000 ppm

TWA

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**Appearance (Physical state, form, colour, etc.)**

Form : Liquefied gas
Color : clear
Odor : slight, ether-like
Odor threshold : No applicable data available.
pH : neutral
Melting point/range : No applicable data available.

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Boiling point/boiling range	: Boiling point -40.8 °C (-41.4 °F) at 1,013 hPa
Flash point	: does not flash
Evaporation rate	: > 1 (CCL4=1.0)
Flammability (solid, gas)	: No applicable data available.
Upper explosion limit	: Method: None per ASTM E681
Lower explosion limit	: Method: None per ASTM E681
Vapor pressure	: 10,439.0 hPa at 25 °C (77 °F)
Vapor density	: 3.0 at 25 °C (77 °F) and 1013 hPa (Air=1.0)
Density	: 1.191 g/cm ³ at 25 °C (77 °F) (as liquid)
Specific gravity (Relative density)	: 1.19 at 25 °C (77 °F)
Bulk density	: No applicable data available.
Water solubility	: 2.6 g/l at 25 °C (77 °F)
Solubility(ies)	: No applicable data available.
Partition coefficient: n-octanol/water	: No applicable data available.
Auto-ignition temperature	: No applicable data available.
Decomposition temperature	: 632 °C
Viscosity	: No applicable data available.
% Volatile	: 100 %

SECTION 10. STABILITY AND REACTIVITY

Reactivity	: Decomposes on heating.
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Chemical stability	: Stable at normal temperatures and storage conditions.
Possibility of hazardous reactions	: Polymerization will not occur. Other burning materials may cause HCFC 22 to burn weakly. Chlorodifluoromethane is not flammable at ambient temperatures and atmospheric pressure. However, chlorodifluoromethane has been shown in tests to be combustible at pressures as low as 60 psig at ambient temperature when mixed with air at concentrations of 65 volume % air. Experimental data have also been reported which indicate combustibility of HCFC 22 in the presence of certain concentrations of chlorine.
Conditions to avoid	: The product is not flammable in air under ambient conditions of temperature and pressure. When pressurised with air or oxygen, the mixture may become flammable. Certain mixtures of HCFCs or HFCs with chlorine may become flammable or reactive under certain conditions. Avoid open flames and high temperatures.
Incompatible materials	: Alkali metals Alkaline earth metals, Powdered metals, Powdered metal salts
Hazardous decomposition products	: Decomposition products are hazardous., This material can be decomposed by high temperatures (open flames, glowing metal surfaces, etc.) forming hydrochloric and hydrofluoric acids, and possibly carbonyl halides., These materials are toxic and irritating., Avoid contact with decomposition products

SECTION 11. TOXICOLOGICAL INFORMATION

Chlorodifluoromethane (HCFC-22)

Inhalation 4 h LC50	: > 150000 ppm , Mouse
Inhalation Low Observed Adverse Effect Concentration (LOAEC)	: 50000 ppm , Dog Cardiac sensitization
Inhalation No Observed Adverse Effect Concentration	: 25000 ppm , Dog Cardiac sensitization
Skin irritation	: Not expected to cause skin irritation based on expert review of the properties of the substance.
Eye irritation	: Not expected to cause eye irritation based on expert review of the properties of the substance.
Skin sensitization	: Not expected to cause sensitization based on expert review of the

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properties of the substance.

- Repeated dose toxicity : Inhalation
Mouse
-
gas
No toxicologically significant effects were found.
- Carcinogenicity : Not classifiable as a human carcinogen.
Overall weight of evidence indicates that the substance is not carcinogenic.
- Mutagenicity : Animal testing did not show any mutagenic effects.
Experiments showed mutagenic effects in cultured bacterial cells.
- Reproductive toxicity : No toxicity to reproduction
- Teratogenicity : Animal testing showed effects on embryo-fetal development at levels equal to or above those causing maternal toxicity.

Carcinogenicity

None of the components present in this material at concentrations equal to or greater than 0.1% are listed by IARC, NTP, or OSHA, as a carcinogen.

SECTION 12. ECOLOGICAL INFORMATION**Aquatic Toxicity****Chlorodifluoromethane (HCFC-22)**

- 96 h LC50 : Zebra fish 777 mg/l
- 96 h EC50 : Algae 250 mg/l
- 48 h EC50 : Daphnia magna (Water flea) 433 mg/l

Environmental Fate**Chlorodifluoromethane (HCFC-22)**

- Biodegradability : According to the results of tests of biodegradability this product is not readily biodegradable.

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SECTION 13. DISPOSAL CONSIDERATIONS

Waste disposal methods - Product : Can be used after re-conditioning. Recover, reclaim by distillation, or remove to a permitted waste disposal facility. Comply with applicable Federal, State/Provincial and Local Regulations.

Contaminated packaging : Empty pressure vessels should be returned to the supplier.

SECTION 14. TRANSPORT INFORMATION

DOT	UN number	: 1018
	Proper shipping name	: Chlorodifluoromethane
	Class	: 2.2
	Labelling No.	: 2.2
IATA_C	UN number	: 1018
	Proper shipping name	: Chlorodifluoromethane
	Class	: 2.2
	Labelling No.	: 2.2
IMDG	UN number	: 1018
	Proper shipping name	: CHLORODIFLUOROMETHANE
	Class	: 2.2
	Labelling No.	: 2.2

SECTION 15. REGULATORY INFORMATION

TSCA : On the inventory, or in compliance with the inventory
SARA 313 Regulated Chemical(s) : Chlorodifluoromethane

PA Right to Know Regulated Chemical(s) : Substances on the Pennsylvania Hazardous Substances List present at a concentration of 1% or more (0.01% for Special Hazardous Substances):

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Chlorodifluoromethane

NJ Right to Know
Regulated Chemical(s) : Substances on the New Jersey Workplace Hazardous Substance List present at a concentration of 1% or more (0.1% for substances identified as carcinogens, mutagens or teratogens): Chlorodifluoromethane

California Prop. 65 : Chemicals known to the State of California to cause cancer, birth defects or any other harm: none known

SECTION 16. OTHER INFORMATION

Freon is a registered trademark of E. I. duPont de Nemours & Company, Inc.

® DuPont's registered trademark

Before use read DuPont's safety information. For further information contact the local DuPont office or DuPont's nominated distributors.

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The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Significant change from previous version is denoted with a double bar.

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This SDS adheres to the standards and regulatory requirements of the United States and may not meet the regulatory requirements in other countries.

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name	:	DuPont™ ISCEON® MO99™ refrigerant
Product Grade/Type	:	ASHRAE Refrigerant number designation: R-438A
Tradename/Synonym	:	MO99 ISCEON MO99™ R-438A
MSDS Number	:	130000031356
Product Use	:	Refrigerant
Manufacturer	:	DuPont 1007 Market Street Wilmington, DE 19898
Product Information	:	1-800-441-7515 (outside the U.S. 1-302-774-1000)
Medical Emergency	:	1-800-441-3637 (outside the U.S. 1-302-774-1139)
Transport Emergency	:	CHEMTREC: 1-800-424-9300 (outside the U.S. 1-703-527-3887)

SECTION 2. HAZARDS IDENTIFICATION**Emergency Overview**

Misuse or intentional inhalation abuse may lead to death without warning.
Vapours are heavier than air and can cause suffocation by reducing oxygen available for breathing.
Rapid evaporation of the liquid may cause frostbite.

Potential Health Effects

Skin	:	Contact with liquid or refrigerated gas can cause cold burns and frostbite. May cause skin irritation. May cause: Discomfort, itching, redness, or swelling.
Eyes	:	Contact with liquid or refrigerated gas can cause cold burns and frostbite. May cause eye irritation. May cause: Tearing, redness, or discomfort.


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Inhalation : Misuse or intentional inhalation abuse may cause death without warning symptoms, due to cardiac effects.
Other symptoms potentially related to misuse or inhalation abuse are: Anaesthetic effects, Light-headedness, dizziness, confusion, incoordination, drowsiness, or unconsciousness, irregular heartbeat with a strange sensation in the chest, heart thumping, apprehension, feeling of fainting, dizziness or weakness, Vapours are heavier than air and can cause suffocation by reducing oxygen available for breathing..

Ingestion
2-Methylbutane : Aspiration hazard if swallowed - can enter lungs and cause damage.

Target Organs
Butane : Respiratory Tract
Central nervous system

2-Methylbutane : Central nervous system

Carcinogenicity

None of the components present in this material at concentrations equal to or greater than 0.1% are listed by IARC, NTP, or OSHA, as a carcinogen.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS-No.	Concentration
Pentafluoroethane (HFC-125)	354-33-6	45 %
1,1,1,2-Tetrafluoroethane (HFC-134a)	811-97-2	44.2 %
Difluoromethane (HFC-32)	75-10-5	8.5 %
Butane	106-97-8	1.7 %

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2-Methylbutane	78-78-4	0.6 %
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SECTION 4. FIRST AID MEASURES

- Skin contact : In case of contact, immediately flush skin with plenty of water for at least 15 minutes. Take off all contaminated clothing immediately. Consult a physician. Wash contaminated clothing before re-use. Treat for frostbite if necessary by gently warming affected area.
- Eye contact : In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Consult a physician if necessary.
- Inhalation : Remove from exposure, lie down. Move to fresh air. Keep patient warm and at rest. Artificial respiration and/or oxygen may be necessary. Consult a physician.
- Ingestion : Is not considered a potential route of exposure.
- General advice : Never give anything by mouth to an unconscious person. When symptoms persist or in all cases of doubt seek medical advice.
- Notes to physician : Because of possible disturbances of cardiac rhythm, catecholamine drugs, such as epinephrine, that may be used in situations of emergency life support should be used with special caution.

SECTION 5. FIREFIGHTING MEASURES

- Flammable Properties
- Flash point : does not flash
- Lower explosion limit : Method : None per ASTM E681
- Upper explosion limit : Method : None per ASTM E681

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Fire and Explosion Hazard : Cylinders are equipped with pressure and temperature relief devices, but may still rupture under fire conditions. Decomposition may occur. Contact of welding or soldering torch flame with high concentrations of refrigerant can result in visible changes in the size and colour of the torch flame. This flame effect will only occur in concentrations of product well above the recommended exposure limit. Therefore stop all work and ventilate to disperse refrigerant vapors from the work area before using any open flames.

This substance is not flammable in air at temperatures up to 100 deg. C (212 deg. F) at atmospheric pressure. However, mixtures of this substance with high concentrations of air at elevated pressure and/or temperature can become combustible in the presence of an ignition source. This substance can also become combustible in an oxygen enriched environment (oxygen concentrations greater than that in air). Whether a mixture containing this substance and air, or this substance in an oxygen enriched atmosphere become combustible depends on the inter-relationship of 1) the temperature 2) the pressure, and 3) the proportion of oxygen in the mixture. In general, this substance should not be allowed to exist with air above atmospheric pressure or at high temperatures; or in an oxygen enriched environment. For example this substance should NOT be mixed with air under pressure for leak testing or other purposes. Experimental data have also been reported which indicate combustibility of this substance in the presence of certain concentrations of chlorine.

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Firefighting Instructions : In the event of fire, wear self-contained breathing apparatus. Cool containers / tanks with water spray. Water runoff should be contained and neutralized prior to release.

SECTION 6. ACCIDENTAL RELEASE MEASURES

NOTE: Review FIRE FIGHTING MEASURES and HANDLING (PERSONNEL) sections before proceeding with clean-up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean-up.

Safeguards (Personnel) : Evacuate personnel to safe areas. Ventilate area, especially low or enclosed places where heavy vapours might collect.

Spill Cleanup : Recover free liquid for reuse or reclamation.

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Accidental Release Measures : Prevent material from entering sewers, waterways, or low areas. Avoid open flames and high temperatures. Self-contained breathing apparatus (SCBA) is required if a large release occurs.

SECTION 7. HANDLING AND STORAGE

- Handling (Personnel) : Avoid breathing vapours or mist. Avoid contact with skin, eyes and clothing. Provide sufficient air exchange and/or exhaust in work rooms. For personal protection see section 8.
- Storage : Valve protection caps and valve outlet threaded plugs must remain in place unless container is secured with valve outlet piped to use point. Do not drag, slide or roll cylinders. Use a suitable hand truck for cylinder movement. Use a pressure reducing regulator when connecting cylinder to lower pressure (>3000 psig) piping or systems. Never attempt to lift cylinder by its cap. Use a check valve or trap in the discharge line to prevent hazardous back flow into the cylinder. Cylinders should be stored upright and firmly secured to prevent falling or being knocked over.
Separate full containers from empty containers. Keep at temperature not exceeding 52 °C. Do not store near combustible materials. Avoid area where salt or other corrosive materials are present.
- Storage temperature : < 52 °C (< 126 °F)

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

- Engineering controls : Normal ventilation for standard manufacturing procedures is generally adequate. Local exhaust should be used when large amounts are released. Mechanical ventilation should be used in low or enclosed places. Refrigerant Concentration monitors may be necessary to determine vapor concentrations in work areas prior to use of torches or other open flames, or if employees are entering enclosed areas.
- Personal protective equipment
Respiratory protection : Under normal manufacturing conditions, no respiratory protection is required when using this product.

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- Hand protection : Additional protection: Impervious gloves
- Eye protection : Wear safety glasses with side shields. Additionally wear a face shield where the possibility exists for face contact due to splashing, spraying or airborne contact with this material.
- Protective measures : Self-contained breathing apparatus (SCBA) is required if a large release occurs.

Exposure Guidelines

Exposure Limit Values

Pentafluoroethane (HFC-125)

AEL *	(DUPONT)	1,000 ppm	8 & 12 hr. TWA
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1,1,1,2-Tetrafluoroethane (HFC-134a)

AEL *	(DUPONT)	1,000 ppm	8 & 12 hr. TWA
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Difluoromethane (HFC-32)

AEL *	(DUPONT)	1,000 ppm	8 & 12 hr. TWA
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Butane

PEL:	(OSHA)	800 ppm	1,900 mg/m ³	8 hr. TWA
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TLV	(ACGIH)	1,000 ppm	TWA
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2-Methylbutane

TLV	(ACGIH)	600 ppm	TWA
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* AEL is DuPont's Acceptable Exposure Limit. Where governmentally imposed occupational exposure limits which are lower than the AEL are in effect, such limits shall take precedence.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

- Form : Liquefied gas
- Color : colourless
- Odor : slight, ether-like
- pH : neutral

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Melting point/range	: Not available for this mixture.
Boiling point	: -42.3 °C (-44.1 °F)
% Volatile	: 100 %
Vapour Pressure	: 11,171 hPa at 25 °C (77 °F)
Specific gravity	: 1.15 at 25 °C (77 °F)
Vapour density	: 3.5 at 25°C (77°F) and 1013 hPa (Air=1.0)

SECTION 10. STABILITY AND REACTIVITY

Stability	: Stable under recommended storage conditions.
Conditions to avoid	: The product is not flammable in air under ambient conditions of temperature and pressure. When pressurised with air or oxygen, the mixture may become flammable. Certain mixtures of HCFCs or HFCs with chlorine may become flammable or reactive under certain conditions.
Incompatibility	: Alkali metals Alkaline earth metals, Powdered metals, Powdered metal salts
Hazardous decomposition products	: Decomposition products are hazardous., This material can be decomposed by high temperatures (open flames, glowing metal surfaces, etc.) forming hydrofluoric acid and possibly carbonyl fluoride., These materials are toxic and irritating., Avoid contact with decomposition products
Hazardous reactions	: Polymerization will not occur.

SECTION 11. TOXICOLOGICAL INFORMATION

Pentafluoroethane (HFC-125)

Dermal	: not applicable
Oral	: not applicable
Inhalation 4 h LC50	: > 800000 ppm , rat
Inhalation Low Observed Adverse Effect Concentration (LOAEC)	: 100000 ppm , dog Cardiac sensitization
Skin irritation	: No skin irritation, Not tested on animals

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	Not expected to cause skin irritation based on expert review of the properties of the substance.
Eye irritation	: No eye irritation, Not tested on animals Not expected to cause eye irritation based on expert review of the properties of the substance.
Skin sensitization	: Does not cause skin sensitization., Not tested on animals Not expected to cause sensitization based on expert review of the properties of the substance. There are no reports of human respiratory sensitization.
Repeated dose toxicity	: Inhalation rat No toxicologically significant effects were found.
Carcinogenicity	: Overall weight of evidence indicates that the substance is not carcinogenic.
Mutagenicity	: Did not cause genetic damage in animals. Did not cause genetic damage in cultured mammalian cells. Did not cause genetic damage in cultured bacterial cells.
Reproductive toxicity	: Evidence suggests the substance is not a reproductive toxin in animals. Information given is based on data obtained from similar substances.
Teratogenicity	: Animal testing showed no developmental toxicity.
Further information	: Cardiac sensitisation threshold limit : 490000 mg/m3
1,1,1,2-Tetrafluoroethane (HFC-134a)	
Dermal	: not applicable
Oral	: not applicable
Inhalation 4 h LC50	: 567000 ppm , rat
Inhalation Low Observed Adverse Effect Concentration (LOAEC)	: 75000 ppm , dog Cardiac sensitization

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Skin irritation	: slight irritation, rabbit Not expected to cause skin irritation based on expert review of the properties of the substance. No skin irritation, human
Eye irritation	: slight irritation, rabbit Not expected to cause eye irritation based on expert review of the properties of the substance. No eye irritation, human
Skin sensitization	: Did not cause sensitization on laboratory animals., guinea pig Not expected to cause sensitization based on expert review of the properties of the substance. Did not cause sensitization on laboratory animals. There are no reports of human respiratory sensitization.
Repeated dose toxicity	: Inhalation rat No toxicologically significant effects were found.
Carcinogenicity	: Overall weight of evidence indicates that the substance is not carcinogenic. An increased incidence of benign tumours was observed in laboratory animals.
Mutagenicity	: Did not cause genetic damage in animals. Did not cause genetic damage in cultured mammalian cells. Did not cause genetic damage in cultured bacterial cells.
Reproductive toxicity	: Animal testing showed no reproductive toxicity.
Teratogenicity	: Animal testing showed effects on embryo-fetal development at levels equal to or above those causing maternal toxicity.
Further information	: Cardiac sensitisation threshold limit : 312975 mg/m3
Difluoromethane (HFC-32) Dermal	: not applicable

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Oral	:	not applicable
Inhalation 4 h LC50	:	> 520000 ppm , rat
Inhalation Low Observed Adverse Effect Concentration (LOAEC)	:	> 300000 ppm , dog
Skin irritation	:	No skin irritation, Not tested on animals Not expected to cause skin irritation based on expert review of the properties of the substance.
Eye irritation	:	No eye irritation, Not tested on animals Not expected to cause eye irritation based on expert review of the properties of the substance.
Skin sensitization	:	Not tested on animals Not expected to cause sensitization based on expert review of the properties of the substance. There are no reports of human respiratory sensitization.
Repeated dose toxicity	:	Inhalation rat No toxicologically significant effects were found.
Carcinogenicity	:	Overall weight of evidence indicates that the substance is not carcinogenic.
Mutagenicity	:	Did not cause genetic damage in animals. Did not cause genetic damage in cultured mammalian cells. Did not cause genetic damage in cultured bacterial cells.
Reproductive toxicity	:	Animal testing showed no reproductive toxicity. Information given is based on data obtained from similar substances.
Teratogenicity	:	Animal testing showed no developmental toxicity.
Further information	:	Cardiac sensitisation threshold limit : > 638000 mg/m3
Butane		
Dermal	:	not applicable

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Oral	:	not applicable
Inhalation 4 h LC50	:	277018 ppm , rat Target Organs: Respiratory Tract, Central nervous system Irritating to respiratory system. Central nervous system depression Narcosis
Inhalation Low Observed Adverse Effect Concentration (LOAEC) Skin irritation	:	150000 ppm , dog Cardiac sensitization No skin irritation, Not tested on animals Not expected to cause skin irritation based on expert review of the properties of the substance.
Eye irritation	:	No eye irritation, Not tested on animals Not expected to cause eye irritation based on expert review of the properties of the substance.
Skin sensitization	:	Not tested on animals There are no reports of human skin sensitization. Not expected to cause sensitization based on expert review of the properties of the substance.
Repeated dose toxicity	:	Inhalation multiple species No toxicologically significant effects were found.
Mutagenicity	:	Did not cause genetic damage in animals. Did not cause genetic damage in cultured bacterial cells.
Further information	:	Cardiac sensitisation threshold limit : 356294 mg/m3

2-Methylbutane

Oral LD50	:	> 2,000 mg/kg , rat
Inhalation 4 h LC50	:	1,281.9 mg/l , rat Target Organs: Central nervous system Central nervous system depression Narcosis
Inhalation 4 h LC50	:	70000 ppm , rat

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Inhalation Low Observed Adverse Effect Concentration (LOAEC)	: 250000 ppm , dog Cardiac sensitization
Skin irritation	: slight irritation, human
Eye irritation	: No eye irritation, rabbit
Skin sensitization	: Did not cause sensitization on laboratory animals., guinea pig
Repeated dose toxicity	: Inhalation rat No toxicologically significant effects were found.
Mutagenicity	: Animal testing did not show any mutagenic effects. Tests on bacterial or mammalian cell cultures did not show mutagenic effects.
Reproductive toxicity	: Animal testing showed no reproductive toxicity.
Teratogenicity	: Animal testing showed no developmental toxicity.
Further information	: Cardiac sensitisation threshold limit : 737680 mg/m3

SECTION 12. ECOLOGICAL INFORMATION

Aquatic Toxicity
Pentafluoroethane (HFC-125)
96 h LC50

: Danio rerio (zebra fish) > 200 mg/l
Information given is based on data obtained from similar substances.

96 h LC50

: Oncorhynchus mykiss (rainbow trout) 450 mg/l
Information given is based on data obtained from similar substances.

96 h EC50

: Algae 142 mg/l
Information given is based on data obtained from similar substances.

48 h EC50

: Daphnia magna (Water flea) > 200 mg/l


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Information given is based on data obtained from similar substances.

1,1,1,2-Tetrafluoroethane (HFC-134a)

96 h LC50 : Oncorhynchus mykiss (rainbow trout) 450 mg/l

72 h EC50 : Algae > 118 mg/l

Information given is based on data obtained from similar substances.

48 h EC50 : Daphnia magna (Water flea) 980 mg/l

Difluoromethane (HFC-32)

96 h LC50 : Fish 1,507 mg/l

96 h EC50 : Algae 142 mg/l

48 h EC50 : Daphnia 652 mg/l

Butane

96 h LC50 : Fish (unspecified species) > 1,000 mg/l

2-Methylbutane

96 h LC50 : Oncorhynchus mykiss (rainbow trout) 4.26 mg/l

72 h ErC50 : Pseudokirchneriella subcapitata (green algae) 25.12 mg/l

72 h ErC50 : Scenedesmus capricornutum (fresh water algae) 10.7 mg/l

72 h EbC50 : Scenedesmus capricornutum (fresh water algae) 7.51 mg/l

48 h EC50 : Daphnia magna (Water flea) 2.3 mg/l

28 d : NOEC Oncorhynchus mykiss (rainbow trout) 7.6 mg/l

21 d : NOEC Daphnia magna (Water flea) 13.29 mg/l

Environmental Fate

Butane

Biodegradability : 100 %
Readily biodegradable.

2-Methylbutane

Biodegradability : 71.43 %

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Readily biodegradable.

Bioaccumulation : Bioconcentration factor (BCF) : 171
Bioaccumulation is unlikely.

SECTION 13. DISPOSAL CONSIDERATIONS

Waste Disposal : Can be used after re-conditioning. Recover by distillation or remove to a permitted waste disposal facility. Comply with applicable Federal, State/Provincial and Local Regulations.

Environmental Hazards : Empty pressure vessels should be returned to the supplier.

SECTION 14. TRANSPORT INFORMATION

DOT	UN number	: 1078
	Proper shipping name	: Refrigerant gas, n.o.s. (1,1,1,2-Tetrafluoroethane, Pentafluoroethane)
	Class	: 2.2
	Labelling No.	: 2.2
IATA_C	UN number	: 1078
	Proper shipping name	: Refrigerant gas, n.o.s. (1,1,1,2-Tetrafluoroethane, Pentafluoroethane)
	Class	: 2.2
	Labelling No.	: 2.2
IMDG	UN number	: 1078
	Proper shipping name	: Refrigerant gas, n.o.s. (1,1,1,2-Tetrafluoroethane, Pentafluoroethane)
	Class	: 2.2
	Labelling No.	: 2.2

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SECTION 15. REGULATORY INFORMATION

SARA 313 Regulated Chemical(s)	: SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.
California Prop. 65	: Chemicals known to the State of California to cause cancer, birth defects or any other harm: none known
PA Right to Know Regulated Chemical(s)	: Substances on the Pennsylvania Hazardous Substances List present at a concentration of 1% or more (0.01% for Special Hazardous Substances): Butane , Difluoromethane
NJ Right to Know Regulated Chemical(s)	: Substances on the New Jersey Workplace Hazardous Substance List present at a concentration of 1% or more (0.1% for substances identified as carcinogens, mutagens or teratogens): Butane , Difluoromethane

SECTION 16. OTHER INFORMATION

HMIS

Health	:	1
Flammability	:	0
Reactivity/Physical hazard	:	1
PPE	:	Personal Protection rating to be supplied by user depending on use conditions.

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Before use read DuPont's safety information.

For further information contact the local DuPont office or DuPont's nominated distributors.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination



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with any other materials or in any process, unless specified in the text.

Significant change from previous version is denoted with a double bar.

**DuPont™ SUVA® 404A refrigerant**

Version 2.4

Revision Date 06/06/2012

Ref. 130000000494

This SDS adheres to the standards and regulatory requirements of the United States and may not meet the regulatory requirements in other countries.

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name	:	DuPont™ SUVA® 404A refrigerant
Product Grade/Type	:	ASHRAE Refrigerant number designation: R-404A
Tradename/Synonym	:	HP62 404A
MSDS Number	:	130000000494
Product Use	:	Refrigerant
Manufacturer	:	DuPont 1007 Market Street Wilmington, DE 19898
Product Information	:	1-800-441-7515 (outside the U.S. 1-302-774-1000)
Medical Emergency	:	1-800-441-3637 (outside the U.S. 1-302-774-1139)
Transport Emergency	:	CHEMTREC: 1-800-424-9300 (outside the U.S. 1-703-527-3887)

SECTION 2. HAZARDS IDENTIFICATION**Emergency Overview**

Misuse or intentional inhalation abuse may lead to death without warning.
Vapours are heavier than air and can cause suffocation by reducing oxygen available for breathing.
Rapid evaporation of the liquid may cause frostbite.

Potential Health Effects

Skin	:	Contact with liquid or refrigerated gas can cause cold burns and frostbite. May cause skin irritation. May cause: Discomfort, itching, redness, or swelling.
Eyes	:	Contact with liquid or refrigerated gas can cause cold burns and frostbite. May cause eye irritation. May cause: tearing, Redness, Discomfort.

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Inhalation : Misuse or intentional inhalation abuse may cause death without warning symptoms, due to cardiac effects.
Other symptoms potentially related to misuse or inhalation abuse are:
Anaesthetic effects, Light-headedness, dizziness, confusion, incoordination, drowsiness, or unconsciousness, irregular heartbeat with a strange sensation in the chest, heart thumping, apprehension, feeling of fainting, dizziness or weakness.
Vapours are heavier than air and can cause suffocation by reducing oxygen available for breathing.

Carcinogenicity

None of the components present in this material at concentrations equal to or greater than 0.1% are listed by IARC, NTP, or OSHA, as a carcinogen.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS-No.	Concentration
1,1,1-Trifluoroethane (HFC-143a)	420-46-2	52 %
Pentafluoroethane (HFC-125)	354-33-6	44 %
1,1,1,2-Tetrafluoroethane (HFC-134a)	811-97-2	4 %

SECTION 4. FIRST AID MEASURES

Skin contact : Flush area with lukewarm water. Do not use hot water. If frostbite has occurred, call a physician.

Eye contact : In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Call a physician.

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Inhalation	: Remove from exposure, lie down. Artificial respiration and/or oxygen may be necessary. Call a physician.
Ingestion	: Is not considered a potential route of exposure.
General advice	: Never give anything by mouth to an unconscious person. When symptoms persist or in all cases of doubt seek medical advice.
Notes to physician	: Because of possible disturbances of cardiac rhythm, catecholamine drugs, such as epinephrine, that may be used in situations of emergency life support should be used with special caution.

SECTION 5. FIREFIGHTING MEASURES

Flammable Properties	
Flash point	: does not flash
Lower explosion limit	: Method : None per ASTM E681
Upper explosion limit	: Method : None per ASTM E681
Fire and Explosion Hazard	: Cylinders are equipped with pressure and temperature relief devices, but may still rupture under fire conditions. Decomposition may occur. Contact of welding or soldering torch flame with high concentrations of refrigerant can result in visible changes in the size and colour of the torch flame. This flame effect will only occur in concentrations of product well above the recommended exposure limit. Therefore stop all work and ventilate to disperse refrigerant vapors from the work area before using any open flames.

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This substance is not flammable in air at temperatures up to 100 deg. C (212 deg. F) at atmospheric pressure. However, mixtures of this substance with high concentrations of air at elevated pressure and/or temperature can become combustible in the presence of an ignition source. This substance can also become combustible in an oxygen enriched environment (oxygen concentrations greater than that in air). Whether a mixture containing this substance and air, or this substance in an oxygen enriched atmosphere become combustible depends on the inter-relationship of 1) the temperature 2) the pressure, and 3) the proportion of oxygen in the mixture. In general, this substance should not be allowed to exist with air above atmospheric pressure or at high temperatures; or in an oxygen enriched environment. For example this substance should NOT be mixed with air under pressure for leak testing or other purposes. Experimental data have also been reported which indicate combustibility of this substance in the presence of certain concentrations of chlorine.

Suitable extinguishing media : As appropriate for combustibles in area. Extinguishant for other burning material in area is sufficient to stop burning.

Firefighting Instructions : Use water spray or fog to protect the fire fighters and to cool container. Self-contained breathing apparatus (SCBA) is required if containers rupture and contents are released under fire conditions.
Water runoff should be contained and neutralized prior to release.

SECTION 6. ACCIDENTAL RELEASE MEASURES

NOTE: Review FIRE FIGHTING MEASURES and HANDLING (PERSONNEL) sections before proceeding with clean-up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean-up.

Safeguards (Personnel) : Ventilate area, especially low or enclosed places where heavy vapours might collect.

Accidental Release Measures : Avoid open flames and high temperatures. Self-contained breathing apparatus (SCBA) is required if a large release occurs.

SECTION 7. HANDLING AND STORAGE

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- Handling (Personnel)** : Avoid breathing vapours or mist. Avoid contact with skin, eyes and clothing. Provide sufficient air exchange and/or exhaust in work rooms. For personal protection see section 8.
Handle in accordance with good industrial hygiene and safety practice.
- Storage** : Valve protection caps and valve outlet threaded plugs must remain in place unless container is secured with valve outlet piped to use point. Do not drag, slide or roll cylinders. Use a suitable hand truck for cylinder movement. Use a pressure reducing regulator when connecting cylinder to lower pressure (>3000 psig) piping or systems. Never attempt to lift cylinder by its cap. Use a check valve or trap in the discharge line to prevent hazardous back flow into the cylinder. Cylinders should be stored upright and firmly secured to prevent falling or being knocked over.
Separate full containers from empty containers. Keep at temperature not exceeding 52 °C. Do not store near combustible materials. Avoid area where salt or other corrosive materials are present.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

- Engineering controls** : Local exhaust should be used when large amounts are released. Mechanical ventilation should be used in low or enclosed places. Refrigerant Concentration monitors may be necessary to determine vapor concentrations in work areas prior to use of torches or other open flames, or if employees are entering enclosed areas.
- Personal protective equipment**
- Respiratory protection** : Under normal manufacturing conditions, no respiratory protection is required when using this product.
- Hand protection** : Material: Impervious gloves
- Eye protection** : Wear safety glasses with side shields. Additionally wear a face shield where the possibility exists for face contact due to splashing, spraying or airborne contact with this material.
- Protective measures** : Self-contained breathing apparatus (SCBA) is required if a large release occurs.

Exposure Guidelines

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Exposure Limit Values

1,1,1-Trifluoroethane

AEL * (DUPONT) 1,000 ppm 8 & 12 hr. TWA

Pentafluoroethane

AEL * (DUPONT) 1,000 ppm 8 & 12 hr. TWA

1,1,1,2-Tetrafluoroethane

AEL * (DUPONT) 1,000 ppm 8 & 12 hr. TWA

* AEL is DuPont's Acceptable Exposure Limit. Where governmentally imposed occupational exposure limits which are lower than the AEL are in effect, such limits shall take precedence.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Form	: Liquefied gas
Color	: colourless
Odor	: slight, ether-like
Melting point	: Not available for this mixture.
Boiling point	: -46.2 °C (-51.2 °F)
% Volatile	: 100 %
Vapour Pressure	: 12,546 hPa at 25 °C (77 °F)
Specific gravity	: 1.05 at 25 °C (77 °F)
Water solubility	: not determined
Vapour density	: 3.4 at 25°C (77°F) and 1013 hPa (Air=1.0)
Evaporation rate	: > 1 (CCL4=1.0)

SECTION 10. STABILITY AND REACTIVITY

Stability	: Stable at normal temperatures and storage conditions.
Conditions to avoid	: Avoid open flames and high temperatures.

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Incompatibility	: Alkali metals Alkaline earth metals, Powdered metals, Powdered metal salts
Hazardous decomposition products	: Decomposition products are hazardous., This material can be decomposed by high temperatures (open flames, glowing metal surfaces, etc.) forming hydrofluoric acid and possibly carbonyl fluoride., These materials are toxic and irritating., Avoid contact with decomposition products
Hazardous reactions	: Polymerization will not occur.

SECTION 11. TOXICOLOGICAL INFORMATION

1,1,1-Trifluoroethane (HFC-143a)

Dermal	: not applicable
Oral	: not applicable
Inhalation 4 h LC50	: > 540000 ppm , rat Anaesthetic effects
Inhalation 4 h LC50	: 591000 ppm , rat
Inhalation Low Observed Adverse Effect Concentration (LOAEC)	: 300000 ppm , dog Cardiac sensitization
Skin irritation	: No skin irritation, Not tested on animals Not expected to cause skin irritation based on expert review of the properties of the substance.
Eye irritation	: No eye irritation, Not tested on animals Not expected to cause eye irritation based on expert review of the properties of the substance.
Skin sensitization	: Not tested on animals Not expected to cause sensitization based on expert review of the properties of the substance. There are no reports of human respiratory sensitization.
Repeated dose toxicity	: Inhalation rat

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No toxicologically significant effects were found.

- Carcinogenicity : Animal testing did not show any carcinogenic effects.
- Mutagenicity : Did not cause genetic damage in animals.
Did not cause genetic damage in cultured mammalian cells.
Did not cause genetic damage in cultured bacterial cells.
- Teratogenicity : Animal testing showed no developmental toxicity.
- Further information : Cardiac sensitisation threshold limit : 1040000 mg/m3

Pentafluoroethane (HFC-125)

- Dermal : not applicable
- Oral : not applicable
- Inhalation 4 h LC50 : > 800000 ppm , rat
- Inhalation Low Observed Adverse Effect Concentration (LOAEC) : 100000 ppm , dog
Cardiac sensitization
- Skin irritation : No skin irritation, Not tested on animals
Not expected to cause skin irritation based on expert review of the properties of the substance.
- Eye irritation : No eye irritation, Not tested on animals
Not expected to cause eye irritation based on expert review of the properties of the substance.
- Skin sensitization : Does not cause skin sensitization., Not tested on animals
Not expected to cause sensitization based on expert review of the properties of the substance.
- There are no reports of human respiratory sensitization.
- Repeated dose toxicity : Inhalation
rat
- No toxicologically significant effects were found.
- Carcinogenicity : Overall weight of evidence indicates that the substance is not carcinogenic.

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- Mutagenicity : Did not cause genetic damage in animals.
Did not cause genetic damage in cultured mammalian cells.
Did not cause genetic damage in cultured bacterial cells.
- Reproductive toxicity : Evidence suggests the substance is not a reproductive toxin in animals.
Information given is based on data obtained from similar substances.
- Teratogenicity : Animal testing showed no developmental toxicity.
- Further information : Cardiac sensitisation threshold limit : 490000 mg/m3

1,1,1,2-Tetrafluoroethane (HFC-134a)

- Dermal : not applicable
- Oral : not applicable
- Inhalation 4 h LC50 : 567000 ppm , rat
- Inhalation Low Observed Adverse Effect Concentration (LOAEC) : 75000 ppm , dog
Cardiac sensitization
- Skin irritation : slight irritation, rabbit
Not expected to cause skin irritation based on expert review of the properties of the substance.

No skin irritation, human
- Eye irritation : slight irritation, rabbit
Not expected to cause eye irritation based on expert review of the properties of the substance.

No eye irritation, human
- Skin sensitization : Did not cause sensitization on laboratory animals., guinea pig
Not expected to cause sensitization based on expert review of the properties of the substance.

Did not cause sensitization on laboratory animals. There are no reports of human respiratory sensitization.
- Repeated dose toxicity : Inhalation


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rat

No toxicologically significant effects were found.

- | | | |
|-----------------------|---|--|
| Carcinogenicity | : | Overall weight of evidence indicates that the substance is not carcinogenic.
An increased incidence of benign tumours was observed in laboratory animals. |
| Mutagenicity | : | Did not cause genetic damage in animals.
Did not cause genetic damage in cultured mammalian cells.
Did not cause genetic damage in cultured bacterial cells. |
| Reproductive toxicity | : | Animal testing showed no reproductive toxicity. |
| Teratogenicity | : | Animal testing showed effects on embryo-fetal development at levels equal to or above those causing maternal toxicity. |
| Further information | : | Cardiac sensitisation threshold limit : 312975 mg/m3 |

SECTION 12. ECOLOGICAL INFORMATION
Aquatic Toxicity

1,1,1-Trifluoroethane (HFC-143a)

96 h LC50

: Oncorhynchus mykiss (rainbow trout) > 100 mg/l

: not applicable

48 h EC50

: Daphnia 300 mg/l

Pentafluoroethane (HFC-125)

96 h LC50

: Danio rerio (zebra fish) > 200 mg/l

Information given is based on data obtained from similar substances.

96 h LC50

: Oncorhynchus mykiss (rainbow trout) 450 mg/l

Information given is based on data obtained from similar substances.

96 h EC50

: Algae 142 mg/l

Information given is based on data obtained from similar substances.

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48 h EC50 : Daphnia magna (Water flea) > 200 mg/l
Information given is based on data obtained from similar substances.

1,1,1,2-Tetrafluoroethane (HFC-134a)

96 h LC50 : Oncorhynchus mykiss (rainbow trout) 450 mg/l

72 h EC50 : Algae > 118 mg/l
Information given is based on data obtained from similar substances.

48 h EC50 : Daphnia magna (Water flea) 980 mg/l

Environmental Fate

1,1,1-Trifluoroethane (HFC-143a)

Biodegradability : Not readily biodegradable.

SECTION 13. DISPOSAL CONSIDERATIONS

Waste Disposal : Can be used after re-conditioning. Recover by distillation or remove to a permitted waste disposal facility. Comply with applicable Federal, State/Provincial and Local Regulations.

Environmental Hazards : Empty pressure vessels should be returned to the supplier.

SECTION 14. TRANSPORT INFORMATION

DOT UN number : 3337

Proper shipping name : Refrigerant gas R 404A

Class : 2.2

Labelling No. : 2.2

IATA_C UN number : 3337

Proper shipping name : Refrigerant gas R 404A

Class : 2.2

Labelling No. : 2.2

IMDG UN number : 3337

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Proper shipping name : Refrigerant gas R 404A
Class : 2.2
Labelling No. : 2.2

SECTION 15. REGULATORY INFORMATION

SARA 313 Regulated Chemical(s) : SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

California Prop. 65 : Chemicals known to the State of California to cause cancer, birth defects or any other harm: none known

SECTION 16. OTHER INFORMATION**HMIS**

Health : 1
Flammability : 0
Reactivity/Physical hazard : 1
PPE : Personal Protection rating to be supplied by user depending on use conditions.

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Before use read DuPont's safety information.

For further information contact the local DuPont office or DuPont's nominated distributors.

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Significant change from previous version is denoted with a double bar.



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**DuPont™ SUVA® 410A Refrigerant**

Version 2.3

Revision Date 09/12/2011

Ref. 130000050990

This SDS adheres to the standards and regulatory requirements of the United States and may not meet the regulatory requirements in other countries.

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name	:	DuPont™ SUVA® 410A Refrigerant
Product Grade/Type	:	ASHRAE Refrigerant number designation: R-410A
Tradename/Synonym	:	SUVA® 9100 R-410A Suva® R-410A 410A HFC 410A
MSDS Number	:	130000050990
Product Use	:	Refrigerant
Manufacturer	:	DuPont 1007 Market Street Wilmington, DE 19898
Product Information	:	1-800-441-7515 (outside the U.S. 1-302-774-1000)
Medical Emergency	:	1-800-441-3637 (outside the U.S. 1-302-774-1139)
Transport Emergency	:	CHEMTREC: 1-800-424-9300 (outside the U.S. 1-703-527-3887)

SECTION 2. HAZARDS IDENTIFICATION**Emergency Overview**

Misuse or intentional inhalation abuse may lead to death without warning.

Vapours are heavier than air and can cause suffocation by reducing oxygen available for breathing.

Rapid evaporation of the liquid may cause frostbite.

Potential Health Effects

Skin : Contact with liquid or refrigerated gas can cause cold burns and frostbite.

Eyes : Contact with liquid or refrigerated gas can cause cold burns and frostbite.

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Version 2.3

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Ref. 130000050990

Inhalation : Misuse or intentional inhalation abuse may cause death without warning symptoms, due to cardiac effects.
Other symptoms potentially related to misuse or inhalation abuse are: Anaesthetic effects, Light-headedness, dizziness, confusion, incoordination, drowsiness, or unconsciousness, irregular heartbeat with a strange sensation in the chest, heart thumping, apprehension, feeling of fainting, dizziness or weakness.
Vapours are heavier than air and can cause suffocation by reducing oxygen available for breathing.

Carcinogenicity

None of the components present in this material at concentrations equal to or greater than 0.1% are listed by IARC, NTP, or OSHA, as a carcinogen.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS-No.	Concentration
Pentafluoroethane (HFC-125)	354-33-6	50 %
Difluoromethane (R-32)	75-10-5	50 %

SECTION 4. FIRST AID MEASURES

Skin contact : In case of contact, immediately flush skin with plenty of water for at least 15 minutes. Take off all contaminated clothing immediately. Consult a physician. Wash contaminated clothing before re-use. Treat for frostbite if necessary by gently warming affected area.

Eye contact : In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Consult a physician if necessary.



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Inhalation	: Remove from exposure, lie down. Move to fresh air. Keep patient warm and at rest. Artificial respiration and/or oxygen may be necessary. Consult a physician.
Ingestion	: Is not considered a potential route of exposure.
General advice	: Never give anything by mouth to an unconscious person. When symptoms persist or in all cases of doubt seek medical advice.
Notes to physician	: Because of possible disturbances of cardiac rhythm, catecholamine drugs, such as epinephrine, that may be used in situations of emergency life support should be used with special caution.

SECTION 5. FIREFIGHTING MEASURES

Flammable Properties	
Flash point	: does not flash
Lower explosion limit	: Method : None per ASTM E681
Upper explosion limit	: Method : None per ASTM E681

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Revision Date 09/12/2011

Ref. 130000050990

- Fire and Explosion Hazard** : Cylinders are equipped with pressure and temperature relief devices, but may still rupture under fire conditions. Decomposition may occur. Contact of welding or soldering torch flame with high concentrations of refrigerant can result in visible changes in the size and colour of the torch flame. This flame effect will only occur in concentrations of product well above the recommended exposure limit. Therefore stop all work and ventilate to disperse refrigerant vapors from the work area before using any open flames. This substance is not flammable in air at temperatures up to 100 deg. C (212 deg. F) at atmospheric pressure. However, mixtures of this substance with high concentrations of air at elevated pressure and/or temperature can become combustible in the presence of an ignition source. This substance can also become combustible in an oxygen enriched environment (oxygen concentrations greater than that in air). Whether a mixture containing this substance and air, or this substance in an oxygen enriched atmosphere become combustible depends on the inter-relationship of 1) the temperature 2) the pressure, and 3) the proportion of oxygen in the mixture. In general, this substance should not be allowed to exist with air above atmospheric pressure or at high temperatures; or in an oxygen enriched environment. For example this substance should NOT be mixed with air under pressure for leak testing or other purposes. Experimental data have also been reported which indicate combustibility of this substance in the presence of certain concentrations of chlorine.
- Suitable extinguishing media** : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- Firefighting Instructions** : Cool containers / tanks with water spray. Self-contained breathing apparatus (SCBA) is required if containers rupture and contents are released under fire conditions.
Water runoff should be contained and neutralized prior to release.

SECTION 6. ACCIDENTAL RELEASE MEASURES

NOTE: Review FIRE FIGHTING MEASURES and HANDLING (PERSONNEL) sections before proceeding with clean-up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean-up.

- Safeguards (Personnel)** : Evacuate personnel to safe areas. Ventilate area, especially low or enclosed places where heavy vapours might collect.
- Accidental Release Measures** : Avoid open flames and high temperatures. Self-contained breathing apparatus (SCBA) is required if a large release occurs.

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Version 2.3

Revision Date 09/12/2011

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SECTION 7. HANDLING AND STORAGE

- Handling (Personnel) : Avoid breathing vapours or mist. Avoid contact with skin, eyes and clothing. Provide sufficient air exchange and/or exhaust in work rooms. For personal protection see section 8.
- Handling (Physical Aspects) : The product should not be mixed with air for leak testing or used with air for any other purpose above atmospheric pressure. Contact with chlorine or other strong oxidizing agents should also be avoided.
- Storage : Valve protection caps and valve outlet threaded plugs must remain in place unless container is secured with valve outlet piped to use point. Do not drag, slide or roll cylinders. Use a suitable hand truck for cylinder movement. Use a pressure reducing regulator when connecting cylinder to lower pressure (>3000 psig) piping or systems. Never attempt to lift cylinder by its cap. Use a check valve or trap in the discharge line to prevent hazardous back flow into the cylinder. Cylinders should be stored upright and firmly secured to prevent falling or being knocked over.
Separate full containers from empty containers. Keep at temperature not exceeding 52 °C. Do not store near combustible materials. Avoid area where salt or other corrosive materials are present.
- Storage temperature : < 52 °C (< 126 °F)

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

- Engineering controls : Refrigerant concentration monitors may be necessary to determine vapour concentrations in work areas prior to use of torches or other open flames, or if employees are entering enclosed areas. Use sufficient ventilation to keep employee exposure below recommended limits. Local exhaust should be used when large amounts are released. Mechanical ventilation should be used in low or enclosed places.
- Personal protective equipment
Respiratory protection : Under normal manufacturing conditions, no respiratory protection is required when using this product.

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- Hand protection : Additional protection: Impervious gloves
- Eye protection : Wear safety glasses with side shields. Additionally wear a face shield where the possibility exists for face contact due to splashing, spraying or airborne contact with this material.
- Protective measures : Self-contained breathing apparatus (SCBA) is required if a large release occurs.

Exposure Guidelines

Exposure Limit Values

Pentafluoroethane

AEL * (DUPONT) 1,000 ppm 8 & 12 hr. TWA

Difluoromethane

AEL * (DUPONT) 1,000 ppm 8 & 12 hr. TWA

* AEL is DuPont's Acceptable Exposure Limit. Where governmentally imposed occupational exposure limits which are lower than the AEL are in effect, such limits shall take precedence.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

- Form : Liquefied gas
- Color : colourless
- Odor : slight, ether-like
- pH : neutral
- Boiling point : -51.4 °C (-60.5 °F)
- % Volatile : 100 %
- Vapour Pressure : 16,574 hPa at 25 °C (77 °F)
- Specific gravity : 1.06 at 25 °C (77 °F)
- Water solubility : not determined
- Vapour density : 2.5 at 25°C (77°F) and 1013 hPa (Air=1.0)
- Evaporation rate : > 1
(CCL4=1.0)

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SECTION 10. STABILITY AND REACTIVITY

- Stability : Stable at normal temperatures and storage conditions.
- Conditions to avoid : Avoid open flames and high temperatures.
- Incompatibility : Alkali metals Alkaline earth metals, Powdered metals, Powdered metal salts
- Hazardous decomposition products : Decomposition products are hazardous., This material can be decomposed by high temperatures (open flames, glowing metal surfaces, etc.) forming hydrofluoric acid and possibly carbonyl fluoride., These materials are toxic and irritating., Avoid contact with decomposition products
- Hazardous reactions : Polymerization will not occur.

SECTION 11. TOXICOLOGICAL INFORMATION

Pentafluoroethane (HFC-125)

- Dermal : not applicable
- Oral : not applicable
- Inhalation 4 h LC50 : > 800000 ppm , rat
- Inhalation : dog
Cardiac sensitization
- Skin irritation : No skin irritation, Not tested on animals
Not expected to cause skin irritation based on expert review of the properties of the substance.
- Eye irritation : No eye irritation, Not tested on animals
Not expected to cause eye irritation based on expert review of the properties of the substance.
- Skin sensitization : Does not cause skin sensitization., Not tested on animals
Not expected to cause sensitization based on expert review of the properties of the substance.

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There are no reports of human respiratory sensitization.

Repeated dose toxicity	: Inhalation rat No toxicologically significant effects were found.
Carcinogenicity	: Overall weight of evidence indicates that the substance is not carcinogenic.
Mutagenicity	: Did not cause genetic damage in animals. Did not cause genetic damage in cultured mammalian cells. Did not cause genetic damage in cultured bacterial cells.
Reproductive toxicity	: Evidence suggests the substance is not a reproductive toxin in animals. Information given is based on data obtained from similar substances.
Teratogenicity	: Animal testing showed no developmental toxicity.
Further information	: Cardiac sensitisation threshold limit : 490000 mg/m3
Difluoromethane (R-32)	
Dermal	: not applicable
Oral	: not applicable
Inhalation 4 h LC50	: > 520000 ppm , rat
Inhalation	: dog Not a cardiac sensitizer.
Skin irritation	: No skin irritation, Not tested on animals Not expected to cause skin irritation based on expert review of the properties of the substance.
Eye irritation	: No eye irritation, Not tested on animals Not expected to cause eye irritation based on expert review of the properties of the substance.
Skin sensitization	: Not tested on animals Not expected to cause sensitization based on expert review of the properties of the substance.

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	There are no reports of human respiratory sensitization.
Repeated dose toxicity	: Inhalation rat No toxicologically significant effects were found.
Carcinogenicity	: Overall weight of evidence indicates that the substance is not carcinogenic.
Mutagenicity	: Did not cause genetic damage in animals. Did not cause genetic damage in cultured mammalian cells. Did not cause genetic damage in cultured bacterial cells.
Reproductive toxicity	: Animal testing showed no reproductive toxicity. Information given is based on data obtained from similar substances.
Teratogenicity	: Animal testing showed no developmental toxicity.

SECTION 12. ECOLOGICAL INFORMATION**Aquatic Toxicity**
Pentafluoroethane (HFC-125)

96 h LC50	: Oncorhynchus mykiss (rainbow trout) > 81.8 mg/l Information given is based on data obtained from similar substances.
96 h LC50	: Danio rerio (zebra fish) > 200 mg/l Information given is based on data obtained from similar substances.
96 h LC50	: Oncorhynchus mykiss (rainbow trout) 450 mg/l Information given is based on data obtained from similar substances.
72 h EC50	: Pseudokirchneriella subcapitata (green algae) > 118 mg/l Information given is based on data obtained from similar substances.
72 h EC50	: Pseudokirchneriella subcapitata (green algae) > 114 mg/l Information given is based on data obtained from similar substances.
96 h EC50	: Algae 142 mg/l


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Information given is based on data obtained from similar substances.

48 h EC50 : Daphnia magna (Water flea) > 200 mg/l
Information given is based on data obtained from similar substances.

48 h EC50 : Daphnia magna (Water flea) > 97.9 mg/l
Information given is based on data obtained from similar substances.

Difluoromethane (R-32)
96 h LC50 : Fish 1,507 mg/l
96 h EC50 : Algae 142 mg/l
48 h EC50 : Daphnia 652 mg/l

SECTION 13. DISPOSAL CONSIDERATIONS

Waste Disposal : Can be used after re-conditioning. Recover by distillation or remove to a permitted waste disposal facility. Comply with applicable Federal, State/Provincial and Local Regulations.

Environmental Hazards : Empty pressure vessels should be returned to the supplier.

SECTION 14. TRANSPORT INFORMATION

DOT	UN number	: 3163
	Proper shipping name	: Liquefied gas, n.o.s. (Pentafluoroethane, Difluoromethane)
	Class	: 2.2
	Labelling No.	: 2.2
IATA_C	UN number	: 3163
	Proper shipping name	: Liquefied gas, n.o.s. (Pentafluoroethane, Difluoromethane)
	Class	: 2.2
	Labelling No.	: 2.2
IMDG	UN number	: 3163

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Revision Date 09/12/2011

Ref. 130000050990

Proper shipping name : Liquefied gas, n.o.s. (Pentafluoroethane,
Difluoromethane)
Class : 2.2
Labelling No. : 2.2

SECTION 15. REGULATORY INFORMATION

SARA 313 Regulated Chemical(s) : SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

California Prop. 65 : Chemicals known to the State of California to cause cancer, birth defects or any other harm: none known

PA Right to Know Regulated Chemical(s) : Substances on the Pennsylvania Hazardous Substances List present at a concentration of 1% or more (0.01% for Special Hazardous Substances): Difluoromethane

NJ Right to Know Regulated Chemical(s) : Substances on the New Jersey Workplace Hazardous Substance List present at a concentration of 1% or more (0.1% for substances identified as carcinogens, mutagens or teratogens): Difluoromethane

SECTION 16. OTHER INFORMATION**HMIS**

Health : 1
Flammability : 0
Reactivity/Physical hazard : 1
PPE : Personal Protection rating to be supplied by user depending on use conditions.

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Before use read DuPont's safety information.
For further information contact the local DuPont office or DuPont's nominated distributors.



DuPont™ SUVA® 410A Refrigerant

Version 2.3

Revision Date 09/12/2011

Ref. 130000050990

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The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Significant change from previous version is denoted with a double bar.

CONSUMER MATERIAL SAFETY DATA SHEET
NAME OF PRODUCT: Duro All-Purpose Spray Adhesive
MSDS DATE: 08/27/2004

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Duro All Purpose Spray Adhesive
PRODUCT CODES: 01-81088 All formats and case packs.
SUPPLIER: Henkel Consumer Adhesives.
ADDRESS: 32150 Just Imagine Drive
Avon, Ohio 44011

DOMESTIC EMERGENCY PHONE: Chemtrec 1-800-424-9300
In Canada Canutec 613-996-6666
OTHER CALLS: Regulatory Affairs 905-459-1140
FAX PHONE: Regulatory Affairs 905-459-8031
CHEMICAL FAMILY: Spray Adhesives
PRODUCT USE: Consumer Product; All Purpose Spray Adhesive
PREPARED BY: S. Dhalla
MSDS PREPARATION DATE: 08/27/04

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT:	%	CAS NO.	OSHA PEL	ACGIH TLV
Acetone	15-25%	67-64-1	750ppm	500ppm N/A
Hexane	30-40%	110-54-3	50ppm	50ppm
Propane	<40%	74-98-6	Unknown	1000ppm
Butane	<40%	106-97-8	Unknown	800ppm

SECTION 3: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: DANGER: EXTREMELY FLAMMABLE. CONTENTS UNDER PRESSURE. VAPOR HARMFUL. EYE, SKIN AND RESPIRATORY TRACT IRRITANT

ROUTES OF ENTRY: oral, dermal, inhalation

POTENTIAL HEALTH EFFECTS

EYES: Direct spray or vapors will cause irritation. Symptoms include stinging, tearing, redness and swelling of the eyes.

SKIN: Product may cause mild irritation. Prolonged or repeated contact may dry the skin. Symptoms include redness, burning, drying and cracking of skin and skin burns.

INGESTION: Swallowing large amounts may be harmful. This material can get into the lungs during swallowing or vomiting. This can result in lung inflammation and other lung injury

INHALATION: High concentrations or vapors may irritate nose, throat and cause symptoms such as dizziness, nausea, headache or indigestion.

SECTION 4: FIRST AID MEASURES

EYES: Immediately flush eyes with water for atleast 15 minutes. Get medical attention if irritation persists.

SKIN: Remove contaminated clothing and wash skin with soap and water. Get medical attention if irritation persists.

INGESTION: DO NOT INDUCE VOMITING. Unless directed by a physician or poison control center. Get medical attention immediately.

INHALATION: Remove victim to fresh air. Apply artificial respiration if needed. Seek medical attention.

SECTION 5: FIRE-FIGHTING MEASURES

NFPA HAZARD CLASSIFICATION

HEALTH: FLAMMABILITY: REACTIVITY: <1,4,0>

EXTINGUISHING MEDIA: Foam, CO2, Dry chemical (B-C)

FLAMMABLE LIMITS IN AIR: LEL: 1.9% UEL: 9.5%

FLASHPOINT: 0F (-18C) (EXTREMELY FLAMMABLE)

UNUSUAL FIRE AND EXPLOSION HAZARDS: Do not expose to temperatures exceeding 120F as containers may vent, rupture or burst.

SPECIAL FIREFIGHTING PROCEDURES: Keep containers cool using water spray. Use proper equipment to protect personnel from bursting containers.

HAZARDOUS DECOMPOSITION PRODUCTS: Oxides of carbon, various hydrocarbons.

SECTION 6: ACCIDENTAL RELEASE MEASURES

ACCIDENTAL RELEASE MEASURES: Eliminate all sources of ignition. Absorb spill with inert material then place in a chemical waste container. Dispose of spill material in accordance with regulations.

SECTION 7: HANDLING AND STORAGE

HANDLING AND STORAGE: Use with adequate ventilation. Make sure containers are properly grounded before use or transfer of material. Deliberately concentrating and inhaling the contents of this container may be harmful and fatal. Do not use or store near fire, sparks or flame. Do not store at temperatures above 120F. Keep out of reach of children. Dispose of waste material in accordance with state, local and federal regulations.

See label on product for use directions.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Maintain adequate ventilation to maintain below exposure limits

RESPIRATORY PROTECTION:	Use respirator only as a last resort to control exposure when engineering controls are not possible.
EYE PROTECTION:	Wear Safety glasses or Goggles to prevent eye contact.
SKIN PROTECTION:	Wear chemical resistant gloves if repeated skin contact occurs or causes irritation.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	White liquid.
ODOR:	Solvent odor
PHYSICAL STATE:	Mixture packaged in pressurized aerosol spray can.
pH AS SUPPLIED:	Not established.
SPECIFIC GRAVITY (H₂O = 1):	0.635-0.705
SOLUBILITY IN WATER:	Insoluble
EVAPORATION RATE:	>1 (Butyl acetate=1)
BOILING POINT:	>100F (>37C) @ 760mmHg
CAN PRESSURE:	50 psig
% VOC	64.96%

SECTION 10: STABILITY AND REACTIVITY

STABILITY:	Stable
CONDITIONS TO AVOID:	Do not use or store near fire, sparks or flame.
HAZARDOUS POLYMERIZATION:	Will not occur
INCOMPATIBILITY:	Avoid contact with acids, strong oxidizers.

SECTION 11: TOXICOLOGICAL INFORMATION

TOXICOLOGICAL INFORMATION: See Section 3 Hazard Identifications.

SECTION 11 NOTES: Contact Regulatory Affairs if further information is required.

SECTION 12: ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION: No data available.

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: Dispose in accordance with applicable regulations.

SECTION 14: TRANSPORT INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION
PROPER SHIPPING NAME: AEROSOLS, FLAMMABLE
HAZARD CLASS: 2.1
UN NUMBER: UN1950

NOTE: This product classifies as a Consumer Commodity due to its size and intended use. ORM-D

SECTION 15: REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS

This product has been labeled according to the Federal Hazardous Substances Act and the associated Consumer Product Safety Regulations.

SECTION 16: OTHER INFORMATION

OTHER INFORMATION: Information provided in this MSDS is intended to provide supplementary information for consumer uses of this product. This product is not intended for industrial uses.

Contact Regulatory Affairs for additional information

PREPARATION INFORMATION: Created and approved on 08/27/2004 by S.Dhalla

DISCLAIMER: The information appearing herein is furnished without express or implied warranty and is based upon tests and data believed to be accurate to the best knowledge of Henkel Consumer Adhesives Inc. It is the user's responsibility to ensure that the product is handled safely and that the instructions for use are properly communicated and followed. Henkel Consumer Adhesives Inc. assumes no legal responsibility or liability for any use not in accordance with the use described in this MSDS or in the product labeling.



MATERIAL SAFETY DATA SHEET

320 37th Avenue, St. Charles, Illinois 60174
www.unitedlabsinc.com . www.unitedlabsinc.ca

To Reorder Call:
800-323-2594

1. PRODUCT AND COMPANY IDENTIFICATION

FOR MEDICAL AND TRANSPORTATION EMERGENCIES
24 Hour INFOTRAC (US and CANADA): **800-535-5053**

PRODUCT NAME
UNITED 717 ESA Multi-Purpose Industrial Descaler

USE/DESCRIPTION	Earth Smart Multi-Purpose Industrial Descaler
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REVISION DATE
January 20, 2014

HMIS III HEALTH (0 = Maximum Safety)

Always follow Label Directions and Cautions.

* Chronic
4 Severe
3 Serious
2 Moderate
1 Slight
0 Minimal

See Hazards Identification Section of this MSDS for more detailed information.

PHYSICAL HAZARD (0 = Maximum Safety)

Susceptible to Release of Energy.

- 4 May detonate-vacate area if materials are exposed to fire.
- 3 Strong shock of heat may detonate-use monitors from behind explosion resistant barriers.

2 Violent chemical change possible-use hose stream from distance
1 Unstable if heated-use precaution.
0 Normally stable.

FLAMMABILITY (0 = Maximum Safety)

Susceptibility of Material to Burning.

4 Extremely flammable	1 Must be preheated
3 Ignites at normal temperature.	to burn.
2 Ignites when moderately heated.	0 Will not burn.

PERSONAL PROTECTION: p & n



2. COMPOSITION/INFORMATION ON INGREDIENTS

In accordance with Federal Regulation 29 CFR 1910.1200, all materials in this product are considered non-hazardous.

3. HAZARDS IDENTIFICATION

Eyes: Causes burns to eyes.

Skin: Prolonged or repeated contact may cause irritation; non-corrosive the skin.

Inhalation: Product may be irritating to the respiratory tract if inhaled as a mist or if material is vaporized.

Ingestion: This product may be harmful or fatal if ingested.

4. FIRST AID MEASURES

Yes: Flush with plenty of cool water for at least 15 minutes. Hold eyelids apart to ensure thorough rinsing of the entire surface of the eye and lids with water. Call a physician or poison center.

Skin: Wash with soap and water and remove contaminated clothing. If irritation persists, call a physician or poison center.

Inhalation: Remove to fresh air. Apply CPR, if needed. Call a physician or poison center immediately.

Ingestion: DO NOT INDUCE VOMITING. Call a physician or poison center immediately. Drink large amounts of water. If vomiting occurs give fluids. Never give anything by mouth to an unconscious person.

5. FIRE FIGHTING MEASURES

Flash Point (TCC): None

Explosive Limits: Lower (LEL): ND Upper (UEL): ND

Flame Projection (Aerosol): NA

Hazardous Products of Combustion: When strongly heated, as in a fire, this product may produce nitrogen oxide fumes and acid mist.

Fire and Explosion Hazards: In the presence of extreme heat (as in a fire) product may react with active metals (e.g. Aluminum, Zinc, etc.) to release flammable hydrogen gas. Thermal decomposition may also product oxides of carbon, nitrogen and chlorine.

Extinguishing Media: Water, Dry chemical, Carbon dioxide, alcohol foam.

Fire Fighting Instructions: Wear self-contained breathing apparatus w/full protective clothing. Vapors are irritating to the respiratory tract and may cause difficulty breathing and pulmonary edema. Provide for protection of employees and residents.

6. ACCIDENTAL RELEASE MEASURES

Small Spills: Absorb spills with dry sand or earth, then place in chemical waste container for disposal. Neutralize washings with base such as soda ash or lime. Flush residual spill area with large amounts of water. Exercise caution during neutralization as considerable heat may be generated.

Large Spills: Absorb spills with dry sand or earth, then place in chemical waste container for disposal. Neutralize washings with base such as soda ash or lime. Flush residual spill area with large amounts of water. Exercise caution during neutralization as considerable heat may be generated.

7. HANDLING AND STORAGE

When diluting, always add acid slowly to water and stir well to avoid spattering. NEVER ADD WATER TO ACID! Keep this product in a properly labeled, tightly closed container and store in a cool, dry, well-ventilated area away from incompatible materials. Exercise caution to prevent damage to or leakage from the container.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Eyes: Chemical safety goggles are recommended.

Skin: Chemical resistant gloves (rubber or nitrile) are recommended.

Respiratory: Not normally required if good ventilation is maintained. Avoid breathing vapor and/or mist.

Engineering Controls: Normally not required. Ventilation and local exhaust generally adequate.

Work Hygienic Practices: Shirts with long sleeves are recommended. Remove contaminated clothing immediately and wash with soap and water before reusing. Wash hands and face with soap and water after using this product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point: 275°F/135°C **Specific Gravity:** 1.050 (H₂O=1) **Vapor Pressure:** 5.65 mmHg @68°F/20°C **Melting Point:** ND

Vapor Density: ND

Evaporation Rate: ND

Solubility in Water: Complete **pH:** 1

Appearance and Odor: Yellow color liquid with little or no odor.

10. STABILITY AND REACTIVITY

Hazardous Polymerization: Will not occur.

Hazardous Decomposition: When strongly heated, as in a fire, this product may decompose to nitrogen oxide fumes and acid mist.

Chemical Stability: Stable

Incompatibility: This product reacts violently with bases, liberating heat and spattering. Avoid contact with oxidizers. Material may be hazardous in contact with chlorates or nitrates.

11. TOXICOLOGICAL INFORMATION

Carcinogenicity (NTP/IARC/OSHA): None

California Proposition 65: Does this product contain chemical(s) known to the State of California to cause cancer and/or to cause birth defects or other reproductive harm? None

12. ECOLOGICAL INFORMATION

ND

13. DISPOSAL CONSIDERATIONS

Consult your local, state, provincial and federal regulations for proper disposal guidelines. Disposal regulations may be different for each state and/or locality.

14. TRANSPORT INFORMATION

DOT: Available upon request

TDG: Available upon request

UN: Available upon request

15. REGULATORY INFORMATION

VOC (Volatile Organic Compounds): None

TSCA (Toxic Substances Control Act): Listed

SARA Title III Section 302 EHS: None

SARA Title III Section 311/312: ND

SARA Title III Section 313 Toxic Chemicals: None

WHMIS Classification:

This product has been classified in accordance with the hazard criteria of the CPR (Controlled Products Regulations/ WHMIS) and the MSDS contains all the information required by the CPR.

16. OTHER INFORMATION

Read and follow all label directions and precautions before using this product. These products are intended for industrial and institutional use only. NOT FOR HOUSEHOLD USE OR RESALE. KEEP OUT OF REACH OF CHILDREN.

UNITED 717 ESA Multi-Purpose Industrial Descaler

PREPARED BY: Sandy Kopacz



MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Product Name	Evap Pow'R C (4168)
CAS #	Mixture
Product use	Evaporator Coil Cleaner
Manufacturer	Nu-Calgon 2008 Altom Court St. Louis, MO 63146 US Phone: 314-469-7000 / 800-554-5499 Emergency Phone: 1-800-424-9300 (CHEMTREC)

2. Hazards Identification

Emergency overview	CAUTION MAY CAUSE SKIN IRRITATION. MAY CAUSE EYE IRRITATION. MAY CAUSE RESPIRATORY TRACT IRRITATION.
Potential short term health effects	
Routes of exposure	Eye, Skin contact, Skin absorption, Inhalation, Ingestion.
Eyes	May cause irritation.
Skin	May cause irritation. May be absorbed through the skin.
NIOSH - Pocket Guide - Skin Notations	
Ethylene glycol monobutyl ether 111-76-2	Potential for dermal absorption
Inhalation	Excessive intentional inhalation may cause respiratory tract irritation and central nervous system effects (headache, dizziness).
Ingestion	May cause stomach distress, nausea or vomiting.
Target organs	Blood. Eyes. Kidney. Liver. Respiratory system. Skin.
Chronic effects	Prolonged or repeated exposure can cause drying, defatting and dermatitis.
Signs and symptoms	Symptoms may include redness, edema, drying, defatting and cracking of the skin. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.
OSHA Regulatory Status	This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
Potential environmental effects	Components of this product have been identified as having potential environmental concerns.

3. Composition / Information on Ingredients

Ingredient(s)	CAS #	Percent
Ethylene glycol monobutyl ether	111-76-2	3 - 7
Alcohols, C7-21, ethoxylated	68991-48-0	1 - 5
Sodium xylene sulphonate	1300-72-7	1 - 5

4. First Aid Measures

First aid procedures	
Eye contact	Immediately flush with cool water. Remove contact lenses, if applicable, and continue flushing for 15 minutes. Obtain medical attention immediately.
Skin contact	Flush with cool water. Wash with soap and water. Obtain medical attention if irritation persists.
Inhalation	Remove affected person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.
Ingestion	Do not induce vomiting. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Never give anything by mouth if victim is unconscious, or is convulsing. Obtain medical attention.
Notes to physician	Symptoms may be delayed.

General advice

If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Avoid contact with eyes and skin. Keep out of reach of children.

5. Fire Fighting Measures

Flammable properties	Not flammable by WHMIS/OSHA criteria.
Extinguishing media	
Suitable extinguishing media	Water spray. Fog. Dry chemical. Carbon dioxide.
Unsuitable extinguishing media	Not available
Protection of firefighters	
Specific hazards arising from the chemical	Not available
Protective equipment for firefighters	Firefighters should wear full protective clothing including self contained breathing apparatus.
Hazardous combustion products	May include and are not limited to: Oxides of carbon. Oxides of sulphur.
Explosion data	
Sensitivity to mechanical impact	Not available
Sensitivity to static discharge	Not available

6. Accidental Release Measures

Personal precautions	Keep unnecessary personnel away. Do not touch or walk through spilled material. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep people away from and upwind of spill/leak.
Environmental precautions	Do not discharge into lakes, streams, ponds or public waters.
Methods for containment	Stop leak if you can do so without risk. Prevent entry into waterways, sewers, basements or confined areas.
Methods for cleaning up	Before attempting clean up, refer to hazard data given above. Small spills may be absorbed with non-reactive absorbent and placed in suitable, covered, labelled containers. Prevent large spills from entering sewers or waterways. Contact emergency services and supplier for advice. Never return spills to original containers for re-use.

7. Handling and Storage

Handling	Use good industrial hygiene practices in handling this material. When using do not eat or drink. Avoid contact with skin and clothing. Avoid contact with eyes. Avoid breathing vapors or mists of this product. Keep container tightly closed. Use only with adequate ventilation. Wash thoroughly after handling.
Storage	Keep out of reach of children. Store in a closed container away from incompatible materials.

8. Exposure Controls / Personal Protection

Exposure limits	
Ingredient(s)	Exposure Limits
Alcohols, C7-21, ethoxylated	ACGIH-TLV Not established OSHA-PEL Not established
Ethylene glycol monobutyl ether	ACGIH-TLV TWA: 20 ppm OSHA-PEL TWA: 50 ppm
Sodium xylene sulphonate	ACGIH-TLV Not established OSHA-PEL Not established
Engineering controls	General ventilation normally adequate.
Personal protective equipment	
Eye / face protection	Wear safety glasses with side shields.
Hand protection	Rubber gloves. Confirm with a reputable supplier first.
Skin and body protection	As required by employer code.
Respiratory protection	Where exposure guideline levels may be exceeded, use an approved NIOSH respirator.
General hygiene considerations	Handle in accordance with good industrial hygiene and safety practice. When using do not eat or drink. Wash hands before breaks and immediately after handling the product.

9. Physical and Chemical Properties

Appearance	Clear
Color	Green
Form	Liquid
Odor	butyl
Odor threshold	Not available
Physical state	Liquid
pH	7.9 (Concentrate)
Melting point	Not available
Freezing point	Not available
Boiling point	Not available
Pour point	Not available
Evaporation rate	Not available
Flash point	Not available
Auto-ignition temperature	Not available
Flammability limits in air, lower, % by volume	Not available
Flammability limits in air, upper, % by volume	Not available
Vapor pressure	Not available
Vapor density	Not available
Specific gravity	Not available
Octanol/water coefficient	Not available
Viscosity	Not available
Percent volatile	Not available

10. Stability and Reactivity

Reactivity	Reacts vigorously with acids.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Chemical stability	Stable under recommended storage conditions.
Conditions to avoid	Do not mix with other chemicals.
Incompatible materials	Acids. Oxidizers.
Hazardous decomposition products	May include and are not limited to: Oxides of carbon. Oxides of sulphur.

11. Toxicological Information

Component analysis - LC50

Ingredient(s)	LC50
Alcohols, C7-21, ethoxylated	Not available
Ethylene glycol monobutyl ether	2.21 mg/l/4h rat
Sodium xylene sulphonate	Not available

Component analysis - Oral LD50

Ingredient(s)	LD50
Alcohols, C7-21, ethoxylated	1410 mg/kg rat
Ethylene glycol monobutyl ether	470 mg/kg rat; 320 mg/kg rabbit
Sodium xylene sulphonate	7200 mg/kg rat

Effects of acute exposure

Eye	May cause irritation.
Skin	May cause irritation. May be absorbed through the skin.

NIOSH - Pocket Guide - Skin Notations

Ethylene glycol monobutyl ether	111-76-2	Potential for dermal absorption
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Inhalation Excessive intentional inhalation may cause respiratory tract irritation and central nervous system effects (headache, dizziness).

Ingestion May cause stomach distress, nausea or vomiting.

Sensitization Non-hazardous by WHMIS/OSHA criteria.

Chronic effects Non-hazardous by WHMIS/OSHA criteria.

Carcinogenicity See below.

ACGIH - Threshold Limit Values - Carcinogens

Ethylene glycol monobutyl ether	111-76-2	A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans
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IARC - Group 3 (Not Classifiable)

Ethylene glycol monobutyl ether	111-76-2	Monograph 88 [2006]
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Mutagenicity Non-hazardous by WHMIS/OSHA criteria.

Reproductive effects Non-hazardous by WHMIS/OSHA criteria.

Teratogenicity Non-hazardous by WHMIS/OSHA criteria.

Name of Toxicologically Synergistic Products Not available

12. Ecological Information

Ecotoxicity Components of this product have been identified as having potential environmental concerns.

Ecotoxicity - Freshwater Fish - Acute Toxicity Data

Ethylene glycol monobutyl ether	111-76-2	96 Hr LC50 <i>Lepomis macrochirus</i> : 1490 mg/L [static]; 96 Hr LC50 <i>Lepomis macrochirus</i> : 2950 mg/L
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Ecotoxicity - Water Flea - Acute Toxicity Data

Ethylene glycol monobutyl ether	111-76-2	24 Hr EC50 <i>Daphnia magna</i> : 1698 - 1940 mg/L; 48 Hr EC50 <i>Daphnia magna</i> : >1000 mg/L
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Persistence / degradability Not available

Bioaccumulation / accumulation Not available

Mobility in environmental media Not available

Environmental effects Not available

Aquatic toxicity	Not available
Partition coefficient	Not available
Chemical fate information	Not available
Other adverse effects	Not available

13. Disposal Considerations

Disposal instructions	Dispose in accordance with all applicable regulations.
Waste from residues / unused products	Not available
Contaminated packaging	Not available

14. Transport Information

U.S. Department of Transportation (DOT)

Not regulated as dangerous goods.

Transportation of Dangerous Goods (TDG - Canada)

Not regulated as dangerous goods.

15. Regulatory Information

Canadian federal regulations	This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.
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Canada - CEPA - Schedule I - List of Toxic Substances

Ethylene glycol monobutyl ether 111-76-2 Present

Canada - WHMIS - Ingredient Disclosure List

Ethylene glycol monobutyl ether 111-76-2 1 %

WHMIS status Controlled

WHMIS classification Class D - Division 2B

WHMIS labeling



Occupational Safety and Health Administration (OSHA)

29 CFR 1910.1200 hazardous chemical Yes

US Federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

CERCLA (Superfund) reportable quantity

None

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - Yes
Delayed Hazard - Yes
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

Section 302 extremely hazardous substance No

Section 311 hazardous chemical Yes

Clean Water Act (CWA) Not available

State regulations

This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

U.S. - California - 8 CCR Section 339 - Director's List of Hazardous Substances

Ethylene glycol monobutyl ether 111-76-2 Present

U.S. - Massachusetts - Right To Know List

Ethylene glycol monobutyl ether 111-76-2 Present

U.S. - Minnesota - Hazardous Substance List

Ethylene glycol monobutyl ether 111-76-2 Skin

U.S. - New Jersey - Right to Know Hazardous Substance List

Ethylene glycol monobutyl ether 111-76-2 sn 0275

U.S. - Pennsylvania - RTK (Right to Know) List

Ethylene glycol monobutyl ether 111-76-2 Present

U.S. - Rhode Island - Hazardous Substance List

Ethylene glycol monobutyl ether 111-76-2 Toxic (skin)

Inventory name

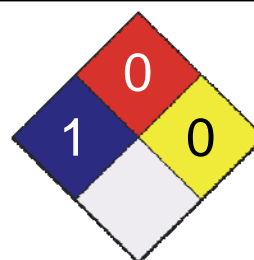
Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

16. Other Information

LEGEND HMIS/NFPA	
Severe	4
Serious	3
Moderate	2
Slight	1
Minimal	0

Health	* 1
Flammability	0
Physical Hazard	0
Personal Protection	X

**Disclaimer**

Information contained herein was obtained from sources considered technically accurate and reliable. While every effort has been made to ensure full disclosure of product hazards, in some cases data is not available and is so stated. Since conditions of actual product use are beyond control of the supplier, it is assumed that users of this material have been fully trained according to the requirements of all applicable legislation and regulatory instruments. No warranty, expressed or implied, is made and supplier will not be liable for any losses, injuries or consequential damages which may result from the use of or reliance on any information contained in this document.

Issue date

25-Oct-2012

Effective date

15-Oct-2012

Expiry date

15-Oct-2015

Prepared by

Nu-Calgon Technical Service (314) 469-7000

Other information

For an updated MSDS, please contact the supplier/manufacturer listed on the first page of the document.

MATERIAL SAFETY DATA SHEET

SECTION 1 — PRODUCT IDENTIFICATION AND USE

PRODUCT IDENTIFIER Vacuum Pump Oil , DVO 6/12/24		PRODUCT IDENTIFICATION NUMBER (PIN) N/A	
PRODUCT USE N/A			
MANUFACTURER'S NAME J/B INDUSTRIES INC.		SUPPLIER'S NAME Alltemp Products Limited	
STREET ADDRESS 601 N. Farnsworth Ave.		STREET ADDRESS 827 Brock Road S.	
CITY Aurora,	PROVINCE IL, USA	CITY Pickering	PROVINCE Ontario, Canada
POSTAL CODE 60507	EMERGENCY TELEPHONE 630/851-9444	POSTAL CODE L1W 3J2	EMERGENCY TELEPHONE NO.

SECTION 2 — HAZARDOUS INGREDIENTS

HAZARDOUS INGREDIENTS	%	CAS NUMBER	LD ₅₀ OF INGREDIENT (SPECIFY SPECIES AND ROUTE)	LC ₅₀ OF INGREDIENT (SPECIFY SPECIES)
Distillates, hydrotreated heavy paraffinic	100%	64742-54-7	N/A	N/A

SECTION 3 — PHYSICAL DATA

PHYSICAL STATE Liquid	ODOUR AND APPEARANCE Clear colorless to pale yellow liquid			ODOUR THRESHOLD (ppm) N/A
VAPOUR PRESSURE (mm Hg) <0.01	VAPOUR DENSITY (AIR=1) >1	EVAPORATION RATE N/A	BOILING POINT (°C) >315°C	FREEZING POINT (°C) N/A
pH Not available	SPECIFIC GRAVITY 0.85-0.87 @ 15.6 C/15.6°C	COEFF. WATER/OIL DIST. N/A		

SECTION 4 — FIRE AND EXPLOSION DATA

FLAMMABILITY YES NO IF YES, UNDER WHICH CONDITIONS? OSHA Classification (29 CFR 1910.1200): Not classified by OSHA as flammable or combustible.		
MEANS OF EXTINCTION Use water fog, foam, dry chemical or carbon dioxide (CO₂) to extinguish flames.		
FLASHPOINT (°C) AND METHOD Cleveland Open Cup 378°F (190°C) (Min)	UPPER FLAMMABLE LIMIT (% BY VOLUME) N/A	LOWER FLAMMABLE LIMIT (% BY VOLUME) N/A
AUTOIGNITION TEMPERATURE (°C) No Data Available	HAZARDOUS COMBUSTION PRODUCTS Highly dependent on combustion conditions. A complex mixture of airborne solids, liquids, and gases including carbon monoxide, carbon dioxide, and unidentified organic compounds will be evolved when this material undergoes combustion.	
EXPLOSION DATA n/a	SENSITIVITY TO IMPACT	SENSITIVITY TO STATIC DISCHARGE N/A

SECTION 5 — REACTIVITY DATA

CHEMICAL STABILITY YES
INCOMPATIBILITY WITH OTHER SUBSTANCES YES May react with strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.
REACTIVITY, AND UNDER WHAT CONDITIONS Not known
HAZARDOUS DECOMPOSITION PRODUCTS None known

PRODUCT IDENTIFIER Vacuum Pump Oil , DVO 6/12/24				
SECTION 6 — TOXICOLOGICAL PROPERTIES				
ROUTE OF ENTRY				
EFFECTS OF ACUTE EXPOSURE TO PRODUCT EYE: Not expected to cause prolonged or significant eye irritation. SKIN: Contact with the skin is not expected to cause prolonged or significant irritation. Not expected to be harmful to internal organs if absorbed through the skin. Contact with the skin is not expected to cause an allergic skin response. INGESTION: Not expected to be harmful if swallowed. INHALATION: Not expected to be harmful if inhaled. Contains a petroleum-based mineral oil. May cause respiratory irritation or other pulmonary effects following prolonged or repeated inhalation of oil mist at airborne levels above the recommended mineral oil mist exposure limit. Symptoms of respiratory irritation may include coughing and difficulty breathing.				
EFFECTS OF CHRONIC EXPOSURE TO PRODUCT				
N/A				
EXPOSURE LIMITS	IRRITANCY OF PRODUCT	SENSITIZATION TO PRODUCT	CARCINOGENICITY	
Not available	Not available	Not available	Not available	
TERATOGENICITY	REPRODUCTIVE TOXICITY	MUTAGENICITY	SYNERGISTIC PRODUCTS	
Not available	Not available	Not available	Not available	
SECTION 7 — PREVENTIVE MEASURES				
PERSONAL PROTECTIVE EQUIPMENT				
GLOVES (SPECIFY)		RESPIRATOR (SPECIFY)		EYE (SPECIFY)
Nitrile Rubber Silver shield Viton		None needed under normal conditions		Safety glasses with side guard when splashing is probable
FOOTWEAR (SPECIFY)		CLOTHING (SPECIFY)		OTHER (SPECIFY)
none		none		
ENGINEERING CONTROLS (SPECIFY, EG. VENTILATION, ENCLOSED PROCESS.)				
Use in well ventilated area				
LEAK AND SPILL PROCEDURE				
Stop the source of the release if you can do it without risk. Contain release to prevent further contamination of soil, surface water or groundwater. Clean up spill as soon as possible, observing precautions in Exposure Controls/Personal Protection. Use appropriate techniques such as applying noncombustible absorbent materials or pumping. Where feasible and appropriate, remove contaminated soil. Place contaminated materials in disposable containers and dispose of in a manner consistent with applicable regulations.				
WASTE DISPOSAL				
Oil collection services are available for used oil recycling or disposal. Place contaminated materials in containers and dispose of in a manner consistent with applicable regulations. Contact your sales representative or local environmental or health authorities for approved disposal or recycling methods.				
HANDLING PROCEDURES AND EQUIPMENT				
N/A				
STORAGE REQUIREMENTS				
Container is not designed to contain pressure. Do not use pressure to empty container or it may rupture with explosive force. Empty containers retain product residue (solid, liquid, and/or vapor) and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition. They may explode and cause injury or death. Empty containers should be completely drained, properly closed, and promptly returned to a drum reconditioner or disposed of properly.				
SPECIAL SHIPPING INFORMATION				
Chemical Name	Class	Subclass	Small Means of Containment	Consumer Commodities
Product is not Whmis Controlled. No known TDG regulations				

SECTION 8 — FIRST AID MEASURES

SPECIFIC MEASURES

EYE:

No specific first aid measures are required because this material is not expected to cause eye irritation. As a precaution, remove contact lenses, if worn, and flush eyes with water.

SKIN:

No specific first aid measures are required because this material is not expected to be harmful if it contacts the skin. As a precaution, remove clothing and shoes if contaminated. To remove the material from skin, use soap and water. Discard contaminated clothing and shoes or thoroughly clean before reuse.

INGESTION:

No specific first aid measures are required because this material is not expected to be harmful if swallowed. Do not induce vomiting. As a precaution, give the person a glass of water or milk to drink and get medical advice. Never give anything by mouth to an unconscious person.

INHALATION:

No specific first aid measures are required because this material is not expected to be harmful if inhaled. If exposed to excessive levels of material in the air, move the exposed person to fresh air. Get medical attention if coughing or respiratory discomfort occurs.

SECTION 9 — PREPARATION DATE OF MSDS

PREPARED BY (GROUP, DEPARTMENT, ETC.)
Health and Safety Department

PHONE NUMBER
1-800-263-4624

DATE
09/09/2012



SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**1.1 Product identifier**

GHS Product Identifier **Roadside® Fix-a-Flat®**
 Chemical Name Mixture
 Trade name **Roadside® Fix-a-Flat®**
 CAS No. Mixture
 EINECS No. Mixture
 REACH Registration No. Not available

**1.2 Relevant identified uses of the substance or mixture and uses advised against**

Identified use(s) Sealant & Inflator for Automotive Tires
 Uses advised against Users are recommended to seek further advice.

1.3 Details of the supplier of the safety data sheet

Company (North America) **Accessories Marketing, Inc.**
 Identification (Europa) **Freightways c/o Access Marketing Europa**
 Address (North America) **125 Venture Drive, Suite 210, San Luis Obispo, CA 93401**
 (Europa) **Mandenmakerstraat 6, 2222 AX Katwijk Nederlands**
 Telephone (North America) **(805) 489-0490**
 (Europa) **+31 71 408 0838**
 E-Mail (competent person) mailto:brett_slime.com
Only representative of a non-Community manufacturer
 Company Identification **H2 Compliance**
 Address **Rubicon Building, CIT Campus, Bishopstown, Cork, Ireland**
 Telephone **+353 21 486 8122**
 E-Mail (competent person) mailto:info_h2compliance.com

1.4 Emergency telephone number – ChemTel Inc.

Emergency Phone No. (800) 255-3924, (813) 248-0585

SECTION 2: HAZARDS IDENTIFICATION**2.1 Classification of the substance or mixture**

2.1.1 Regulation (EC) No. 1272/2008 (CLP) and GHS Classifications - Hazardous according to Directives 1272/2008/EC and 1907/2006/EC – Compressed dissolved gas, Aspiration hazard 1. Hazardous according to GHS-compliant regulations in Japan, as well as the UN model regulations.

2.1.2 Directive 67/548/EEC & Directive 1999/45/EC - Hazardous according to Directives 67/548/EEC and 1999/45/EC – Harmful

2.2 Label elements**2.2.1 Label elements According to Regulation (EC) No. 1272/2008 (CLP)**

GHS Product Identifiers

Hazard pictogram(s)



Signal word(s)

DANGER

Hazard statement(s)

H280: Contains gas under pressure; may explode if heated.
 H304: May be fatal if swallowed and enters airways.

Precautionary statement(s)

P301 + P310: IF SWALLOWED: Immediately call a POISON CENTRE or doctor/physician.
 P331: Do NOT induce vomiting.

2.2.2 Label elements

According to Directive 67/548/EEC & Directive 1999/45/EC

Hazard Symbol



Risk Phrases

R65: Harmful: may cause lung damage if swallowed.

Safety Phrases

S2: Keep out of the reach of children.
 S62: If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

- 2.3 Other hazards OSHA Classification (USA):** Hazardous under OSHA Hazard Communication Standard – Contains gas under pressure; may explode if heated..
- HMIS:** Health– 0, Flammability – 1, Reactivity – 0
- WHMIS Classification (Canada):** Hazardous under WHMIS. Classification A: Compressed Gas.
- (USA/Canada):** Hazardous under GHS.
- H280: Contains gas under pressure; may explode if heated.
- H304: May be fatal if swallowed and enters airways.
- P301 + P310: IF SWALLOWED: Immediately call a POISON CENTRE or doctor/physician.
- P331: Do NOT induce vomiting.



2.4 Additional Information None

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

EC Classification No. 1272/2008/EC (GHS Classification)

Hazardous ingredient(s)	%W/W	CAS No.	EC No.	REACH Registration No.	Hazard pictogram(s) and Hazard statement(s)
Heavy Aromatic Solvent Naptha	10-50	64742-94-5	265-198-5	NA	3.10/1: H304
Norflurane	10-55	811-97-2	212-377-0	NA	2.5/1: H280
Ammonia	0.2	7664-41-7	231-635-3	007-001-00-5	2.5/1, 2.6/2, 3.1/3 (Inhalation), 3.2/1B, 4.1/1; H221, H280, H314, H331, H400

EC Classification No. 67/548/EEC

Hazardous ingredient(s)	%W/W	CAS No.	EC No.	REACH Registration No.	Hazard pictogram(s) and Risk (R) Phras(es)
Heavy Aromatic Solvent Naptha	10-50	64742-94-5	265-198-5	NA	Xn: R65
Norflurane	10-30	811-97-2	212-377-0	NA	None None
Ammonia	0.2	7664-41-7	231-635-3	007-001-00-5	T, N+:R10, R23, R34, R50

3.3 Additional Information

- For full text of H phrases see section 16. For full text of R phrases see section 16. Non-Hazardous ingredients are not listed and make up the balance of the product.

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

Inhalation Remove patient from exposure. Keep patient at rest and give oxygen if breathing difficult. If symptoms develop, obtain medical attention.

Skin Contact Wash exposed areas with soap and warm water. In the event of irritation, seek medical advice.

Eye Contact Remove any contact lenses. Irrigate with eyewash solution or clean water, holding the eyelids apart, for at least 15 minutes. Obtain immediate medical attention.

Ingestion Not a likely route of exposure. If swallowed, seek medical advice immediately and show this container or label. **Do not induce vomiting.**

4.2 Most important symptoms and effects, both acute and delayed

Acute: Product is an aspiration hazard if ingested and vomitus enters the lungs which results in aspiration pneumonia..

Delayed and chronic effects: Expected to be similar to acute exposures. Multiple or prolonged contact with skin may result in chemical dermatitis.



- 4.3 Indication of the immediate medical attention and special treatment needed** Treat symptomatically.

SECTION 5: FIRE-FIGHTING MEASURES

Combustible but not readily ignited. Acrid smoke. Not Sensitive to mechanical impact and static discharge.

Flash Point . Explosive Limits: NA Auto-Ignition Temperatures: NA

- 5.1 Extinguishing media**
Suitable Extinguishing Media Extinguish preferably with dry chemical, foam or waterspray.
Unsuitable Extinguishing Media None known.
- 5.2 Special hazards arising from the substance or mixture** Containers may rupture from exposure to high temperatures, releasing contents that may be slippery.
- 5.3 Advice for fire-fighters** A self contained breathing apparatus and suitable protective clothing should be worn in fire conditions. Extinguish preferably with dry chemical, foam or waterspray.

SECTION 6: ACCIDENTAL RELEASE MEASURES

- 6.1 Personal precautions, protective equipment and emergency procedures** Nitrile gloves are suggested for spill cleanup. Evacuate if necessary. Ensure suitable personal protection (including respiratory protection) during removal of spillages.
- 6.2 Environmental precautions** Environmental hazards cannot be excluded by inappropriate handling or disposal.
- 6.3 Methods and material for containment and cleaning up** Mix spilled product with sand, then shovel up into covered container. For small spills on hard surfaces, allow substance to harden, then scrape up and discard. Do not crush aerosol cans.
- 6.4 Reference to other sections** See Also Section 7, 8, 13.
- 6.5 Additional Information** None

SECTION 7: HANDLING AND STORAGE

- 7.1 Precautions for safe handling** Avoid ingestion. Avoid skin and eye contact. Use only in well-ventilated areas. Keep away from oxidising agents. Heating of containers may cause pressure rise, with risk of bursting. Do not crush, puncture, or attempt to dismantle aerosol cans.
- 7.2 Conditions for safe storage, including any incompatibilities**
Gases under pressure. Do not use or store near heat or open flame. Do not store and transport with oxidizers etc. Do not crush or puncture cans.
Storage Temperature Ambient.
Storage Life Not available
Incompatible materials Can react violently if in contact with acids, alkalis, reducing agents and heavy metals.
- 7.3 Specific end use(s)** Consult the supplier.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

8.1.1 Occupational Exposure Limits

SUBSTANCE.	CAS No.	LTEL (8 hr TWA ppm)	LTEL (8 hr TWA mg/m ³)	STEL (ppm)	STEL (mg/m ³)	Note:
Heavy Aromatic Solvent Naptha	64742-94-5	400	NE	NE	NE	DOW
		NE	NE	NE	NE	OSHA
Norflurane	811-97-2	1000	NE	NE	NE	UK HSE
		1000	NE	NE	NE	Dupont AEL
Ammonia	7664-41-7	20	NE	50	NE	EU OEL
		25	NE	35	NE	ACGIH
		50	NE	NE	NE	OSHA



OELs are not available for non-listed components. AEL – Acceptable Exposure Limit.





8.1.2 Biological limit value

Limit value type (country of origin)	SUBSTANCE.	CAS No.	Biological limit value	Note:
No Biological Limit Values are available for this product				

8.1.3 PNECs and DNELs

No PNECs or DNELs are available for this product. As with all chemical products, users are cautioned to avoid unnecessary exposures.

8.2.2 Personal protection equipment

	Respirators	Usually Not Needed.
	Eye Protection	Safety glasses are suggested as good practice. Not normally required when used according to manufacturer instructions.
	Gloves	Nitrile or neoprene gloves are suggested where skin contact is possible.
	Body protection	Usually Not Needed.
	Engineering Controls	No special controls required.
	Other	Clean contaminated equipment.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	Foamy, milky liquid	Colour	White
Odour	Ammonia	Odour Threshold (ppm)	Not available
Melting Point (°C) / Freezing Point (°C)	No data	Boiling point/boiling range (°C):	30 °F / -1.1°C
Flash Point (°C)	None	Explosive limit ranges	Not available
Auto Ignition Temperature (°C)	Not available	Decomposition Temperature (°C)	Not available
Explosive properties	Not available	Oxidising properties	Not an Oxidizer
Flammability (solid, gas)	Not available	pH (Value)	8.5 -9.5
Evaporation rate	Not available	Vapour Pressure (mm Hg)	77-79 psig
			20°C
Vapour Density (Air=1)	1	Density (g/ml)	0.98
Solubility (Water)	Soluble	Solubility (Other)	Not available
Partition Coefficient (n-Octanol/water)	Not available	Viscosity (mPa.s)	20 SSU

9.2 Other information Volatile Organic Chemical (VOC) Content: No Data Available.

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity	May react with incompatible materials.
10.2 Chemical stability	Stable under normal conditions. Avoid temperature extremes
10.3 Possibility of hazardous reactions	Can react violently if in contact with acids, alkalis, reducing agents and heavy metals.
10.4 Conditions to avoid	Avoid temperature extremes
10.5 Incompatible materials	Can react violently if in contact with acids, alkalis, reducing agents and heavy metals.
10.6 Hazardous Decomposition Product(s)	Carbon monoxide, Carbon dioxide, Nitrogen Oxides, Sulfur Oxides. Thermal decomposition will evolve toxic, irritant and flammable vapours.



SECTION 11: TOXICOLOGICAL INFORMATION

SUBSTANCE.	CAS No.	LD ₅₀ (Oral, Rat)	LC ₅₀ (Inhalation, Rat)	LD ₅₀ (Dermal, Rat)
Heavy Aromatic Solvent Naptha	64742-94-5	5 ml/ kg	>590 mg/m ³ /4h	>2ml/kg rabbit
Norflurane	811-97-2	NE	567000 ppm / 4 Hours	NE
Ammonia	7664-41-7	NE	2000 ppm / 4 Hours	NE

11.1 Information on toxicological effects

11.1.2 Mixtures

Acute toxicity and Exposure Effects	Ingestion	Not a likely route of exposure. Aspiration of droplets may cause pulmonary oedema.
	Inhalation	Aspiration of droplets may cause pulmonary oedema.
	Skin Contact	Repeated exposure may cause skin dryness or cracking.
	Eye Contact	May cause eye irritation.
Irritation		May cause irritation to skin and eyes.
Corrosivity		Not to be expected.
Repeated dose toxicity		Expected to be similar to single exposures. Repeated exposure may cause skin dryness or cracking.
Carcinogenicity		No data.
Mutagenicity		No data.
Toxicity for reproduction		No data.
11.2 Other information		None

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity	May cause harm to the environment; this harm is generally not expected to be long-term.
12.2 Persistence and degradability	Partially persistent
12.3 Bioaccumulative potential	Particulate material may bioaccumulate.
12.4 Mobility in soil	Variable mobility; dependent upon component.
12.5 Results of PBT and vPvB assessment	No data.
12.6 Other adverse effects	Environmental hazards cannot be excluded by inappropriate handling or disposal.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods	Disposal should be in accordance with local, state or national legislation. Containers must not be punctured or destroyed by burning, even when empty.
13.2 Additional Information	None

SECTION 14: TRANSPORT INFORMATION

Land transport (ADR/RID) (b)(c)(d)

UN number	1950
Proper Shipping Name	Aerosols, Non-Flammable
Transport hazard class(es)	2.2
Packing Group	NA
Hazard label(s)	Non-Flammable Gas
Environmental hazards	None
Special precautions for user	None

Sea transport (IMDG) (b)(c)(d)

UN number	1950
Proper Shipping Name	Not classified as dangerous for transport.
Transport hazard class(es)	2.2
Packing Group	NA
Marine Pollutant	None
Special precautions for user	None

Land transport (Within USA) (b)(c)(d)

UN number	1950 (or ORM-D)
Proper Shipping Name	Aerosols, Non-Flammable
Transport hazard class(es)	2.2 or ORM-D
Packing Group	NA
Hazard label(s)	Non-Flammable Gas /ORM-D
Environmental hazards	None
Special precautions for user	None

Air transport (ICAO/IATA) (b)(c) (d)

UN number	1950
Proper Shipping Name	Aerosols, Non-Flammable
Transport hazard class(es)	2.2
Packing Group	NA
Environmental hazards	None
Special precautions for user	None





(b)– Limited Quantity for packages less than 30 kg (66 lb). Consult regulation for inner packing limits.

(c)– Consult with transport provider.

(d)– Check relevant regulations for Special Provisions.

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**SECTION 15: REGULATORY INFORMATION****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****15.1.1 EU regulations**

Authorisations and/or restrictions on use	Consult the supplier.
European Union (EINECS/ELINCS)	All chemicals listed
WGK number	2

15.1.2 National regulations**USA**

TSCA (Toxic Substance Control Act)	All chemicals listed
SARA 311/312 - Hazard Categories	Acute Health, Pressurized
SARA 302 - Extremely Hazardous Substances	Listed - None
SARA 313 - Toxic Chemicals	Listed - Ammonia (as ammonium hydroxide)
CERCLA (Comprehensive Environmental Response Compensation and Liability Act)	RQ = 1000 lbs. (454 kg) as ammonium hydroxide.
CAA (Clean Air Act 1990)	Listed - None
CWA (Clean Water Act)	Listed - None
State Right to Know Lists	Listed as required.
Proposition 65 (California)	Listed - None

Canada

WHMIS Classification	A – Compressed Gas.
Canada (DSL/NDL)	Listed as required.
Canada Ingredient Disclosure List (CIDL)	Listed as required.

Japan

Japan Fire Service Act	Not classified as flammable/combustible, oxidizing, or reactive.
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15.2 Chemical Safety Assessment

Hazardous – Aspiration hazard, Aerosol propellant. May cause irritation to skin and eyes.

SECTION 16: OTHER INFORMATION**The following sections contain revisions or new statements: 1-16.****LEGEND**

ACGIH	American Conference of Governmental Industrial Hygienists	NA	not applicable, not available
AICS	Australian Inventory of Chemical Substances	NIOSH	National Institute for Occupational Safety and Health
ANSI	American National Standards Institute	ND	not determined
atm	atmosphere (pressure unit)	NFPA	National Fire Prevention Association
BOD	biological oxygen demand	NTP	National Toxicology Program
CAS	Chemical Abstracts Service	OC	open cup
CC	closed cup	OSHA	Occupational Safety and Health Administration
CDTA	Chemical Drug and Trafficking Act	Part	partition
COC	Cleveland Open Cup	PEL	permissible exposure limits
COD	chemical oxygen demand	ppb	parts per billion
coeff.	coefficient	PPE	personal protective equipment
CFR	Code of Federal Regulations	ppm	parts per million
CPR	cardio-pulmonary resuscitation	psi	pounds per square inch
DEA	Drug Enforcement Agency	RCRA	Resource Conservation and Recovery Act
DOT	Department of Transportation	RQ	Reportable quantity
DSCL	Dangerous Substances Classification and Labeling	RTK	Right to Know
EEC	European Economic Community	SARA	Superfund Amendments and Reauthorization Act
FDA	Food and Drug Administration	STEL	short-term exposure limit
HMIS	Hazardous Materials Information System	SUSDP	Standard for the Uniform Scheduling of Drugs and Poisons (Australia)



Roadside® Fix-a-Flat®

IARC	International Agency for Research on Cancer	TCC	Tagliabue Closed Cup
IDLH	immediate danger to life or health	TDG	Transportation of Dangerous Goods
kg	kilogram	TPQ	threshold planning quantity
L	liter	TQ	threshold quantity
LC50	median lethal concentration	TSCA	Toxic Substances Control Act
LD50	median lethal dose	TWA	time-weighted average
LEL	lower explosive limit	UEL	upper explosive limit
mg	milligram	WES	Workplace Exposure Standard (New Zealand)
mL	milliliter	WHMIS	Workplace Hazardous Material Information System

References: RTECS, CAS Registry, EINECS/ESIS, *Casarett & Doull's Toxicology*, *Goldfrank's Toxicological Emergencies*, Manufacturer Information

Risk Phrases and Safety Phrases

R10: Flammable.
 R23: Toxic by inhalation.
 R34: Causes burns.
 R50: Very toxic to aquatic organisms.
 S2: Keep out of the reach of children.
 S7/9: Keep container tightly closed and in a well-ventilated place.
 S23: Do not breathe gas.
 S24/25: Avoid contact with skin and eyes.
 S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
 S28: After contact with skin, wash immediately with plenty of soap and water.
 S36/37/39: Wear suitable protective clothing, gloves and eye/face protection.
 S38: In case of insufficient ventilation, wear suitable respiratory equipment.
 S45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
 S46: If swallowed, seek medical advice immediately and show this container or label.
 S51: Use only in well-ventilated areas.
 S56: Dispose of this material and its container to hazardous or special waste collection point.
 S61: Avoid release to the environment. Refer to special instructions/Safety Data Sheets.
 S62: If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.
 S63: In case of accident by inhalation: remove casualty to fresh air and keep at rest.

Hazard statement(s) and Precautionary statement(s)

H221: Flammable gas.
 H280: Contains gas under pressure; may explode if heated.
 H304: May be fatal if swallowed and enters airways.
 H314: Causes severe skin burns and eye damage.
 H331: Toxic if inhaled.
 H400: Very toxic to aquatic life.
 P201: Obtain special instructions before use.
 P210: Keep away from heat, sparks, open flame, hot surfaces - No smoking.
 P260: Do not breathe gas.
 P261: Avoid breathing dust/fume/gas/mist/vapours/spray.
 P264: Wash (hands and exposed skin) thoroughly after handling.
 P271: Use only outdoors or in a well-ventilated area.
 P273: Avoid release to the environment.
 P280: Wear protective gloves/protective clothing/eye protection/face protection.
 P301 + P330 + P331: IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
 P303 + P361 + P353: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
 P304 + P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
 P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P310: Immediately call a POISON CENTRE or doctor/physician.
 P311: Call a POISON CENTRE or doctor/physician.
 P321: Specific treatment (see on this label).
 P361: Remove/Take off immediately all contaminated clothing.
 P363: Wash contaminated clothing before reuse.
 P377: Leaking gas fire: Do not extinguish, unless leak can be stopped safely.
 P381: Eliminate all ignition sources if safe to do so.
 P403: Store in a well-ventilated place.
 P405: Store locked up.
 P410 + P403: Protect from sunlight. Store in a well-ventilated place.
 P501: Dispose of contents/container to:

Training advice: None

Additional Information: Replaces all previous editions.



Roadside® Fix-a-Flat®

Information contained in this publication or as otherwise supplied to Users is believed to be accurate and is given in good faith, but it is for the Users to satisfy themselves of the suitability of the product for their own particular purpose. XXXX gives no warranty as to the fitness of the product for any particular purpose and any implied warranty or condition (statutory or otherwise) is excluded except to the extent that exclusion is prevented by law. XXXX accepts no liability for loss or damage (other than that arising from death or personal injury caused by defective product, if proved), resulting from reliance on this information. Freedom under Patents, Copyright and Designs cannot be assumed.





MATERIAL SAFETY DATA SHEET

SECTION 1 – CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

<u>Company Name</u> Nu-Calgon Wholesaler, Inc.	<u>Phone Number</u> (314) 469-7000 / (800) 554-5499		<u>CHEMTREC</u> (800) 424-9300	
<u>Street Address</u> 2008 Altom Court	<u>City</u> St. Louis	<u>State</u> MO	<u>Postal Code</u> 63146-4151	<u>Last Update</u> 1/8/13
<u>Product Name</u> Rx11-flush	<u>Product Number</u> 4300-11	<u>Product Use</u> Air Conditioning & Refrigerant System Flush.		<u>EPA Registration #</u> N/A

SECTION 2 – COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Ingredients	% By Wt.	CAS Number	TLV	PEL
Tetrafluoroethane	10.0-20.0	811-97-2	1000 ppm TWA	1000 ppm STEL AEL: 1000 ppm TWA
1,1,1,2,3,4,4,5,5,5-decafluoropentane	5.0-25.0	138495-42-8	None Established	None Established AEL: 200 ppm, 8 & 12 hr. TLV 400 ppm ceiling
Trans,1,2-dichloroethylene	40.0-60.0	156-60-5	200 ppm STEL, 8 hour TWA	200 ppm, 790 mg/m ³ , 8 hour TWA. AEL: 200 ppm, 8 & 12 hour TWA
Ethyl Alcohol	02.0-06.0	64-17-5	1,000 ppm	1,000 ppm
1,1,1,3,3-Pentafluorobutane	10.0-30.0	406-58-6	None Established	None Established AEL 200 ppm TWA

SECTION 3 – HAZARD IDENTIFICATION

Emergency Overview: Colorless azeotropic liquid with a slight ethereal odor. This product is nonflammable. Liquid will irritate eyes and skin under repeated or prolonged exposure. Product vapors displace air and can cause asphyxiation especially in confined spaces.

Potential Health Effects

Eyes: Moderate irritation. Persons wearing contact lenses should wear chemical protective safety glasses when exposed to this product.

Skin: For repeated contact: dry/chapped skin, risk of chronic dermatitis.

Ingestion: Harmful if swallowed. Irritating to the mouth, throat and stomach.

Inhalation: Inhalation of high concentrations of vapor is harmful and may cause heart irregularities, unconsciousness, or death. Intentional misuse or deliberate inhalation may cause death without warning.

Chronic Exposure: No Data.

Carcinogenicity: None of the components present in this material are listed by IARC, NTP, OSHA or ACGIH as a carcinogen.

Medical Conditions Aggravated by Exposure: Preexisting disease of the heart, lungs, skin and eyes.

SECTION 4 – FIRST AID MEASURES

Eyes: Immediately flush with water. Remove any contact lenses and continue flushing for 15 minutes, lifting eyelids occasionally until no evidence of the chemical remains. If irritation develops or persists call a physician.

Skin: Wash promptly with soap and water. Remove contaminated clothing and shoes and replace with clean clothing.

Ingestion: DO NOT induce vomiting. Immediately give two glasses of water. Never give anything by mouth to an unconscious person. Call a physician.

Inhalation: Remove to fresh air. Keep person calm. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

SECTION 5 – FIREFIGHTING MEASURES

Flash Point: Not flammable per Tag Closed Cup (ASTM D 56) and Pensky-Martins Closed Cup (ASTM D 93).°C/ °F

Autoignition Temp: No Data.°C/No Data.°F

Hazardous Products of Combustion: No Data.

Flammable Limits in Air: LEL/UEL: 4.3 - 13.5 (% by volume)

Extinguishing Media: CO2, dry chemical, water spray, water fog

Fire and Explosion Hazards: No Data.

Special Firefighting Procedures: Evacuate personnel. Wear self contained breathing apparatus (SCBA) and full protective equipment. Containers generate pressure when heated causing violent bursting and dangerous propelling of container. May form toxic decomposition products above 480o F/ 250o C.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Spill or Leak: Evacuate area, absorb spilled liquid with commercial, nonflammable absorbent i.e. sand, vermiculite. Remove unprotected personnel. Protected personnel should remove ignition sources and shut off fire sources. Provide ventilation. Shovel (spark proof) absorbent material into drums and close. Do not flush to sewer.

SECTION 7 – HANDLING AND STORAGE

Handling Procedures and Equipment: Avoid breathing vapors or mist. Use only with adequate ventilation. Avoid repeated or prolonged contact with eyes, skin or clothing. Wash thoroughly after handling.

Storage Requirements: Do not store in direct sunlight. Store in cool dry place, away from heat, sparks or flames which may generate toxic decomposition products. Vapors are heavy and may concentrate in low poorly ventilated areas. Keep away from children.

SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

Respiratory Protection: Use only with adequate ventilation. Keep container tightly closed. Use approved NIOSH self-contained or supplied air respirators for emergencies and in situations where air may be displaced by vapors.

Eye Protection: Use chemical protective safety glasses.

Protective Clothing: Where there is potential for skin contact, use appropriate impervious gloves, apron, pants and jacket.

Exposure Guidelines: Applicable Exposure Limits See Section 2.

Specific Engineering Controls (such as ventilation, enclosed process): No Data.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Physical Form: liquid	Freezing Point: No Data.°C/No Data.°F	% Volatile by Weight: 100%
Color: Clear colorless	Vapor Density [air =1]: 3.4	Evaporation Rate: (ether = 1):>1
Odor: Slight Ethereal	Vapor Pressure: 5.5 psia at 20o C /77o F	Specific Gravity: 1.206 (10.06 lbs/gal)
Boiling Point: 41°C/106°F	Solubility in Water: 0.4%	pH (concentrate): No Data.

SECTION 10 – STABILITY AND REACTIVITY

Chemical Stability: Material is stable.

Hazardous Polymerization: Will not occur.

Incompatibilities: Alkali or alkaline earth metals powdered Al, Zn, Be, Na, Mg, etc. Incompatible w/strong bases such as NaOH, KOH, etc.

Reactive Conditions to avoid: No Data.

Decomposition Products: Decomposes with heat. High temperatures (open flame, glowing metal surfaces, etc.) can decompose forming hydrofluoric acid and possibly carbonyl fluoride. This material is incompatible with strong bases and can react to form salts of hydrofluoric acid and unsaturated compounds of unknown toxicity.

SECTION 11 – TOXICOLOGICAL INFORMATION

Hazardous Ingredients

This material is currently undergoing chronic toxicity testing. 1,1,1,2,3,4,4,5,5,5-decafluoropentane: Oral LD50>5,000 mg/kg in rats. Dermal LD > 5,000 mg/kg in rabbits. Inhalation, 4 hour LC50: 11,100 ppm in rats. Animal testing indicates that 1,1,1,2,3,4,4,5,5,5-decafluoropentane is a slight skin irritant and a mild eye irritant, but is not a skin sensitizer. Single exposure to 5,000 ppm by inhalation caused tremors. No cardiac sensitization was observed. A different single exposure study by inhalation in rats caused incoordination, hyperactivity and prostration; pathological examination of rats from this study revealed kidney and lung changes and external hair loss. Repeated exposures to 1,900-3,500 ppm caused tremors or convulsions, behavioral effects, and altered clinical chemistry. These effects were temporary. In a different repeated exposure test the No Observed Adverse Effect Level (NOAEL) for convulsions was 1,000 ppm. Results indicate convulsions is an acute effect of 1,1,1,2,3,4,4,5,5,5-decafluoropentane. The 90 day NOAEL is 500 ppm. In animal testing this material produced developmental effects only at exposure levels producing other toxic effect in the adult animal. No animal data are available to define the carcinogenic or reproductive hazards of this material. Tests have shown that 1,1,1,2,3,4,4,5,5,5-decafluoropentane does not cause genetic damage in bacterial or mammalian cell cultures. It has not produced genetic damage in tests on animals. Trans,1,2-dichloroethylene (t-DCE): A severe eye irritant and a moderate to severe skin irritant. Single and repeated exposure by ingestion caused increased kidney weight, histopathological changes of the lungs, liver effects, decreased motor activity, pulmonary edema, cardiovascular system changes, and mortality. Single and repeated exposure to t-DCE by inhalation caused pathological changes of the liver and lungs, inactivity/anaesthesia, altered white blood cell count, cardiovascular system changes and weak cardiac sensitization, a potentially fatal disturbance of the heart rhythm caused by heightened sensitivity to the action of epinephrine. Long term exposure caused altered liver and lung functions. A Dec. 1998 inhalation study conducted with 99.45 pure t-DCE produced no adverse, compound related effects. The NOEL was 4,000ppm. Exposure of pregnant rats shows maternal toxicity at 2,000, 6,000 & 12,000ppm. Developmental toxicity was seen only at 12,000 ppm. Tests have shown that T-DCE does not cause genetic damage in bacterial or mammalian cell cultures. No animal data are available to define the carcinogenic or reproductive hazards of t-DCE. 1,1,1,3,3-Pentafluorobutane: No Federal OSHA PEL (29 CFR 1919.1000) or ACGIH TLV values are established for this chemical. The manufacturer of this material (Solvay) has established an AEL as an 8 hour & 12 hour TWA of 500 ppm. Where governmentally imposed occupational exposure limits which are lower than the above AEL are in effect, such limits shall take precedence.

SECTION 12 – ECOLOGICAL INFORMATION

<u>Hazardous Ingredients</u>	<u>Aquatic Toxicity Data</u>
1,1,1,2,3,4,4,5,5,5-decafluoropentane:	96 hour LC50 in fathead minnows: 27.2 mg/L 96 hr LC50 in rainbow trout: 13.9 mg/L 48 hour LC50 in Daphnia magna: 11.7 mg/L
1,1,1,3,3-Pentafluorobutane:	96 hour LC50 in Zebra fish : >200 mg/L 48 hour NOEC in Daphnia magna: >200 mg/L 72 hour NOEC in Algae: 113 mg/L
Trans,1,2-dichloroethylene:	96 hour LC 50 in bluegill sunfish: 1350 mg/L 48 hour LC50 in Daphnia magna: 220 mg/L

SECTION 13 – DISPOSAL CONSIDERATIONS

Waste Disposal: Reclaim by distillation or remove to a permitted waste disposal facility. Treatment, storage, transportation, and disposal must be in accordance with applicable Federal, State/Provincial and Local regulations.

SECTION 14 – TRANSPORTATION INFORMATION

Special Shipping Information: No Data.

<u>Purview</u>	<u>Proper Shipping Name</u>	<u>UN Number</u>	<u>Packing Group</u>	<u>Hazard Class</u>
DOT (Land)	Consumer Commodity	No Data.	No Data.	ORM-D
IMO (Water)	No Data.	No Data.	No Data.	No Data.
ICAO (Air)	Aerosols Nonflammable NOS Hazard Label: Nonflammable Gas	1950	N/A, Pkg.Instr.203	2.2

SECTION 15 – REGULATORY INFORMATION

WHMIS Classification: (Workplace Hazardous Material Information System)	Class A
SARA Title III: (Superfund Amendments & Reauthorization Act)	Acute Yes; Chronic No; Fire No; Reactivity No; Pressure No
OSHA: (Occupational Safety & Health Administration)	No Data.
TSCA: (Toxic Substance Control Act)	No Data.
VOC: (volatile Organic Compounds)	Contains 367 grams/liter Volatile Organic Compounds.
CPR: (Canadian Controlled Products Regulations)	This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations.
EINECS: (European Inventory of Existing Commercial Chemical Substances)	No Data.
DSL / NDSL: (Canadian Domestic Substance List)(Non-Domestic Substance List)	No Data.
CERCLA: (Comprehensive Response Compensation & Liability Act)	No
IDL: (Canadian Ingredient Disclosure List)	No Data.
NFPA (HMIS) Rating: (Hazardous Materials Identification System)	Health 1 Flammability 0 Reactivity 1

SECTION 16 – OTHER INFORMATION

No Data.

The information contained herein is based on the data available to us and is believed to be correct. However, Nu-Calgon Wholesaler Inc. makes no warranty, expressed, or implied, regarding the accuracy of this data or the results to be obtained from the use thereof. Nu-Calgon Wholesaler Inc. assumes no liability for injury from the use of the product described herein.



The MSDS format adheres to the standards and regulatory requirements of the United States and may not meet regulatory requirements in other countries.

DuPont
Material Safety Data Sheet

Page 1

"FREON" 502 Refrigerant
2075FR Revised 4-MAY-2004

CHEMICAL PRODUCT/COMPANY IDENTIFICATION

Material Identification

"FREON" is a registered trademark of DuPont.

Corporate MSDS Number : DU001047
Formula : CHClF₂/CClF₂CF₃
(AZEOTROPE)

Company Identification

MANUFACTURER/DISTRIBUTOR
DuPont Fluoroproducts
1007 Market Street
Wilmington, DE 19898

PHONE NUMBERS

Product Information : 1-800-441-7515 (outside the U.S.
302-774-1000)
Transport Emergency : CHEMTREC 1-800-424-9300(outside U.S.
703-527-3887)
Medical Emergency : 1-800-441-3637 (outside the U.S.
302-774-1000)

COMPOSITION/INFORMATION ON INGREDIENTS

Components

Material	CAS Number	%
"FREON" 502	39432-81-0	100

*	76-15-3	
*ETHANE, CHLOROPENTAFLUORO- ("FREON" 115)		51.2
*METHANE, CHLORODIFLUORO- ("FREON" 22)	75-45-6	48.8

* Disclosure as a toxic chemical is required under Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR part 372.

HAZARDS IDENTIFICATION

Potential Health Effects

Immediate effects of overexposure by inhalation may include central nervous system depression with dizziness, confusion, incoordination, drowsiness or unconsciousness. Gross overexposure may cause irregular heart beat with a strange sensation in the chest, "heart thumping", apprehension,

(HAZARDS IDENTIFICATION - Continued)

lightheadedness, feeling of fainting, dizziness, weakness, sometimes progressing to loss of consciousness, death and suffocation, if air is displaced by vapors. Other effects include fatality from gross overexposure.

Immediate effects of overexposure by skin contact may include frostbite, if liquid or escaping vapor contacts the skin. Repeated and/or prolonged exposure may cause defatting of the skin with itching, redness or rash. Significant skin permeation, and systemic toxicity, after contact appears unlikely. There are no reports of human sensitization.

Immediate effects of overexposure may include eye irritation with tearing, pain or blurred vision.

Increased susceptibility to the effects of this material may be observed in persons with pre-existing disease of the central nervous system and cardiovascular system.

Carcinogenicity Information

None of the components present in this material at concentrations equal to or greater than 0.1% are listed by IARC, NTP, OSHA or ACGIH as a carcinogen.

FIRST AID MEASURES

First Aid

INHALATION

If large amounts are inhaled, immediately remove to fresh air. Keep persons calm. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

SKIN CONTACT

In case of skin contact, flush with water for 15 minutes. Treat for frostbite if necessary by gently warming affected area.

EYE CONTACT

In case of eye contact, immediately flush eyes with plenty of water for 15 minutes. Call a physician.

INGESTION

Ingestion is not considered a potential route of exposure.

(FIRST AID MEASURES - Continued)

Notes to Physicians

Because of possible disturbances of cardiac rhythm, catecholamine drugs, such as epinephrine, should be used with special caution only in situations of emergency life support.

FIRE FIGHTING MEASURES

Flammable Properties

Flash Point : Will not burn
Flammable limits in Air, % by Volume
LEL : Not applicable
UEL : Not applicable
Autoignition : 704 C (1299 F)

Fire and Explosion Hazards:

Cylinders are equipped with temperature and pressure relief devices but still may rupture under fire conditions. Decomposition may occur.

Extinguishing Media

As appropriate for combustibles in area.

Fire Fighting Instructions

Keep containers cool with water spray. Self-contained breathing apparatus (SCBA) is required if cylinders rupture or release under fire conditions.

ACCIDENTAL RELEASE MEASURES

Safeguards (Personnel)

NOTE: Review FIRE FIGHTING MEASURES and HANDLING (PERSONNEL) sections before proceeding with clean-up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean-up.

Accidental Release Measures

Ventilate area - especially low places where heavy vapors might collect. Remove open flames. Use self-contained breathing apparatus (SCBA) for large spills. Comply with Federal, State, and local regulations for reporting releases.

HANDLING AND STORAGE

Handling (Personnel)

Avoid breathing vapors. Avoid liquid contact with skin or eyes. Use with sufficient ventilation to keep employee exposure below recommended limits.

Storage

Clean, dry area. Do not heat above 52 deg C (125 deg F).

EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls

Use with sufficient ventilation to keep employee exposure below recommended exposure limits. Local exhaust should be used when large amounts are released. Mechanical ventilation should be used in low or enclosed places.

Personal Protective Equipment

Impervious gloves and chemical splash goggles should be used if contact is possible. Under normal manufacturing conditions, no respiratory protection is required when using this product. Self-contained breathing apparatus (SCBA) is required if a spill or release occurs.

Exposure Guidelines

Applicable Exposure Limits

ETHANE, CHLOROPENTAFLUORO- ("FREON" 115)

PEL (OSHA) : None Established

TLV (ACGIH) : 1,000 ppm, 6,320 mg/m3, 8 Hr. TWA

AEL * (DuPont) : None Established

METHANE, CHLORODIFLUORO- ("FREON" 22)

PEL (OSHA) : None Established

TLV (ACGIH) : 1,000 ppm, 3,540 mg/m3, 8 Hr. TWA, A4

AEL * (DuPont) : None Established

* AEL is DuPont's Acceptable Exposure Limit. Where governmentally imposed occupational exposure limits which are lower than the AEL are in effect, such limits shall take precedence.

PHYSICAL AND CHEMICAL PROPERTIES

Physical Data

Boiling Point : -45.4 C (-49.7 F)
Vapor Pressure : 169 psia at 25 deg C (77 deg F)
Vapor Density : 3.92 at 25 deg C (77 deg F) (Air= 1)
% Volatiles : 100 WT%
Evaporation Rate : >1 (CCl4 = 1)
Solubility in Water : 0.15 WT% @ 25 C (77 F)
pH : Neutral
Odor : Slight ethereal
Form : Liquified gas
Color : Clear, colorless
Density : 1.22 g/cc at 25 deg C (77 deg F) - Liquid

STABILITY AND REACTIVITY

Chemical Stability

Material is stable. However, avoid open flames and high temperatures.

Incompatibility with Other Materials

Incompatible with alkali or alkaline earth metals- powdered Al, Zn, Be, etc.

Polymerization

Polymerization will not occur.

Other Hazards

Decomposition : Decomposition products are hazardous. "FREON" 502 Refrigerant can be decomposed by high temperatures (open flames, glowing metal surfaces, etc.) forming hydrochloric and hydrofluoric acids, and possibly carbonyl halides.

TOXICOLOGICAL INFORMATION

Animal Data

This material has not been tested for eye irritation.

This material has not been tested for skin irritation or sensitization.

Single exposure to high doses caused altered respiratory rate, lung noise, incoordination, cardiac sensitization, a potentially fatal disturbance of heart rhythm associated

(TOXICOLOGICAL INFORMATION - Continued)

with a heightened sensitivity to the action of epinephrine.

No animal data are available to define the carcinogenicity, developmental, reproductive or mutagenic hazards of this material.

Chloropentafluoroethane (CFC-115):

Ingestion ALD, dog: >1,200 mg/kg Inhalation 4 hour, LC50,
rat: > 800,000 ppm

Repeated exposure by ingestion caused diarrhea and excessive activity.

This material has not produced genetic damage in bacterial cultures.

Chlorodifluoromethane (HCFC-22):

Inhalation 4 hour, LC50, rat: 220,000 ppm

Animal testing indicates this material is a slight eye irritant.

Animal testing indicates this material is a skin irritant, but not a skin sensitizer.

Long-term exposure by ingestion caused no significant toxicological effects.

Long-term exposure by inhalation caused reduced weight gain, increased adrenals, kidney, liver, and pituitary weight.

In chronic inhalation studies, HCFC-22, at a concentration of 50,000 ppm (v/v), produced a small, but statistically significant increase of late-occurring tumors involving salivary glands in male rats, but not female rats or male or female mice. In the same studies, no increased incidence of tumors was seen in either species at concentrations of 10,000 ppm or 1000 ppm (v/v). Animal data show developmental effects only at exposure levels producing other toxic effects in the adult animal. This material is not considered a unique developmental hazard to the conceptus. Reproductive data on male animals show: No change in reproductive performance. Specific studies to evaluate the effect on female reproductive performance have not been conducted; however, limited information obtained from studies on developmental toxicity do not indicate adverse effects on female reproductive performance. This material produces genetic damage in bacterial cell cultures. In mammalian cell cultures and animals, this material has not produced genetic toxicity. In animal testing, this material has not caused permanent genetic damage in reproductive cells of mammals (has not produced heritable genetic

(TOXICOLOGICAL INFORMATION - Continued)

damage).

ECOLOGICAL INFORMATION

Ecotoxicological Information

Aquatic Toxicity:

"Freon" 22:

48 hour EC50 - Daphnia magna: 433 mg/L

Chloropentafluoroethane (CFC-115):

96 hour LC50 - Rainbow trout: > 2.3 mg/L

DISPOSAL CONSIDERATIONS

Waste Disposal

Comply with Federal, State, and local regulations. Remove to a permitted waste disposal facility or reclaim by distillation.

TRANSPORTATION INFORMATION

Shipping Information

DOT/IMO

Proper Shipping Name : CHLORODIFLUOROMETHANE AND
CHLOROPENTAFLUOROETHANE MIXTURE

Hazard Class : 2.2

UN No. : 1973

DOT/IMO Label : NONFLAMMABLE GAS

Shipping Containers

Cylinders

Ton Tanks

REGULATORY INFORMATION

U.S. Federal Regulations

TSCA Inventory Status : Reported/Included.

TITLE III HAZARD CLASSIFICATIONS SECTIONS 311, 312

Acute : Yes

Chronic : No

(REGULATORY INFORMATION - Continued)

Fire : No
Reactivity : No
Pressure : Yes

HAZARDOUS CHEMICAL LISTS

SARA Extremely Hazardous Substance: No
CERCLA Hazardous Substance : No
SARA Toxic Chemical - See Components Section

OTHER INFORMATION

NFPA, NPCA-HMIS

NPCA-HMIS Rating
Health : 1
Flammability : 0
Reactivity : 1

Personal Protection rating to be supplied by user depending on use conditions.

The data in this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process.

Responsibility for MSDS : MSDS Coordinator
> : DuPont Fluoroproducts
Address : Wilmington, DE 19898
Telephone : (800) 441-7515

Indicates updated section.

This information is based upon technical information believed to be reliable. It is subject to revision as additional knowledge and experience is gained.

End of MSDS

CTG026

309124

Rev. D MAR 02, 2007

MATERIAL SAFETY DATA SHEET**PUMP ARMOR**

Lubrication Technologies, Inc.
900 Mendelssohn Avenue North
Golden Valley, MN 55427

24-HOUR EMERGENCY CONTACTS
Health Emergency (RMPC): 303-623-5716
Chemical Spills (Chemtrec): 800-424-9300
General Information: 763-545-0707
Facsimile: 763-545-9256

SECTION 1 CHEMICAL PRODUCT IDENTIFICATION

Product: Graco Pump Armor
Synonyms/Other: Not Applicable
Item Number(s): 243103, 245133, 243104, 244168, 248566
MSDS Number: 0189
Product Type: Corrosion Inhibitor/lubricant
Preparation/Revision Date: 03/05/2007

SECTION 2 COMPOSITION INFORMATION

INGREDIENTS	CAS #	%	OSHA TWA	OSHA STEL	ACGIH TWA	SKIN
Ethylene glycol	107-21-1	45-60	50 ppm (aerosol)	--	127 mg/m ³ (ceiling)	NO
Water	7732-18-4	40-49	--	--	--	NO
Proprietary additives	Mixture	Balance	--	--	--	NO

Comments: Not applicable.
TWA – Time Weighted Average is the employee's average airborne exposure in any 8-hour work shift of a 40-hour work week which shall not be exceeded.
STEL – Short Term Exposure Limit is the employee's 15-minute time weighted average exposure which shall not be exceeded at any time during a work day unless another time limit is specified.

SECTION 3 HAZARDOUS IDENTIFICATION

WARNING:

- HARMFUL IF SWALLOWED
- MAY CAUSE DIZZINESS AND DROWSINESS
- MAY CAUSE EYE IRRITATION
- ASPIRATION HAZARD IF SWALLOWED, CAN ENTER LUNGS
- CAN CAUSE KIDNEY DAMAGE IF SWALLOWED

Eye contact: Direct contact may cause irritation, redness, tearing and blurred vision.
Skin contact: Brief contact may cause slight irritation. Prolonged contact, as with clothing wetted with material, may cause more severe irritation and discomfort, seen as local redness and swelling.
Other than the potential skin irritation effects noted above, acute (short term) adverse effects are not expected from brief skin contact.

Inhalation: Vapors or mist, in excess of permissible concentrations, or in unusually high concentrations generated from spraying, heating the material or from exposure in poorly ventilated areas or confined spaces, may cause irritation of the nose and throat, headache, nausea and drowsiness.

Ingestion: Contains ethylene glycol, which is toxic when swallowed. A lethal dose for an adult is 1-2 mL per kilogram, or about 4 ounces (1/2 cup). Symptoms include headache, weakness, confusion, dizziness, staggering, slurred speech, loss of coordination, faintness, nausea and vomiting, increased heart rate, decreased blood pressure, difficulty in breathing and seeing, pulmonary edema, unconsciousness, convulsions, collapse, and coma. Symptoms may be delayed. Decreased urine output and kidney failure may also occur. Severe poisoning may cause death.

Other: Aspiration may occur during swallowing or vomiting, resulting in lung damage.

SECTION 4 FIRST AID MEASURES

Eye contact:	Immediately flush eyes with plenty of water for at least 15 minutes. Hold eyelids apart while flushing to rinse entire surface of eye and lids with water. Get medical attention.
Skin contact:	Wash skin with plenty of soap and water for several minutes. Get medical attention if skin irritation develops or persists.
Inhalation:	If irritation, headache, nausea, or drowsiness occurs, remove to fresh air. Get medical attention if breathing becomes difficult or respiratory irritation persists.
Ingestion:	If person is conscious and can swallow, immediately give two glasses (16 ounces) of water. Induce vomiting as directed by medical personnel. Get medical attention. Never give anything by mouth to an unconscious or convulsing person.
Other:	Ethylene glycol (EG) intoxication may initially produce behavioral changes, drowsiness, vomiting, diarrhea, thirst, and convulsions. EG is nephrotoxic (kidney damaging). End stages of poisoning may include renal damage or failure with acidosis. Supportive measures, supplemented with hemodialysis if indicated, may limit the progression and severity of toxic effects. For ethylene glycol poisoning intravenous ethanol is a recognized antidotal treatment; other antidotal treatments also exist for EG poisoning. Aspiration of this product during induced emesis may result in severe lung injury. If evacuation of stomach is necessary, use method least likely to cause aspiration - such as gastric lavage after endotracheal intubation. Contact a poison center for additional treatment information.

SECTION 5 FIRE FIGHTING MEASURES

Flash point:	118°C (244°F) typical by ASTM D 92 (COC) for ethylene glycol. If material contains water from addition - flash will not occur until water has boiled off.
Flammable limits:	Not determined.
Extinguishing media:	Use water spray, dry chemical, alcohol foam, all purpose AFFF or carbon dioxide to extinguish fire.
Special firefighting procedures:	Evacuate area and fight fire from a safe distance. If leak or spill has not ignited, ventilate area and use water spray to disperse gas or vapor and to protect personnel attempting to stop a leak. Use water spray to cool adjacent structures and to protect personnel. Shut off source of flow if possible (safely). Stay away from storage tank ends. Withdraw immediately in case of rising sound from venting safety device or any discoloration of storage tank due to fire. Fire fighters must wear MSHA/NIOSH approved positive pressure breathing apparatus (SCBA) with full face mask and full protective equipment.
Unusual fire & explosion hazards:	Dense smoke may be generated while burning. Toxic fumes, gases or vapors may evolve on burning. Heavy flammable vapors may settle along ground level and low spots to create an invisible fire hazard. The vapors may extend to sources of ignition and flash back.
Byproducts of combustion:	Fires involving this product may release COx, NOx, SOx, reactive hydrocarbons and irritating vapors.
Autoignition temperature:	Not determined.
Explosion data:	Not determined. Care should always be exercised in dust/mist areas.
Other:	Not applicable.

SECTION 6**ACCIDENTAL RELEASE MEASURES****Spill control
procedures (land):**

Immediately turn off or isolate any source of ignition (pilot lights, electrical equipment, flames, heaters, etc.). Evacuate area and ventilate. Personnel wearing proper protective equipment should contain spill immediately with inert materials (sand, earth, chemical spill pads of cotton) by forming dikes. Dikes should be placed to contain spill in a manner that will prevent material from entering sewers and waterways. Large spill, once contained, may be picked up using explosion proof, non-sparking vacuum pumps, shovels, or buckets, and disposed of in suitable containers for disposal. If a large spill (5,000 pounds or ~500 gallons) occurs notify appropriate authorities according to SARA 304 and/or CERCLA 102(a) requirements. In the case of accident or road spill contact Chemtrec at 800-424-9300.

**Spill control
procedures (water):**

Material will readily mix with water. If a large spill occurs notify appropriate authorities (normally the National Response Center or Coast Guard at 800-424-8802).

**Waste disposal
method:**

This product has been evaluated for RCRA characteristics and does not meet the criteria of a hazardous waste if discarded in its purchased form. Under RCRA, it is the responsibility of the user of the product to determine at the time of disposal, whether the product meets RCRA criteria for hazardous waste. This is because product uses, transformations, mixtures, processes, etc. may render the resulting materials hazardous. All disposals must comply with federal, state, and local regulations. The material, if spilled or discarded may be a regulated waste. Refer to state and local regulations. Department of Transportation (DOT) regulations may apply for transporting this material when spilled. See Section 14.

Other:

To prevent contamination of drinking water supplies, and poisoning of children, aquatic life, wildlife, and farm and domestic animals, ethylene glycol products should never be discarded onto the ground, into surface waters, or into storm sewers.

Product spills into the environment of one pound (~1 pint) or more must be reported because of ethylene glycol listing in the 1990 Clean Air Act. For information on reporting requirements for a spill located in a specific location, call the EPA's Chemical Preparedness Program Hotline (800-535-0202).

SECTION 7**HANDLING AND STORAGE****Handling procedures:**

Keep containers closed when not in use. Do not transfer to unmarked containers. Empty containers retain product residue which may exhibit hazards of material, therefore do not pressurize, cut, glaze, weld, or use for any other purposes. Return drums to reclamation centers for proper cleaning and reuse.

Storage procedures:

Periods of exposure to high temperatures should be minimized. Water contamination should be avoided.

Additional information:

No additional information.

SECTION 8**EXPOSURE CONTROLS / PERSONAL PROTECTION****Personal protection:**

Applicable mainly to persons in repeated contact situations such as packaging of product, service/maintenance, and cleanup/spill control personnel.

Respiratory protection:

None required if airborne concentrations are maintained below threshold limits listed on page one. Otherwise a respiratory protection program meeting OSHA 1910.134 and ANSI Z88.2 requirements must be followed. Where misting may occur, wear an MSHA/NIOSH approved (or equivalent) half-mask form dust/mist air purifying respirator.

Eye protection:

Eye protection is strongly recommended. If material is handled such that it could be splashed into the eyes, wear safety glasses with side shields or vented/splash proof goggles (ANSI Z87.1 or approved equivalent).

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Hand protection:	Impervious gloves such as neoprene or nitrile rubber to avoid skin sensitization and absorption.
Other protection:	Use of an apron and overboots of chemically impervious materials such as neoprene or nitrile rubber is recommended to avoid skin sensitization and absorption. If handling hot material use insulated protective equipment. Launder soiled clothes. Properly dispose of contaminated leather articles and other materials which cannot be decontaminated.
Local control measures:	Use adequate ventilation when working with material in an enclosed area. Mechanical methods such as fume hoods or area fans may be used to reduce localized vapor/mist areas. If vapor or mist is generated when the material handled, adequate ventilation in accordance with good engineering practice must be provided to maintain concentrations below the specified exposure. Eyewash stations and showers should be available in areas where this material is used and stored.
Other:	Consumption of food and drink should be avoided in work areas where product is present. Always wash hands and face with soap and water before eating, drinking or smoking.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Vapor pressure:	<0.1 mm Hg at 20°C (68°F) for all grades.
API gravity:	0.0
Density:	8.96 lbs/gal at 15.6°C (60.0°F).
Specific gravity:	1.08 at 15.6°C (60.0°F).
Solubility:	Fully miscible with water, immiscible in most petroleum solvents.
Percent volatile:	Not determined.
Vapor density (air=1):	>1.
Evaporation rate (n-Butyl Acetate=1):	Not determined.
Odor:	Mild, sweet odor.
Appearance:	Clear blue fluid
Viscosity:	< 5 cSt @ 40°C
Boiling point:	Not determined
Pour/Freeze point:	- 30 °F
Other:	pH ~ 10 - 11.

SECTION 10 STABILITY AND REACTIVITY

Stability:	Material is stable at room temperatures and pressure.
Conditions to avoid:	Avoid high temperatures and product contamination.
Incompatibility with other materials:	Avoid contact with acids and oxidizing materials.
Decomposition products:	Smoke, carbon monoxide and dioxide, and other aldehydes of incomplete combustion. Oxides of COx, NOx, SOx, reactive hydrocarbons and irritating vapors.
Hazardous polymerization:	Will not occur.
Other:	Not applicable.

SECTION 11 TOXICOLOGICAL INFORMATION

Oral toxicity:	LD50 (rates) is 4.0 to 4.5 g/kg. Animal data does not reflect human toxicity (see Sections 3 and 4 also). This material meets requirements to be classified as an EPA toxin.
Dermal toxicity:	LD50 believed to be <1.00 - 2.00 g/kg (rabbit), slightly toxic.
Inhalation toxicity:	Not determined.
Dermal sensitization:	Skin (Draize) Believed to be >0.50 - 3.00 / 8.0 (rabbit), slightly irritating. Eyes (Draize) Believed to be >15.00 - 25.00 / 110 (rabbit), slightly irritating.
Chronic toxicity:	Not determined.

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Carcinogenicity: This material does not contain items listed by OSHA, IARC or NTP.
Mutagenicity: Not determined.
Reproductive toxicity: Oral administration of ethylene glycol to pregnant experimental animals has been shown to cause birth defects in offspring. These effects were not seen when ethylene glycol was administered by dermal application or by inhalation.
Other: Continuous ingestion of a diet containing 1 or 2% ethylene glycol for two years produced liver and kidney damage, and bladder stones in rats.

SECTION 12 ECOLOGICAL INFORMATION

Environmental toxicity: This material may be toxic to aquatic organisms and should be kept out of sewage and drainage systems and all bodies of water.
Environmental fate: Not determined.
Other: These materials are estimated to have a moderate ($\geq 30\%$) rate of biodegradation in a test for ready biodegradation. Materials are estimated to have a low potential to bioconcentrate.

SECTION 13 DISPOSAL CONSIDERATIONS

Waste disposal: See Section 6. Under RCRA it is the responsibility of the user of the product to determine at the time of disposal whether the product meets RCRA criteria for hazardous waste. This product unadulterated by other materials may be classified as a non-regulated waste in some areas - but still needs to be disposed of at approved facilities. Waste management should be in full compliance with federal, state, and local laws.
Disposal consideration: See Section 6. Under RCRA it is the responsibility of the user of the product to determine at the time of disposal whether the product meets RCRA criteria for hazardous waste. This product unadulterated by other materials may be classified as a non-regulated waste in some areas - but still needs to be disposed of at approved facilities. Waste management should be in full compliance with federal, state, and local laws.
Other: The transportation, storage, treatment and disposal of RCRA waste material must be conducted in compliance with 40 CFR 262, 263, 264, 268 and 270. Disposal can only occur in properly permitted facilities. Check state and local regulations for any additional requirements as these may be more restrictive than federal laws and regulations. Chemical additions, processing or otherwise altering this material may make the waste management information presented in this MSDS incomplete, inaccurate or otherwise inappropriate. Disposal of this material must be conducted in compliance with all federal, state, and local regulations.

SECTION 14 TRANSPORT INFORMATION

U.S. DOT shipping description (bulk): Other Regulated Substance, Liquid, n.o.s. (ethylene glycol).
U.S. DOT identification number (bulk): NA3082.
U.S. DOT hazard classification: Environmentally Hazardous for quantities greater than 5000 pounds (bulk - class 9).
Packaging class: III.
Other: These materials are exempt from DOT regulations unless quantities greater than 5000 pounds are transported. This exclusion applies to consumer packaging up to DOT shipping drums (515 pounds) and small totes. Shipping notification occurs at 5000 pounds, or approximately 531 gallons.
 Information according to 49 CFR 172.101 for materials predominantly composed of ethylene glycol and glycol suppliers.

SECTION 15**REGULATORY INFORMATION****Clean water act/oil
pollution act:**

Contact the National Response Center at 800-424-8802 in the case of a spill that enters waterways.

TSCA:

All components of this material are listed in the U.S. TSCA Inventory.

Other TSCA:

Not applicable.

SARA Title III:

Section 302/304 extremely hazardous substances:

None.

Section 311, 312 hazard categorization:

Acute (immediate health effects): YES

Chronic (delayed health effects): YES

Fire (hazard): NO

Reactivity (hazard): NO

Pressure (sudden release hazard): NO

Section 313 toxic chemicals:

1,2 ethanediol (CAS 107-21-1) < 60%.

CERCLA:

For stationary/moving sources – reportable quantity (due to):

5000 pounds due to ethylene glycol.

Other:

Recommend contacting the local authorities in the event of any type of spill to determine local reporting requirements and also to aid in the cleanup.

Clean Air Act of 1990: Spills of one pound (~1 pint) or more must be reported. For location specific information contact the EPA's Chemical Emergency Preparedness Program Hotline (800-535-0202).

EPA Toxin: This material is an EPA toxin (ethylene glycol).

WHMIS Classification:

Class D, Div 1, Subdiv B: Toxic.

Class D, Div 2, Subdiv A: Teratogenic.

Class D, Div 2, Subdiv B: Chronic toxic effects.

Ethylene glycol appears on the following State list(s):

Florida Toxic Substance.

Massachusetts Hazardous Substances.

Minnesota Hazardous Substances.

Pennsylvania Hazardous Substances (environmental hazard).

Diethylene glycol appears on the following State list(s):

Minnesota Hazardous Substances.

Pennsylvania Hazardous Substances.

SECTION 16**OTHER INFORMATION**

	NFPA 704	NPCA-HMIS	KEY
HEALTH:	2	2	0 = Minimal
FIRE:	1	1	1 = Slight
REACTIVITY:	0	0	2 = Moderate
SPECIFIC HAZARD:	NONE	N/A	3 = Serious
PROTECTION INDEX:	N/A	B	4 = Severe

Precautionary labels:

- HARMFUL IF SWALLOWED
- MAY CAUSE DIZZINESS AND DROWSINESS
- MAY CAUSE EYE IRRITATION
- ASPIRATION HAZARD IF SWALLOWED, CAN ENTER LUNGS
- CAN CAUSE KIDNEY DAMAGE IF SWALLOWED

Prepared By

Graco, Inc.

309124

Rev. D MAR 02, 2007

This Material Safety Data Sheet and the information it contains is offered to you in good faith as accurate. We have reviewed any information contained in this data sheet which we have received from sources outside our company. We believe that information to be correct, but cannot guarantee its accuracy or completeness. Health and safety precautions in this Data Sheet may not be adequate for all individuals and/or situations. It is the users' obligation to evaluate and use this product safely and to comply with all applicable laws and regulations. No statement made in this data sheet shall be construed as a permission or recommendation for the use of any product in a manner that might infringe existing patents. No warranty is made, either express or implied.

NOTES: NA = Not Applicable; NE = Not Established; UN = Unavailable

All written and visual data contained in this document reflects the latest product information available at the time of publication.

Graco reserves the right to make changes at any time without notice.

Sales Offices: Minneapolis, Detroit,

International Offices: Belgium, Korea, Hong Kong, Japan

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Hach Company
P.O.Box 389
Loveland, CO USA 80539
(970) 669-3050

MSDS No: M00109

Material Safety Data Sheet

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: DPD Free Chlorine Reagent
Catalog Number: 2105569

Hach Company
P.O.Box 389
Loveland, CO USA 80539
(970) 669-3050

Emergency Telephone Numbers:
(Medical and Transportation)
(303) 623-5716 24 Hour Service
(515)232-2533 8am - 4pm CST

MSDS Number: M00109
Chemical Name: Not applicable
CAS No.: Not applicable
Chemical Formula: Not applicable
Chemical Family: Not applicable
Hazard: May cause sensitization. May cause irritation.
Date of MSDS Preparation:
Day: 26
Month: 03
Year: 2003

2. COMPOSITION / INFORMATION ON INGREDIENTS

Salt of N,N-Diethyl-p-Phenylenediamine

CAS No.: Confidential
TSCA CAS Number: Confidential
Percent Range: 1.0 - 5.0
Percent Range Units: weight / weight
LD50: Oral rat LD₅₀ = 970 mg/kg.
LC50: None reported
TLV: Not established
PEL: Not established
Hazard: May cause sensitization. May cause irritation.

Carboxylate Salt

CAS No.: Confidential
TSCA CAS Number: Confidential
Percent Range: 55.0 - 65.0
Percent Range Units: weight / weight
LD50: None reported
LC50: None reported
TLV: Not established
PEL: Not established
Hazard: May cause irritation. Toxic properties unknown.

Sodium Phosphate, Dibasic

CAS No.: 7782856
TSCA CAS Number: 7558-79-4
Percent Range: 30.0 - 40.0
Percent Range Units: weight / weight
LD50: Oral rat LD₅₀ = 12930 mg/kg.
LC50: None reported
TLV: Not established
PEL: Not established

Hazard: May cause irritation.

Ethylenediaminetetraacetic Acid, Disodium Salt

CAS No.: 6384926

TSCA CAS Number: 139-333

Percent Range: 1.0 - 10.0

Percent Range Units: weight / weight

LD50: Oral rat LD50 = 2000 mg/kg

LC50: None reported

TLV: Not established

PEL: Not established

Hazard: May cause irritation.

3. HAZARDS IDENTIFICATION

Emergency Overview:

Appearance: White or light pink powder

Odor: None

MAY CAUSE EYE AND RESPIRATORY TRACT IRRITATION

MAY CAUSE ALLERGIC SKIN REACTION

HMIS:

Health: 2

Flammability: 1

Reactivity: 0

Protective Equipment: X - See protective equipment, Section 8.

NFPA:

Health: 1

Flammability: 1

Reactivity: 0

Symbol: Not applicable

Potential Health Effects:

Eye Contact: MAY CAUSE IRRITATION

Skin Contact: MAY CAUSE IRRITATION May cause allergic reaction

Skin Absorption: None reported

Target Organs: None reported

Ingestion: DPD Oral rat LD50 studies revealed decreased locomotor activity, depressed respiration, muscle spasms, loss of righting reflex and death. Autopsies revealed ulcerated stomach, enteritis, gas and congested lungs.

Target Organs: None reported

Inhalation: May cause: respiratory tract irritation Effects similar to those of ingestion.

Target Organs: None reported

Medical Conditions Aggravated: Allergy or sensitivity to salts of N,NDiethyl-p-phenylenediamine Pre-existing: Eye conditions Skin conditions Respiratory conditions

Chronic Effects: DPD may cause allergic skin reactions in some people causing severe skin rashes and itching.

Cancer / Reproductive Toxicity Information:

This product does NOT contain any OSHA listed carcinogens.

This product does NOT contain any IARC listed chemicals.

This product does NOT contain any NTP listed chemicals.

Additional Cancer / Reproductive Toxicity Information: None reported

Toxicologically Synergistic Products: None reported

4. FIRST AID

Eye Contact: Immediately flush eyes with water for 15 minutes. Call physician.

Skin Contact (First Aid): Wash skin with soap and plenty of water. Call physician if irritation develops.

Ingestion (First Aid): Call physician immediately. Give 1-2 glasses of water under medical supervision. Never give anything by mouth to an unconscious person.

Inhalation: Remove to fresh air.

5. FIRE FIGHTING MEASURES

Flammable Properties: Can burn in fire, releasing toxic vapors.

Flash Point: Not applicable

Method: Not applicable

Flammability Limits:

Lower Explosion Limits: Not applicable

Upper Explosion Limits: Not applicable

Autoignition Temperature: Not determined

Hazardous Combustion Products: Toxic fumes of: carbon monoxide, carbon dioxide, phosphorus oxides, nitrogen oxides.

Fire / Explosion Hazards: None reported

Static Discharge: None reported.

Mechanical Impact: None reported

Extinguishing Media: Use media appropriate to surrounding fire conditions

Fire Fighting Instruction: As in any fire, wear self-contained breathing apparatus pressure-demand and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Spill Response Notice:

Only persons properly qualified to respond to an emergency involving hazardous substances may respond to a spill according to federal regulations (OSHA 29 CFR 1910.120(a)(v)) and per your company's emergency response plan and guidelines/procedures. See Section 13, Special Instructions for disposal assistance.

Containment Technique: Stop spilled material from being released to the environment.

Clean-up Technique: Scoop up spilled material into a large beaker and dissolve with water. Flush reacted material to the drain with a large excess of water. Decontaminate the area of the spill with a soap solution.

Evacuation Procedure: Evacuate as needed to perform spill clean-up. If conditions warrant, increase the size of the evacuation.

Special Instructions (for accidental release): Mixture contains a component which is regulated as a water pollutant.

304 EHS RQ (40 CFR 355): Not applicable

D.O.T. Emergency Response Guide Number: Not applicable

7. HANDLING / STORAGE

Handling: Avoid contact with eyes, skin, clothing. Do not breathe dust. Wash thoroughly after handling. Maintain general industrial hygiene practices when using this product.

Storage: Store between 10° and 25°C. Protect from: light, moisture, heat

Flammability Class: Not applicable

8. EXPOSURE CONTROLS / PROTECTIVE EQUIPMENT

Engineering Controls: Have an eyewash station nearby. Have a safety shower nearby. Use general ventilation to minimize exposure to mist, vapor or dust. Maintain general industrial hygiene practices when using this product.

Personal Protective Equipment:

Eye Protection: safety glasses with top and side shields

Skin Protection: disposable latex gloves, lab coat

Inhalation Protection: adequate ventilation

Precautionary Measures: Avoid contact with: eyes, skin, clothing. Do not breathe: dust. Wash thoroughly after handling. Protect from: light, moisture, heat

TLV: Not established

PEL: Not established

9. PHYSICAL / CHEMICAL PROPERTIES

Appearance: White or light pink powder

Physical State: Solid
Molecular Weight: Not applicable
Odor: None
pH: of 1% soln. = 6.35 @ 25°C
Vapor Pressure: Not applicable
Vapor Density (air = 1): Not applicable
Boiling Point: Not applicable
Melting Point: 110 C decomp
Specific Gravity (water = 1): 1.76
Evaporation Rate (water = 1): Not applicable
Volatile Organic Compounds Content: Not applicable
Partition Coefficient (n-octanol / water): Not applicable
Solubility:
 Water: Soluble
 Acid: Soluble
 Other: Not determined
Metal Corrosivity:
 Steel: Not determined
 Aluminum: Not determined

10. STABILITY / REACTIVITY

Chemical Stability: Stable when stored under proper conditions.
Conditions to Avoid: Exposure to light. Excess moisture. Heating to decomposition.
Reactivity / Incompatibility: None reported
Hazardous Decomposition: Heating to decomposition releases toxic and/or corrosive fumes of: carbon dioxide, carbon monoxide, phosphorus oxides, nitrogen oxides.
Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Product Toxicological Data:
 LD50: None reported
 LC50: None reported
 Dermal Toxicity Data: None reported
 Skin and Eye Irritation Data: None reported
 Mutation Data: None reported
 Reproductive Effects Data: None reported
Ingredient Toxicological Data: Salt of DPD Oral rat LD50 = 970 mg/kg; Sodium Phosphate Dibasic Oral Rat LD50 = 17 g/kg; EDTA Disodium Salt Oral Rat LD50 = 2000 mg/kg

12. ECOLOGICAL INFORMATION

Product Ecological Information: --
No ecological data available for this product.
Ingredient Ecological Information: --
No ecological data available for the ingredients of this product.

13. DISPOSAL CONSIDERATIONS

EPA Waste ID Number: Not applicable
Special Instructions (Disposal): Dilute to 3 to 5 times the volume with cold water. Open cold water tap completely, slowly pour the material to the drain. Allow cold water to run for 5 minutes to completely flush the system.
Empty Containers: Rinse three times with an appropriate solvent. Dispose of empty container as normal trash.
NOTICE (Disposal): These disposal guidelines are based on federal regulations and may be superseded by more stringent state or local requirements. Please consult your local environmental regulators for more information.

14. TRANSPORT INFORMATION

D.O.T.:

D.O.T. Proper Shipping Name: Not Currently Regulated

--

DOT Hazard Class: NA

DOT Subsidiary Risk: NA

DOT ID Number: NA

DOT Packing Group: NA

I.C.A.O.:

I.C.A.O. Proper Shipping Name: Not Currently Regulated

--

ICAO Hazard Class: NA

ICAO Subsidiary Risk: NA

ICAO ID Number: NA

ICAO Packing Group: NA

I.M.O.:

I.M.O. Proper Shipping Name: Not Currently Regulated

--

I.M.O. Hazard Class: NA

I.M.O. Subsidiary Risk: NA

I.M.O. ID Number: NA

I.M.O. Packing Group: NA

15. REGULATORY INFORMATION

U.S. Federal Regulations:

O.S.H.A.: This product meets the criteria for a hazardous substance as defined in the Hazard Communication Standard. (29 CFR 1910.1200)

E.P.A.:

S.A.R.A. Title III Section 311/312 Categorization (40 CFR 370): Immediate (Acute) Health Hazard Delayed (Chronic) Health Hazard

S.A.R.A. Title III Section 313 (40 CFR 372): This product does NOT contain any chemical subject to the reporting requirements of Section 313 of Title III of SARA.

--

302 (EHS) TPQ (40 CFR 355): Not applicable

304 CERCLA RQ (40 CFR 302.4): 5000 lbs. Sodium phosphate, dibasic

304 EHS RQ (40 CFR 355): Not applicable

Clean Water Act (40 CFR 116.4): Sodium phosphate, dibasic - RQ 5000 lbs.

RCRA: Contains no RCRA regulated substances.

C.P.S.C.: Not applicable

State Regulations:

California Prop. 65: No Prop. 65 listed chemicals are present in this product.

Identification of Prop. 65 Ingredient(s): Not applicable

Trade Secret Registry: New Jersey Trade Secret Registry Number 80100131-5001 (Carboxylate Salt) New Jersey Trade Secret Registry Number 80100131-5002 (DPD Salt) New York Trade Secret Registry Number 478 (DPD Salt) New York Trade Secret Registry Number 479 (Carboxylate Salt) This product complies with Pennsylvania Trade Secret Regulations. This product is registered as a trade secret in the state of Illinois. This product is registered as a trade secret in the state of Massachusetts. This product is registered as a trade secret in the state of New York.

National Inventories:

U.S. Inventory Status: All ingredients in this product are listed on the TSCA 8(b) Inventory (40 CFR 710).

TSCA CAS Number: Not applicable

16. OTHER INFORMATION

Intended Use: Determination of Free Chlorine

References: TLV's Threshold Limit Values and Biological Exposure Indices for 1992/1993. American Conference of Governmental Industrial Hygienists, 1992. Air Contaminants, Federal Register, Vol. 54, No. 12. Thursday, January 19, 1989. pp. 2332-2983. In-house information. Technical Judgment. Outside Testing. Sax, N. Irving. Dangerous Properties of Industrial Materials, 7th Ed. New York: Van Nostrand Reinhold Co., 1989.

Revision Summary:

Legend:

NA - Not Applicable	w/w - weight/weight
ND - Not Determined	w/v - weight/volume
NV - Not Available	v/v - volume/volume

USER RESPONSIBILITY: Each user should read and understand this information and incorporate it in individual site safety programs in accordance with applicable hazard communication standards and regulations.

**THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED TO BE ACCURATE.
HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA
OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF.**

HACH COMPANY ©2003

MATERIAL SAFETY DATA SHEET**NFPA RATING:** Health = 1 Flammability = 0 Reactivity = 0**HMIS RATING:** Health = 1 Flammability = 0 Reactivity = 0**SECTION I -- IDENTITY AND MANUFACTURER'S INFORMATION (#0771J)****Manufacturer's Name:** HILLYARD INDUSTRIES**Product Name:** ARSENAL SUPER SHINE-ALL**Address:** 302 North Fourth Street**Date Prepared:** December 22, 2008(version 2)

St. Joseph, MO 64501

Prepared by: Regulatory Affairs Department**Emergency Telephone No.:** (800) 424-9300 (Only in the event of chemical emergency involving a spill, leak, fire, exposure or accident involving chemicals.)**Other information calls:** (816) 233-1321 (Ext. 8285)<http://www.hillyard.com>**SECTION II -- INGREDIENTS/IDENTITY INFORMATION****Components****(Specific Chemical Identity:**

Common Name(s)	CAS#	OSHA PEL	ACGIH TLV	OTHER LIMITS RECOMMENDED	%
Water	7732-18-5	none	none	N.A.	---
Tall oil soap, potassium	61790-44-1	not established	not established	N.A.	---
Ammonium parath sulfate	67762-19-0	not established	not established	N.A.	---
Triethanolamine(1)	102-71-6	not established	5 mg/m ³	N.A.	---
Fragrance	Unknown	not established	not established	N.A.	---

(1) Regulated in FL., MA., PA., RI.

SECTION III -- PHYSICAL / CHEMICAL CHARACTERISTICS**Boiling Point:** 743mmHg 205°F **Specific Gravity (H₂O = 1):** 25°C = 1.00 & 39°C = 1.00**Vapor Pressure (mm Hg.):** 17.6 **Percent Volatile by Volume (%):** 87%**Vapor Density (AIR = 1):** 0.6 **Evaporation Rate (ethyl ether = 1):** Slower than 1**Solubility in Water:** Complete **Appearance and Odor:** light amber liquid, Sassafras odor***pH (concentrate) =** 9.0-9.3 **pH (diluted 1:128) =** 8 - 9**SECTION IV -- FIRE AND EXPLOSION HAZARD DATA****Flash point:** None (T.C.C.) **Flammable Limits:** LEL = N.A. UEL = N.A.**Extinguishing Media:** Water**Special Fire Fighting Procedures:** None.**Unusual Fire and Explosion Hazards:** None known to Hillyard Industries.**SECTION V -- PHYSICAL HAZARDS****Stability:** Stable **Conditions to Avoid:** N.A.**Incompatibility (Materials to Avoid):** None of which we have knowledge.**Hazardous Decomposition Products or Byproducts:** As with any organic materials, combustion will produce carbon dioxide and probably carbon monoxide.**Hazardous Polymerization:** Will not occur **Conditions to Avoid:** None known to Hillyard Ind.**SECTION VI -- HEALTH HAZARD DATA****Routes of entry:** Inhalation? No Skin? No Ingestion? No**HEALTH HAZARDS (1. Acute and 2. Chronic)**

1. Primary Irritation test on the concentrate per the Federal Hazardous Substance Act showed the concentrated product was a primary skin irritant and an eye irritant.
2. None known to manufacturer.

SECTION VI -- HEALTH HAZARD DATA (continued)

National Toxicology Program = No I.A.R.C. Monographs = No OSHA = No

This product has no carcinogens listed by IARC, NTP, NIOSH, or ACGIH as of this date, greater than or equal to 0.1%.

Signs and Symptoms of Exposure: May cause irritation to skin and eyes.

Medical Conditions Generally Aggravated by Exposure: Open cuts and sores may be irritated by contact.

Emergency and First Aid Procedures: In case of contact with eyes or skin, flush with plenty of water for 15 minutes. Remove contaminated clothing. Call a physician if irritation persists. Wash clothing before reuse. If swallowed give water; may cause diarrhea; call physician

SECTION VII -- PRECAUTIONS FOR SAFE HANDLING AND USE

Steps To Be Taken In Case Material Is Released Or Spilled: Rinse area with water and pick up with wet vac or mop.

Waste Disposal Method: Dispose of in accordance with state or local regulations.

Precautions To Be Taken In Handling And Storing: Not applicable.

Other Precautions: Do not dispose of in storm drains or streams.

SECTION VIII -- CONTROL MEASURES

Respiratory Protection (Specify Type): Not normally required.

Ventilation:

Local Exhaust = Normally adequate **Mechanical (General)** = Recommended **Special =** N.A. **Other =** N.A.

Protective Gloves: None required with normal use. **Eye Protection:** Splash goggles where eye contact is likely.

Other Protective Clothing or Equipment: Not normally required.

Work / Hygienic Practices: Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling; wash clothing before reuse.

SECTION IX - TRANSPORTATION INFORMATION

Applicable regulations: DOT = no; IMCO = no; IATA = no

Proper shipping name: Cleaning compound

UN No.: not applicable **Limited Qty.:** not applicable **Hazard Class:** not applicable

Labels required: not required **DOT Exception:** not applicable

EPA Hazardous waste/number code: not listed

Hazardous waste characteristics:

Ignitability = not applicable; **Corrosivity =** not applicable; **Reactivity =** not applicable

DISCLAIMER OF WARRANTIES

NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR OF ANY NATURE ARE MADE WITH RESPECT TO THE PRODUCT(S) OR INFORMATION CONTAINED IN THIS MATERIAL SAFETY DATA SHEET.

The information and recommendations contained in this Material Safety Data Sheet are supplied pursuant to 29 CFR 1910.1200 of the Occupational Safety and Health Standards Hazard Communication Rule. All information contained herein is presented in good faith and is believed to be appropriate and accurate.

THE BUYER OR USER ASSUMES ALL RISKS ASSOCIATED WITH THE USE, MISUSE OR DISPOSAL OF THIS PRODUCT. THE BUYER OR USER IS RESPONSIBLE TO COMPLY WITH ALL FEDERAL, STATE OR LOCAL REGULATIONS CONCERNING THE USE, MISUSE OR DISPOSAL OF THESE PRODUCTS.

Version 2, * Denotes revisions since last published MSDS. Supersedes Version 1 September 26, 2006

MATERIAL SAFETY DATA SHEET

NFPA RATING: Health = 1 Flammability = 2 Reactivity = 0
HMIS RATING: Health = 1 Flammability = 2 Reactivity = 0

SECTION I – IDENTITY AND MANUFACTURER'S INFORMATION *(565N-26B)**Manufacturer's Name:** HILLYARD INDUSTRIES**Product Name:** WINDO-CLEAN+**Address:** 302 North Fourth Street
St. Joseph, MO 64501**Date Prepared:** September 25, 2011 (version 2)**Prepared by:** Regulatory Affairs Department**Emergency Telephone No.:** (800) 424-9300 (Only in the event of chemical emergency involving a spill, leak, fire, exposure or accident involving chemicals.)**Other information calls:** (816) 233-1321 (Ext. 8285)<http://www.hillyard.com>**SECTION II – INGREDIENTS/IDENTITY INFORMATION****Components****(Specific Chemical Identity:**

Common Name(s)	CAS#	OSHA PEL	ACGIH TLV	OTHER LIMITS RECOMMENDED	%
Water	7732-18-5	none	none	N/A	---
Butyl cellosolve (2-Butoxyethanol) * (1)	111-76-2	50 ppm	20 ppm	N/A	12-17
Isopropyl alcohol (2)	67-63-0	400 ppm	400 ppm	N/A	4-9
Propylene Glycol Monomethyl Ether(3)	107-98-2	100 ppm	100 ppm	STEL=150 ppm	4-9
Sulfated Ethoxylated Alcohol	27731-61-9	none	none	N/A	---

*This product contains the following chemical subject to the reporting requirements of SARA Title III, Sec. 313, and 40 CFR Part 372: 2-Butoxyethanol.

(1) and (3) Regulated by OSHA and the following states: CA, FL, ID, IL, MA, MN, OH, PA, TX, WA, WI.

(2) Regulated by OSHA and the following states: CA, FL, ID, IL, MA, MN, NJ, OH, PA, TX, WA, WI.

VOC = 865 g/l less water

N/A= Not Applicable N/E= Not Established

***SECTION III – PHYSICAL / CHEMICAL CHARACTERISTICS**

***Boiling Point:** 184°F **Specific Gravity (H₂O = 1):** 25°C = 0.98 ***Density=** 8.15 lbs/gal
***Vapor Pressure (mm Hg.):** 17.5 ***Percent Volatile by Volume (%):** 97 - 98
Vapor Density (AIR = 1): 1.5 **Evaporation Rate (ethyl ether = 1):** slower than 1
Solubility in Water: complete ***Appearance and Odor:** clear, dark purple liquid; solvent odor
***pH (concentrate) =** 6.5 – 7.5

***SECTION IV – FIRE AND EXPLOSION HAZARD DATA**

Flash point: 111°F (T.C.C.) minimum **Flammable Limits:** LEL = 1.1% UEL = N/A (mixture)
Extinguishing Media: Alcohol foam, dry chemical, carbon dioxide
Special Fire Fighting Procedures: Water spray may be ineffective, but may be used to cool closed containers.
Unusual Fire and Explosion Hazards: None known to manufacturer

SECTION V – PHYSICAL HAZARDS

Stability: Stable **Conditions to Avoid:** Heat, sparks and open flame
Incompatibility (Materials to Avoid): Strong oxidizing materials
Hazardous Decomposition Products or Byproducts: As with any organic material, combustion will produce carbon dioxide and probably carbon monoxide.
Hazardous Polymerization: Will not occur **Conditions to Avoid:** None known

SECTION VI – HEALTH HAZARD DATA**Routes of entry:** Inhalation? Yes Skin? Yes Ingestion? Yes**HEALTH HAZARDS (1. Acute and 2. Chronic)**

1. When tested according to Federal Hazardous Substance Act product was not a primary skin irritant but concentrate produced slight skin irritation on prolonged exposure. When tested, the concentrate was found to be an eye irritant. Also test on the concentrate showed that acute oral LD50 was not acutely toxic at 8.0 g./kg. Inhalation testing showed that the LC50 nominal concentration to be 15.5 mg./l. (actual concentration 12.5 mg./l.). Prolonged breathing of high concentrations of butyl cellosolve vapor may result in respiratory and eye irritation, narcosis, hematuria and damage to liver and kidneys.

2. None known to Hillyard Industries.

SECTION VI – HEALTH HAZARD DATA continued**Chemical listed as Carcinogen or Potential Carcinogen:****National Toxicology Program** = No **I.A.R.C. Monographs** = No **OSHA** = No

This product has no carcinogens listed by IARC, NTP, NIOSH, or ACGIH as of this date, greater than or equal to 0.1%.

Signs and Symptoms of Exposure: Overexposure may cause drowsiness, headache and uncoordination.**Medical Conditions Generally Aggravated by Exposure:** None known by manufacturer.**Emergency and First Aid Procedures:** If swallowed, get medical attention immediately. In case of contact, immediately flush eyes or skin with plenty of water for 15 minutes. If irritation persists, get medical attention. Inhalation - If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical assistance immediately.**SECTION VII – PRECAUTIONS FOR SAFE HANDLING AND USE****Steps To Be Taken In Case Material Is Released Or Spilled:** Absorb large spills with floor dry material. Small spills: Flush with water and pick up with mop.**Waste Disposal Method:** Dispose of contaminated absorbent, container, and unused contents in accordance with state and local regulations. Do not dispose of in storm drains or streams.**Precautions To Be Taken In Handling And Storing:** Keep away from heat, sparks and flames. Since empty packages retain product residue, follow label warnings even after packages are empty.**Other Precautions:** Keep away from heat and flame. Prevent build-up of vapors by opening all windows and doors to achieve cross-ventilation. **USE ONLY WITH ADEQUATE VENTILATION.** Do not breathe vapors or spray mist. **Ensure fresh air entry during application and drying.** If you experience eye watering, headache or dizziness or if air monitoring demonstrates vapor / mist levels are above applicable limits, wear an appropriate, properly fitted respirator (NIOSH/MSHA approved) during and after application. Follow respirator manufacturer's directions for respirator use. Close container after each use. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Do not take internally. Contains Butyl Cellosolve which may cause blood damage based on animal data.**SECTION VIII – CONTROL MEASURES****Respiratory Protection (Specify Type):** Ventilate to keep air below TLV. A NIOSH approved respirator for organic vapor should be worn if needed to keep level below TLV.**Ventilation:** Recommend at least 5 CFM**Local Exhaust** = N/A **Mechanical (General)** = Recommended **Special** = N/A **Other** = N/A**Protective Gloves:** none required with normal use **Eye Protection:** Splash goggles where splashing is a concern.**Other Protective Clothing or Equipment:** use uniforms or coveralls.**Work / Hygienic Practices:** Wash thoroughly after handling**SECTION IX – TRANSPORTATION INFORMATION****Applicable regulations:** no 49 CFR; yes IMCO; yes IATA.**Proper shipping name for air and foreign water:** Flammable Liquid, N.O.S. (Isopropyl alcohol), 3.3, UN 1993, III.**Proper shipping name for U.S. highway:** Cleaning Compound**UN No.:** not applicable for highway **Limited Qty.:** not applicable **Hazard Class** = not applicable**Labels required:** not required for highway **DOT Exception:** not applicable**EPA Hazardous waste characteristics:****Ignitability** = yes **Corrosivity** = not applicable **Reactivity** = not applicable**DISCLAIMER OF WARRANTIES****NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR OF ANY NATURE ARE MADE WITH RESPECT TO THE PRODUCT(S) OR INFORMATION CONTAINED IN THIS MATERIAL SAFETY DATA SHEET.****The information and recommendations contained in this Material Safety Data Sheet are supplied pursuant to 29 CFR 1910.1200 of the Occupational Safety and Health Standards Hazard Communication Rule. All information contained herein is presented in good faith and is believed to be appropriate and accurate.****THE BUYER OR USER ASSUMES ALL RISKS ASSOCIATED WITH THE USE, MISUSE OR DISPOSAL OF THIS PRODUCT. THE BUYER OR USER IS RESPONSIBLE TO COMPLY WITH ALL FEDERAL, STATE OR LOCAL REGULATIONS CONCERNING THE USE, MISUSE OR DISPOSAL OF THESE PRODUCTS.**

Version 2, * Denotes revisions since last published MSDS. Supersedes Version 1 April 28, 2008

MATERIAL SAFETY DATA SHEET

Hillyard Lustre - Mist Furniture Polish

Section 1: PRODUCT AND COMPANY IDENTIFICATION

Product Name: Hillyard Lustre - Mist Furniture Polish
Product Number: A00134
Product Use: Polishing wax.
Manufacturer/Supplier: HILLYARD INDUSTRIES
302 North Fourth Street, St.
Joseph, MO 64502
Phone Number: (816) 233-1321 (Ext, 8285)
D.O.T. Emergency Phone: (800) 424-9300
Date of Preparation: August 29, 2007 **Revision #:** 1.0

Section 2: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

HMIS: See Section 15

CAUTION

MAY CAUSE EYE IRRITATION. MAY CAUSE SKIN IRRITATION.
CONTENTS UNDER PRESSURE. CONTAINER MAY EXPLODE IF HEATED.

Potential Health Effects: See Section 11 for more information.

Likely Routes of Exposure: Skin contact, eye contact, inhalation, and ingestion.

Eye: May cause eye irritation.
Skin: May cause skin irritation.
Ingestion: Not a normal route of exposure. Harmful: may cause lung damage if swallowed.
Inhalation: May cause respiratory tract irritation. This product may be aspirated into the lungs and cause chemical pneumonitis.

Chronic Effects: Prolonged or repeated contact may dry skin and cause irritation.

Signs and Symptoms: Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva. Handling can cause dry skin.

Medical Conditions Aggravated By Exposure: Asthma. Allergies.

Target Organs: Skin, eyes, gastrointestinal tract, respiratory system.

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Potential Environmental Effects: May cause long-term adverse effects in the aquatic environment See Section 12 for more information.

Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient	CAS #	Wt. %
Distillates (petroleum), hydrotreated light	64742-47-8	5 - 10
Isobutane	75-28-5	1 - 5
Propane	74-98-6	1 - 5

MATERIAL SAFETY DATA SHEET

Hillyard Lustre - Mist Furniture Polish

Section 4: FIRST AID MEASURES

- Eye Contact:** In case of contact, immediately flush eyes with plenty of water. If easy to do, remove contact lenses, if worn.
- Skin Contact:** In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Call a physician if irritation develops and persists.
- Inhalation:** If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.
- Ingestion:** If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person.
- General Advice:** In case of accident or if you feel unwell, seek medical advice immediately (show the label or MSDS where possible).
- Note to Physicians:** Symptoms may not appear immediately.

Section 5: FIRE FIGHTING MEASURES

Flammability: Not flammable by WHMIS/OSHA criteria.

Means of Extinction:

Suitable Extinguishing Media: Powder, foam, carbon dioxide.

Unsuitable Extinguishing Media: Water.

Products of Combustion: May include, and are not limited to: oxides of carbon, hydrogen chloride.

Explosion Data:

Sensitivity to Mechanical Impact: Not available.

Sensitivity to Static Discharge: Not available.

Protection of Firefighters: Containers may explode when heated. Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA).

Section 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions: Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Eliminate sources of ignition. Ruptured cylinders may rocket.

Environmental Precautions: Many gases are heavier than air and will spread along ground and collect in low or confined areas (sewers, basements, tanks). This material is a water pollutant. Keep out of drains, sewers, ditches, and waterways. Minimize use of water to prevent environmental contamination.

Methods for Containment: Contain and/or absorb spill with inert material (e.g. sand, vermiculite), then place in a suitable container. Do not flush to sewer or allow to enter waterways. Use appropriate Personal Protective Equipment (PPE).

Methods for Clean-Up: Vacuum or sweep material and place in a disposal container. Allow gas to dissipate harmlessly into the atmosphere.

Other Information: Not available.

MATERIAL SAFETY DATA SHEET

Hillyard Lustre - Mist Furniture Polish

Section 7: HANDLING AND STORAGE

Handling:

Keep away from sources of ignition. No smoking. Avoid contact with skin and eyes. Do not swallow. Do not breathe gas/fumes/vapor/spray. Use only in well-ventilated areas. Handle and open container with care. When using, do not eat or drink. Wash hands before eating, drinking, or smoking.

Storage:

Keep out of the reach of children. Do not store at temperatures above 49 °C / 120 °F. Keep away from food, drink and animal foodstuffs.

Section 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

Ingredient	Exposure Limits	
	OSHA-PEL	ACGIH-TLV
Distillates (petroleum), hydrotreated light	100 ppm	200 mg/m ³
Isobutane	Not available.	Not available.
Propane	1000 ppm	1000 ppm

Engineering Controls: Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, etc.) below recommended exposure limits.

Personal Protective Equipment:

HMIS: See Section 15

Eye/Face Protection: Wear eye/face protection.

Hand Protection: Wear suitable gloves.

Skin and Body Protection: Wear suitable protective clothing.

Respiratory Protection: In case of insufficient ventilation, wear suitable respiratory equipment.

General Hygiene Considerations: Handle according to established industrial hygiene and safety practices.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Opaque.
Color:	White.
Odour:	Citrus.
Odour Threshold:	Not available.
Physical State:	Gas/Pressurized Liquid.
pH:	Not applicable.
Viscosity:	Not available.
Freezing Point:	Not available.
Boiling Point:	Not available.
Flash Point:	Not available.
Evaporation Rate:	< 1 (Water = 1)
Lower Flammability Limit:	Not available.
Upper Flammability Limit:	Not available.

MATERIAL SAFETY DATA SHEET

Hillyard Lustre - Mist Furniture Polish

Vapor Pressure:	Not available.
Vapor Density:	Not available.
Specific Gravity:	0.954 (Concentrate only)
Solubility in Water:	Negligible.
Coefficient of Water/Oil Distribution:	Not available.
Auto-ignition Temperature:	Not available.
Percent Volatile, wt. %:	Not available.
VOC content, wt. %:	7.2% (US federal/CARB/OTC/LADCO)

Section 10: STABILITY AND REACTIVITY

Stability: Stable under normal storage conditions. Contents under pressure. Container may explode if heated. Do not puncture. Do not burn. Keep in a cool place.

Conditions of Reactivity: Heat. Incompatible materials.

Incompatible Materials: Oxidizers. Bases.

Hazardous Decomposition Products: May include, and are not limited to: oxides of carbon, hydrogen chloride.

Possibility of Hazardous Reactions: No dangerous reaction known under conditions of normal use.

Section 11: TOXICOLOGY INFORMATION

EFFECTS OF ACUTE EXPOSURE

Component Analysis

Ingredient	LD₅₀ (oral)	LC₅₀
Distillates (petroleum), hydrotreated light	> 5000 mg/kg, rat	Not available.
Isobutane	Not available.	Not available.
Propane	Not available.	Not available.

Eye: May cause eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.

Skin: May cause skin irritation. Handling can cause dry skin.

Ingestion: Not a normal route of exposure. Harmful: may cause lung damage if swallowed.

Inhalation: May cause respiratory tract irritation. This product may be aspirated into the lungs and cause chemical pneumonitis.

EFFECTS OF CHRONIC EXPOSURE

Target Organs: Not available.

Chronic Effects: Not hazardous by WHMIS/OSHA criteria.

Carcinogenicity: Not hazardous by WHMIS/OSHA criteria.

Ingredient	Chemical Listed as Carcinogen or Potential Carcinogen *
Distillates (petroleum), hydrotreated light	I -3, G-A3
Isobutane	Not listed.
Propane	Not listed.

* See Section 15 for more information.

MATERIAL SAFETY DATA SHEET

Hillyard Lustre - Mist Furniture Polish

Mutagenicity: Not hazardous by WHMIS/OSHA criteria.

Reproductive Effects: Not hazardous by WHMIS/OSHA criteria.

Developmental Effects:

Teratogenicity: Not hazardous by WHMIS/OSHA criteria.

Embryotoxicity: Not hazardous by WHMIS/OSHA criteria.

Respiratory Sensitization: Not hazardous by WHMIS/OSHA criteria.

Skin Sensitization: Not hazardous by WHMIS/OSHA criteria.

Toxicologically Synergistic Materials: Not available.

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity: May cause long-term adverse effects in the aquatic environment

Persistence / Degradability: Not available.

Bioaccumulation / Accumulation: Not available.

Mobility in Environment: Not available.

Section 13: DISPOSAL CONSIDERATIONS

Disposal Instructions:

This material must be disposed of in accordance with all local, state, provincial, and federal regulations.

Section 14: TRANSPORTATION INFORMATION

DOT Classification

ORM-D

TDG Classification

Limited Quantity

Section 15: REGULATORY INFORMATION

Federal Regulations

Canadian: This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

US: MSDS prepared pursuant to the Hazard Communication Standard (29 CFR 1910.1200).

SARA Title III

Ingredient	Section 302 (EHS) TPQ (lbs.)	Section 304 EHS RQ (lbs.)	CERCLA RQ (lbs.)	Section 313
Distillates (petroleum), hydrotreated light	Not listed.	Not listed.	Not listed.	Not listed.
Isobutane	Not listed.	Not listed.	Not listed.	Not listed.
Propane	Not listed.	Not listed.	Not listed.	Not listed.

State Regulations

California Proposition 65:

This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

MATERIAL SAFETY DATA SHEET

Hillyard Lustre - Mist Furniture Polish

Global Inventories

Ingredient

Distillates (petroleum), hydrotreated light
Isobutane
Propane

Canada DSL/NDSL

DSL
DSL
DSL

USA TSCA

Yes.
Yes.
Yes.

HMIS - Hazardous Materials Identification System

Health - 2

Flammability - 1

Physical Hazard - 0

PPE - B

NFPA - National Fire Protection Association:

Health - 2

Fire - 1

Reactivity - 0

Hazard Rating: 0 = minimal, 1 = slight, 2 = moderate, 3 = severe, 4 = extreme

WHMIS Classification(s):

Class A - Compressed Gas

Class D2B - Skin/Eye Irritant

WHMIS Hazard Symbols:



SOURCE AGENCY CARCINOGEN CLASSIFICATIONS:

OSHA (O) Occupational Safety and Health Administration.

ACGIH (G) American Conference of Governmental Industrial Hygienists.

A1 - Confirmed human carcinogen.

A2 - Suspected human carcinogen.

A3 - Animal carcinogen.

A4 - Not classifiable as a human carcinogen.

A5 - Not suspected as a human carcinogen.

IARC (I) International Agency for Research on Cancer.

1 - The agent (mixture) is carcinogenic to humans.

2A - The agent (mixture) is probably carcinogenic to humans; there is limited evidence of carcinogenicity in humans and sufficient evidence of carcinogenicity in experimental animals.

2B - The agent (mixture) is possibly carcinogenic to humans; there is limited evidence of carcinogenicity in humans in the absence of sufficient evidence of carcinogenicity in experimental animals.

3 - The agent (mixture, exposure circumstance) is not classifiable as to its carcinogenicity to humans.

4 - The agent (mixture, exposure circumstance) is probably not carcinogenic to humans.

NTP (N) National Toxicology Program.

1 - Known to be carcinogens.

2 - Reasonably anticipated to be carcinogens.

Section 16: OTHER INFORMATION

Disclaimer:

We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind. The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. It is the user's responsibility to satisfy oneself as to the suitability and completeness of this information for the user's own particular use.

Expiry Date: August 29, 2010

Prepared by: Nexreg Compliance Inc.

Prepared for: HILLYARD INDUSTRIES
(816) 233-1321 (Ext. 8285)



Material Safety Data Sheet

Hitachi Premium Two Stroke Engine Oil

110003, 110006, 110007, 110008

Section 1 Chemical Product and Company Information

Terresolve Technologies Ltd.
9609 Jackson St.
Mentor, Ohio 44060
Phone: 440-639-8633
Fax: 440-639-4414

PRODUCT TRADE NAME: Hitachi Premium Two Stroke Engine Oil
CAS NO: Not applicable for mixtures
SYNONYMS: None
GENERIC/CHEMICAL NAME: Mixture
PRODUCT TYPE: Two Cycle Oil
PREPARATION/REVISION DATE: 11/29/2010
TRANSPORTATION EMERGENCY PH NO: 1-800-661-3558

Section 2 Composition/Information On Ingredients

NAME	CAS#	%wt.
Solvent Refined Paraffinic Oil	64741-88-4	< 45
Fluidity Modifier	9003-29-6	< 35
Light Distillates	64742-47-8	< 40
Solvent refined residuum	64742-01-4	< 10
Additive Mixture	Confidential	< 5

This material has no known hazards under applicable laws.

Section 3 Hazards Identification

PRINCIPAL HAZARDS: See Section 11 for complete health hazard information.

Health: 1 Fire: 1 Reactivity: 0

Section 4 First Aid Measures

EYES: Flush eyes with clean, low-pressure water for at least 15 minutes, occasionally lifting the eyelids. If pain or redness persists after flushing, obtain medical attention.

SKIN: Remove by wiping, then wash skin thoroughly with plenty of soap and water. Remove contaminated clothing and thoroughly clean before reuse. Discard contaminated leather gloves and shoes.

INHALATION: Vaporization is not expected at ambient temperatures and this material is not expected to be an inhalation problem under anticipated conditions of use. In case of overexposure, move person to fresh air.

INGESTION: DO NOT INDUCE VOMITING. If more than a half-cup full of

this material is swallowed, give quantities of water, do not induce vomiting, and obtain medical attention.

ADDITIONAL:

Note to physician: Treatment based on judgment of the physician response to reactions of the patient. May aggravate pre-existing respiratory conditions. Treat symptomatically.

Section 5 Firefighting Measures

FLASH POINT (Typical):	170° C (338° F)	Method: COC D92
UPPER FLAMMABLE LIMIT:	Not Determined	
LOWER FLAMMABLE LIMIT:	Not Determined	
AUTOIGNITION TEMPERATURE:	Not Determined	
HAZARDOUS COMBUSTION PRODUCTS:	Burning or excessive heating may products carbon monoxide and other harmful gases/vapors including oxides and/or other compounds of zinc, sulfur, and phosphorous also hydrogen sulfide.	
EXTINGUISHING MEDIA:	Dry chemical and carbon dioxide. Foam and water fog are effective, but may cause frothing.	
FIRE FIGHTING INSTRUCTIONS:	OSHA/NFPA Class IIIB Combustible Liquid. For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment. This may include self-contained breathing apparatus to protect against the hazardous effects of combustion products and oxygen deficiencies. If firefighters cannot work upwind to the fire, respiratory protective equipment must be worn. Cool tanks and containers exposed to fire with water.	

Section 6 Accidental Release Measures

SMALL SPILL PROCEDURES:	Absorb spill with an inert material (e.g. dry sand or earth), then place in a chemical waste container.
LARGE SPILL:	Contain spill and prevent it from entering all water bodies, if possible. Safely stop flow of spill. Evacuate non-essential personnel from immediate spill area due to slipping hazards. In urban area, cleanup as soon as possible. In natural environments, cleanup on advice from ecologists. This material will float on water. Absorbent materials and pads can be used. Comply with all applicable laws. Spills may need to be reported to the National Response Center (800-424-8802).

Section 7 Handling and Storage

HANDLING PROCEDURES:	Keep away from heat, sparks and flame. Use of oil impervious gloves recommended.
STORAGE PROCEDURES:	KEEP OUT OF REACH OF CHILDREN! To avoid product degradation, water contamination should be avoided and minimum feasible handling temperatures should be maintained. Product degradation might increase health hazard risks.
STORAGE TEMPERATURE:	Ambient
STORAGE PRESSURE;	Atmospheric

Section	8	Exposure Controls/Personal Protection
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VENTILATION PROCEDURE:	Use adequate ventilation to keep oil mists of this material below applicable guideline(s) standards(s).
EYE PROTECTION:	Safety Glasses. In the likelihood of splashing or spraying, and if especially if the material is hot (GT 125F), wear goggles and/or face shield. Eye wash water should be available. Hard contact lenses must not be worn.
RESPIRATORY PROTECTION:	Under normal use conditions, respirator is not usually required. Use NIOSH/MSHA approved disposable dust/mist mask if the recommended exposure limit is exceeded.
SKIN PROTECTION:	Avoid prolonged and/or repeated skin contact, or wear impervious protective clothing. When leaving work, wash hands/exposed skin with soap and water.

Section	9	Physical And Chemical Properties
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APPEARANCE:	Blue/Green
SPECIFIC GRAVITY:	0.80 – 0.90
VISCOSITY:	6.5 – 7.5 cSt @ 100° C (Typical)
FLASH POINT:	170° C
PERCENT VOLATILE:	Negligible
VAPOR DENSITY:	Not Determined
ODOR:	Mild Petroleum
VAPOR PRESSURE:	Not Determined
WATER SOLUBILITY:	Negligible

Section 10 Stability And Reactivity

STABILITY:	STABLE – avoid extreme heat and open flame.
INCOMPATIBILITY:	Strong acids, alkalis and oxidizers such as liquid chlorine and oxygen.
HAZARDOUS DECOMPOSITION PRODUCTS:	Carbon Monoxides and other harmful gases/vapors including oxides and/or other compounds of zinc, sulfur, phosphorous and hydrogen sulfide.

Section 11 Toxicological Information

EYE IRRITATION:	No significant adverse health effects are expected to occur upon short-term exposure. Slight redness, swelling or blurred vision may occur.
SKIN IRRITATION:	Avoid skin contact. When contact occurs, wash properly to remove. Mild skin irritation may occur upon short-term exposure. Swelling or blistering upon long-term exposure.
INHALATION TOXICITY:	No significant adverse health effects are expected to occur under normal conditions of use. However, exposure to petroleum mist at high levels may be irritating to the nose, throat and lungs.
INGESTION:	Harmful if aspirated into lungs.
CHRONIC EFFECTS/ CARCINOGENICITY:	Laboratory studies sponsored by the American Petroleum Institute show that mice develop skin cancer following repeated application and continuous exposure to a used motor oil composite. Avoid contact with used motor oils. Personnel with pre-existing skin disorders should avoid contact with this product.

Section 12 Ecological Information

ECOTOICOLOGICAL INFORMATION:	The spilled material and any soil or water, which it has contaminated, may be hazardous to animal/aquatic life. The spilled material is not expected to be readily biodegradable.
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Section 13 Disposal Considerations

WASTE DISPOSAL:	Maximize product recovery for reuse or recycling. Conditions of use may cause this material to become a "Hazardous Waste", as defined by state or federal laws. Use approved treatment, transporters and disposal sites in compliance with all applicable laws. If spill is introduced into a waste-water treatment system, chemical and biological oxygen demand will likely increase.
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Spill material is biodegradable if gradually exposed to microorganisms. Potential treatment and disposal methods includes land farming, incineration and land disposal if permitted.

Empty containers contain residue, which may exhibit the hazards of the product. Do not attempt to refill or clean containers since Residue is difficult to remove. Use proper bonding and grounding procedures.

Section 14 Transport Information

DOT Hazardous Materials Proper Shipping Name: Not a D.O.T. "HAZARDOUS MATERIAL"

DOT Hazard Class
Not Regulated

UN/NAID No.
Not Regulated

Section 15 Regulatory Information

SUPERFUND
AMMENDMENTS AND
REAUTHORIZATION
ACT OF 1986 (SARA),
TITLE III:

Section 311/312 Hazard Categories. Immediate (Acute) and delayed (Chronic) Health hazards.

TOXIC SUBSTANCE
CONTROL ACT (TSCA):

All components of this product are listed on the TSCA inventory.

CERCLA HAZARDOUS
SUBSTANCES:

No chemicals in this product are subject to the reporting requirements of CERCLA.

CAL. PROP. 65:

This product is not know to contain any chemicals currently listed as carcinogens or reproductive toxin under California Proposition 65 at levels which would be subject to the proposition.

Section 16 Other Information

Disclaimer of Liability

The conditions or methods of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. **For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling storage, use or disposal of this product.**

This MSDS was prepared and is to be used only for this product. If the product is used as a component in another product, this MSDS information may not be applicable

The information presented herein has been compiled from sources considered to be dependable and is accurate to the best of the knowledge of Terresolve Technologies Ltd.; however, Terresolve Technologies makes no warranty whatsoever, expressed or implied, of

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MERCHANTABILITY OR FITNESS FOR THE PARTICULAR PURPOSE, regarding the accuracy of such data or the results to be obtained from the use thereof. Terresolve Technologies assumes no responsibility for injury to recipient or to third persons or for any damage to any property and recipient assumes all risks.



MSDS

MATERIAL SAFETY DATA SHEET

1. PRODUCT IDENTIFICATION

TRADE NAME (AS LABELED):

**HOMAX WALL TEXTURE
OIL-BASED ORANGE PEEL**

PRODUCT CODES:

4050

PRODUCT USE:

Texture Patch

SUPPLIER/MANUFACTURER'S NAME:

HOMAX PRODUCTS, INC.

ADDRESS:

200 Westerly Rd.
Bellingham, WA 98226

CHEMTREC EMERGENCY NO.:

1-800-424-9300 (United States)
1-703-527-3887 (International Collect)

BUSINESS PHONE:

1-800-729-9029

DATE OF PREPARATION:

July 25, 2011

2. COMPOSITION and INFORMATION ON INGREDIENTS

CHEMICAL	CAS #	% w/w	EXPOSURE LIMITS IN AIR					
			ACGIH-TLV		OSHA-PEL		NIOSH IDLH	NIOSH REL
			TWA	STEL	TWA	STEL		TWA
Nepheline Syenite	37244-96-5	15 - 30	10 mg/m ³	NE	15 mg/m ³ (total dust)	NE	NE	NE
Calcium Silicate	1398317-0	15 - 30	10 mg/m ³	NE	15 mg/m ³ (total dust)	NE	NE	NE
Aluminum Silicate	92704-41-1	15 - 30	2 mg/m ³ (respirable)	NE	15 mg/m ³ (total dust)	NE	NE	NE
Xylenes, mixed	1330-20-7	10 - 20	100 ppm	150 ppm	100 ppm	NE	900 ppm	100 ppm
Acetone	67-64-1	10 - 20	500 ppm	750 ppm	1000	NE	2500 (10% LEL)	250 ppm
Toluene	108-88-3	10 - 20	20 ppm	NE	200 ppm	C 300	100 ppm	150 ppm
Propane (propellant)	74-98-6	5 - 10	2500 ppm	NE	1000 ppm	NE	2,200 (10% LEL)	NE
Isobutane (propellant)	72-28-5	5 - 10	NE	NE	NE	NE	1800 (10% LEL)	800 ppm
Titanium dioxide	13463-67-7	1 - 5	10 mg/m ³	NE	15 mg/m ³ (total dust)	NE	NE	NE
Ethylbenzene	100-41-4	1 - 5	100 ppm	125 ppm	100 ppm	NE	NE	100 ppm
Water and ingredients present in concentrations of less than 1%(or less than 0.1% if carcinogens).		Balance	The ingredients in the balance of this product do not contribute significant hazards beyond those described in this document. All pertinent health, safety and environmental information have been presented, per the requirements of the US Federal OSHA Hazard Communication Standard (29 CFR 1910.1200) and Canadian WHMIS.					

NE = Not Established. See Section 16 for Definitions of Terms Used.

NOTE(1): ALL WHMIS required information is included in appropriate sections based on the ANSI Z400.1-1998 format. This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

3. HAZARD IDENTIFICATION

EMERGENCY OVERVIEW:

PHYSICAL DESCRIPTION: This product is a slurry of textures and binders delivered from an aerosol can by a pressurized propellant. It presents a pressure hazard, especially when exposed to heat.

HEALTH HAZARD: This product may cause severe irritation to the eyes or skin. If vapor, mist, or particulates of this product are inhaled, mild to moderate irritation of the nose or throat could occur.

FIRE HAZARD: This product is **EXTREMELY FLAMMABLE**. It must never be used near sources of ignition.

REACTIVITY HAZARD: Minimal Hazard; the product is normally stable under ordinary conditions of use and storage.

ENVIRONMENTAL HAZARD: This product does not normally present a significant hazard to aquatic or terrestrial life.

INHALATION: Causes respiratory tract irritation. Symptoms of exposure can include coughing, sneezing, shortness of breath, and nasal discomfort. Can cause central nervous system depression. Symptoms of exposure include headache, dizziness, drowsiness, intellectual impairment, pale skin, ringing in the ears, nausea, vomiting, and loss of coordination. Respiratory symptoms may be delayed in onset. High concentrations are an anesthetic, and exposure can lead to unconsciousness.

EYE CONTACT: Causes irritation, possibly severe. Prolonged exposure can cause pain, drying of the conjunctiva and possible permanent damage to the conjunctiva and cornea. Symptoms of eye exposure may include redness, pain, and tearing.

SKIN CONTACT: Causes irritation. Prolonged skin contact may result in redness, irritation, and dermatitis.

SKIN ABSORPTION: Components of this product may be absorbed through intact skin, which may lead to symptoms described in "Inhalation" or "Ingestion".

INGESTION: Ingestion is not anticipated to be a significant route of occupational exposure. If the material is swallowed, irritation of the mouth, throat, and other tissues of the gastro-intestinal system may occur. Ingestion of large amounts may cause irritation, pain, vomiting, and diarrhea. Components of this product are an aspiration hazard: aspiration of vomit may cause chemical pneumonia, a potentially life-threatening condition.

CHRONIC: Long-term skin contact may result in dermatitis. Prolonged or repeated exposure may cause liver, kidney and blood effects.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Pre-existing conditions of conjunctivitis and dermatitis. Pre-existing respiratory, liver, kidney or blood conditions.

Hazardous Materials Identification System (HMIS)

Health	2*
Flammability	4
Physical Hazard	1

4. FIRST-AID MEASURES

SKIN EXPOSURE: Rinse with running water for at least 15 minutes. Remove exposed or contaminated clothing, taking care not to contaminate eyes. Victim must seek immediate medical attention if any adverse exposure symptoms develop.

EYE EXPOSURE: Rinse under gently running water for at least 15 minutes. Have victim "roll" eyes. Victim must seek medical attention.

INHALATION: Remove victim to fresh air. Have victim blow nose and rinse mouth to clear any dusts. If difficulty with breathing or irritation persists, seek medical attention.

INGESTION: If this product is swallowed, seek immediate medical attention. DO NOT INDUCE VOMITING, unless directed by medical personnel. Have victim rinse mouth with water, if conscious. Never induce vomiting or give anything by mouth to someone who is unconscious, having convulsions, or unable to swallow.

5. FIRE-FIGHTING MEASURES

PRODUCT FLASH POINT: - 4°F (-20°C)

PROPELLANT FLASH POINT: - 158°F (-105°C)

AUTOIGNITION TEMPERATURE: NA

FLAMMABLE LIMITS (in air by volume, %):

Lower: 1

Upper: 12.8

FIRE EXTINGUISHING MATERIALS: Use extinguishing material suitable to the surrounding fire.

Water Spray: NO

Foam: OK

Halon: OK

Carbon Dioxide: OK

Dry Chemical: OK

Other: Any "ABC" Class.

UNUSUAL FIRE AND EXPLOSION HAZARDS: When involved in a fire, this material may decompose and, generating dusts, irritating fumes and toxic gases (e.g., carbon monoxide, carbon dioxide).

Explosion Sensitivity to Mechanical Impact: Not sensitive under normal conditions.

Explosion Sensitivity to Static Discharge: Not sensitive under normal conditions.

SPECIAL FIRE-FIGHTING PROCEDURES: Incipient fire responders should wear eye protection. Structural firefighters must wear Self-Contained Breathing Apparatus and full protective equipment. Move containers from fire area if it can be done without risk to personnel. Exercise caution; contaminated floors and surfaces can be sticky. If possible, prevent runoff water from entering storm drains, bodies of water, or other environmentally sensitive areas.

6. ACCIDENTAL RELEASE MEASURES

SPILL OR LEAK:

Remove all sources of ignition if safe to do so. Ventilate area. Stop the source of the spill if safe to do so. Contain the spill to prevent further contamination of the soil, water, or drains.

CONTAINMENT: If can is punctured or leaking soak up liquid with an absorbent material such as sand, sawdust, etc. Place in an appropriate container for disposal.

CLEANUP: Rinse spill area with small amount of soapy water. Contain and absorb the rinsate with inert absorbents and place into the same disposal container.

DISPOSAL: Dispose of all materials in accordance with federal, state and local requirements.

7. HANDLING and STORAGE

HANDLING PRECAUTIONS: Avoid contact with skin, eyes or clothing. Do not use near heat or open flame.

STORAGE PRECAUTIONS: Do not store near heat or open flame, Store in a cool, dry area away from children.

WORK/HYGIENIC PRACTICES: Wash thoroughly with soap and water after handling.

NFPA 30B: Level 3 Aerosol.

8. EXPOSURE CONTROLS - PERSONAL PROTECTION

VENTILATION AND ENGINEERING CONTROLS: Use with adequate ventilation to ensure exposure levels are maintained below the limits provided in Section 2 (Composition and Information on Ingredients). Ensure adequate ventilation is available when sanding. Ensure eyewash/safety shower stations are available near areas where this product is used.

RESPIRATORY PROTECTION: None needed under normal conditions of use. Use a dust respirator for large jobs if dusts cannot otherwise be eliminated.

EYE PROTECTION: For consumer use, wearing eye protection (such as splash goggles) is advisable. However, for specific industrial applications, enhanced eye protection may be necessary. Use approved safety goggles or safety glasses, as described in OSHA 29 CFR 1910.133. If necessary, refer to U.S. OSHA 29 CFR 1910.133, or appropriate Canadian standards.

HAND PROTECTION: For consumer use, wearing protective gloves is recommended. For specific industrial applications, wear chemical impervious gloves (e.g., Neoprene, nitrile). If necessary, refer to U.S. OSHA 29 CFR 1910.138 or the appropriate standards of Canada.

9. PHYSICAL and CHEMICAL PROPERTIES

RELATIVE VAPOR DENSITY (air = 1): > 1

SPECIFIC GRAVITY: Not applicable.

SOLUBILITY IN WATER: Insoluble.

VAPOR PRESSURE: Not applicable

ODOR THRESHOLD: Not available.

V.O.C.: Flat paint product < 60%

MIR: < 1.20

APPEARANCE, ODOR AND COLOR: White slurry with a light to pungent hydrocarbon odor.

EVAPORATION RATE (BuAc =1): Not applicable

MELTING/FREEZING POINT: Not applicable

BOILING POINT: Not applicable

pH: Not applicable.

10. STABILITY and REACTIVITY

STABILITY: Stable under normal circumstances of use and handling.

DECOMPOSITION PRODUCTS: Thermal decomposition of this product may generate dusts, irritating fumes, and toxic gases (e.g., carbon monoxide, carbon dioxide).

MATERIALS WITH WHICH SUBSTANCE IS INCOMPATIBLE: This product is not compatible with strong bases, strong acids, Hydrofluoric acid, and powerful oxidizers.

HAZARDOUS POLYMERIZATION: Will not occur.

CONDITIONS TO AVOID: Avoid contact with incompatible chemicals and elevated temperatures.

11. TOXICOLOGICAL INFORMATION

TOXICITY DATA: Component data follows:

Xylene: Oral rat LD50: 4300 mg/kg

Toluene: Oral rat LD50: 636 mg/kg

Acetone: Oral rat LD50: 5800 mg/kg

Ethylbenzene: Oral rat LD50: 3500 mg/kg

SUSPECTED CANCER AGENT: The following table summarizes the carcinogenicity listing for the components of this product. "NO" indicates that the substance is not considered to be, or suspected to be, a carcinogen by the listed agency.

CHEMICAL	IARC	NTP	OSHA
Xylenes, mixed	3	NO	NO
Acetone	NO	NO	NO
Toluene	3	NO	NO
Nepheline Syenite	NO	NO	NO
Calcium Silicate	NO	NO	NO
Aluminum Silicate	NO	NO	NO
Titanium dioxide	2B	NO	NO
Propane (propellant)	NO	NO	NO
Isobutane (propellant)	NO	NO	NO
Ethylbenzene	2B	NO	NO

12. ECOLOGICAL INFORMATION

Product has not been evaluated.

13. DISPOSAL CONSIDERATIONS

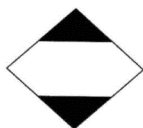
PREPARING WASTES FOR DISPOSAL: Follow applicable Federal, State, and local regulations for disposal.

14. TRANSPORTATION INFORMATION

Ground Transport:

Limited Quantity

Label:



Air Transport:

Not evaluated.

Ocean Transport:

Not evaluated

15. REGULATORY INFORMATION

ADDITIONAL U.S. REGULATIONS:

EPA REPORTING REQUIREMENTS: The following reporting requirements are applicable to components of this product:

CHEMICAL	SECTION 302 (40 CFR 355, Appendix A)	SECTION 304 (40 CFR Table 302.4)	SECTION 313 (40 CFR 372.65)
Xylenes, mixed	NO	YES, RQ 100 lbs	YES
Acetone	NO	YES, RQ 5,000 lbs	YES
Toluene	NO	YES, RQ 1000 lbs	YES
Ethylbenzene	NO	YES, RQ 1000 lbs	YES

U.S. SARA SECTION 311/312 FOR PRODUCT: Acute health effects; chronic health effects, flammable.

U.S. TSCA INVENTORY STATUS: The components of this product are listed on the TSCA Inventory.

CALIFORNIA SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT (PROPOSITION 65): “WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects, or reproductive harm.”

ADDITIONAL CANADIAN REGULATIONS:

CANADIAN DSL/NDL INVENTORY STATUS: The components of this product are listed on the DSL Inventory.

16. OTHER INFORMATION

DISCLAIMER: THIS INFORMATION IS PROVIDED IN GOOD FAITH BUT WITHOUT EXPRESS OR IMPLIED WARRANTY. BUYER ASSUMES ALL RESPONSIBILITY FOR SAFETY AND USE NOT IN ACCORDANCE WITH LABEL INSTRUCTIONS. JUDGEMENTS AS TO THE SUITABILITY OF INFORMATION HEREIN FOR THE INDIVIDUAL'S OWN USE OR PURPOSES ARE NECESSARILY THE INDIVIDUAL'S OWN RESPONSIBILITY. ALTHOUGH REASONABLE CARE HAS BEEN TAKEN IN THE PREPARATION OF SUCH INFORMATION, AS MANUFACTURER OR DISTRIBUTOR, WE EXTEND NO WARRANTIES, MAKE NO REPRESENTATIONS, AND ASSUME NO RESPONSIBILITY AS TO THE ACCURACY OR SUITABILITY OF SUCH INFORMATION FOR APPLICATION TO THE INDIVIDUAL'S PURPOSES OR THE CONSEQUENCES OF ITS USE.



MSDS

MATERIAL SAFETY DATA SHEET

1. PRODUCT IDENTIFICATION

TRADE NAME (AS LABELED):

**HOMAX WALL TEXTURE
WATER-BASED ORANGE PEEL**

PRODUCT CODES:

4092, 4092-06, 4092-48

PRODUCT USE:

Aerosol Texture

SUPPLIER/MANUFACTURER'S NAME:

HOMAX PRODUCTS, INC.

ADDRESS:

200 WESTERLY ROAD
BELLINGHAM, WA 98226

CHEMTREC EMERGENCY NO.:

1-800-424-9300 (United States)
1-703-527-3887 (International Collect)

BUSINESS PHONE:

1-800-729-9029

DATE OF PREPARATION:

July 26, 2011

2. COMPOSITION and INFORMATION ON INGREDIENTS

CHEMICAL NAME	CAS #	% w/w	EXPOSURE LIMITS IN AIR						
			ACGIH-TLV		OSHA-PEL		NIOSH-REL		
			TWA mg/m ³	STEL mg/m ³	TWA mg/m ³	STEL mg/m ³	TWA mg/m ³	STEL mg/m ³	IDLH/OTHER mg/m ³
Calcium Carbonate	1317-65-3	30 - 60	10	NE	15 *	NE	10 *	NE	NE
					5 **		5 **		
Dimethyl Ether (Propellant)	115-10-6	7 - 13	NE	NE	NE	NE	NE	NE	DFG MAK: IDLH: 1900 Peak: II (8)
Isopropyl alcohol	67-63-0	3 - 7	492	984	980	NE	980	1225	2,000 (10% LEL)
Talc	14807-96-6	1 - 5	2 **	NA	20 mppcf	NA	2 *	NE	1000
Silica Quartz	14808-60-7	0.1-1	0.05 R	NE	10 mg/m ³ ** % SiO ₂ +2	NE	0.05 *	NE	50
Water and ingredients present in concentrations of less than 1% (or less than 0.1% if carcinogens)		Balance	The ingredients in the balance of this product do not contribute significant hazards beyond those described in this document. All pertinent health, safety and environmental information have been presented, per the requirements of the US Federal OSHA Hazard Communication Standard (29 CFR 1910.1200) and Canadian WHMIS.						

NE = Not Established. See Section 16 for Definitions of Terms Used.

NOTE (1): ALL WHMIS required information is included in appropriate sections based on the ANSI Z400.1-1998 format. This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

NOTE (2):* Total dust; ** Respirable fraction; **R** = Measured as respirable fraction of the aerosol.

3. HAZARD IDENTIFICATION

EMERGENCY OVERVIEW:

PHYSICAL DESCRIPTION: This product is a slurry of textures and binders delivered from an aerosol can by a pressurized propellant. It presents a pressure hazard, especially when exposed to heat.

HEALTH HAZARD: This product may cause severe irritation to the eyes or skin. If vapor, mist, or particulates of this product are

inhaled, mild to moderate irritation of the nose or throat could occur.

FIRE HAZARD: Flammable Vapor. Do not use near sources of ignition.

REACTIVITY HAZARD: Minimal Hazard; the product is normally stable under ordinary conditions of use and storage.

ENVIRONMENTAL HAZARD: This product does not normally present a significant hazard to aquatic or terrestrial life.

INHALATION: Causes respiratory tract irritation. Symptoms of exposure can include coughing, sneezing, shortness of breath, and nasal discomfort. Can cause central nervous system depression. Symptoms of exposure include headache, dizziness, drowsiness, intellectual impairment, pale skin, ringing in the ears, nausea, vomiting, and loss of coordination. Respiratory symptoms may be delayed in onset. High concentrations are an anesthetic, and exposure can lead to unconsciousness.

EYE CONTACT: Causes irritation, possibly severe. Prolonged exposure can cause pain, drying of the conjunctiva and possible permanent damage to the conjunctiva and cornea. Symptoms of eye exposure may include redness, pain, and tearing.

SKIN CONTACT: Causes irritation. Prolonged skin contact may result in redness, irritation, and dermatitis.

SKIN ABSORPTION: Components of this product may be absorbed through intact skin, which may lead to symptoms described in "Inhalation" or "Ingestion".

INGESTION: Ingestion is not anticipated to be a significant route of occupational exposure. If the material is swallowed, irritation of the mouth, throat, and other tissues of the gastro-intestinal system may occur. Ingestion of large amounts may cause irritation, pain, vomiting, and diarrhea. Components of this product are an aspiration hazard: aspiration of vomit may cause chemical pneumonia, a potentially life-threatening condition.

CHRONIC: Long-term skin contact may result in dermatitis. Prolonged or repeated exposure may cause liver, kidney and blood effects.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Pre-existing conditions of conjunctivitis and dermatitis. Pre-existing respiratory, liver, kidney or blood conditions.

Hazardous Materials Identification System (HMIS)

Health	1*
Flammability	4
Physical Hazard	1

4. FIRST-AID MEASURES

SKIN EXPOSURE: Rinse with running water for at least 15 minutes. Remove exposed or contaminated clothing, taking care not to contaminate eyes. Victim must seek immediate medical attention if any adverse exposure symptoms develop.

EYE EXPOSURE: Rinse under gently running water for at least 15 minutes. Have victim "roll" eyes. Victim must seek medical attention.

INHALATION: Remove victim to fresh air. Have victim blow nose and rinse mouth to clear any dusts. If difficulty with breathing or irritation persists, seek medical attention.

INGESTION: If this product is swallowed, seek immediate medical attention. **DO NOT INDUCE VOMITING**, unless directed by medical personnel. Have victim rinse mouth with water, if conscious. Never induce vomiting or give anything by mouth to someone who is unconscious, having convulsions, or unable to swallow.

5. FIRE-FIGHTING MEASURES

FLASH POINT: 29°F (-1.6°C)

AUTOIGNITION TEMPERATURE: 662°F (350°C) (Dimethyl ether propellant)

FLAMMABLE LIMITS (in air by volume, %):

Lower: 3.4% (Dimethyl ether propellant)

Upper: 27% (Dimethyl ether propellant)

FIRE EXTINGUISHING MATERIALS: Use extinguishing material suitable to the surrounding fire.

Water Spray: OK.

Carbon Dioxide: OK

Foam: OK

Dry Chemical: OK

Halon: OK

Other: Any "ABC" Class.

UNUSUAL FIRE AND EXPLOSION HAZARDS: When involved in a fire, this material may decompose and, generating dusts, irritating fumes and toxic gases (e.g., carbon monoxide, carbon dioxide).

Explosion Sensitivity to Mechanical Impact: Not sensitive under normal conditions.

Explosion Sensitivity to Static Discharge: Not sensitive under normal conditions.

SPECIAL FIRE-FIGHTING PROCEDURES: Incipient fire responders should wear eye protection. Structural firefighters must wear Self-Contained Breathing Apparatus and full protective equipment. Move containers from fire area if it can be done without risk to personnel. Exercise caution; contaminated floors and surfaces can be sticky. If possible, prevent runoff water from entering storm drains, bodies of water, or other environmentally sensitive areas.

6. ACCIDENTAL RELEASE MEASURES

SPILL OR LEAK:

Remove all sources of ignition if safe to do so. Ventilate area. Stop the source of the spill if safe to do so. Contain the spill to prevent further contamination of the soil, water, or drains.

CONTAINMENT: If can is punctured or leaking soak up liquid with an absorbent material such as sand, sawdust, etc. Place in an appropriate container for disposal.

CLEANUP: Rinse spill area with small amount of soapy water. Contain and absorb the rinsate with inert absorbents and place into the same disposal container.

DISPOSAL: Dispose of all materials in accordance with federal, state and local requirements.

7. HANDLING and STORAGE

HANDLING PRECAUTIONS: Avoid contact with skin, eyes or clothing. Do not use near heat or open flame.

STORAGE PRECAUTIONS: Do not store near heat or open flame. Store in a cool, dry area away from children.

WORK/HYGIENIC PRACTICES: Wash thoroughly with soap and water after handling.

NFPA 30B: Level 1 Aerosol.

8. EXPOSURE CONTROLS - PERSONAL PROTECTION

VENTILATION AND ENGINEERING CONTROLS: Use with adequate ventilation to ensure exposure levels are maintained below the limits provided in Section 2 (Composition and Information on Ingredients). Ensure adequate ventilation is available when sanding. Ensure eyewash/safety shower stations are available near areas where this product is used.

RESPIRATORY PROTECTION: None needed under normal conditions of use. Use a dust respirator for large jobs if dusts cannot otherwise be eliminated.

EYE PROTECTION: For consumer use, wearing eye protection (such as splash goggles) is advisable. However, for specific industrial applications, enhanced eye protection may be necessary. Use approved safety goggles or safety glasses, as described in OSHA 29 CFR 1910.133. If necessary, refer to U.S. OSHA 29 CFR 1910.133, or appropriate Canadian standards.

HAND PROTECTION: For consumer use, wearing protective gloves is recommended. For specific industrial applications, wear chemical impervious gloves (e.g., Neoprene, nitrile). If necessary, refer to U.S. OSHA 29 CFR 1910.138 or the appropriate standards of Canada.

9. PHYSICAL and CHEMICAL PROPERTIES

RELATIVE VAPOR DENSITY (air = 1): > 1

EVAPORATION RATE (BuAc =1): < 1

SPECIFIC GRAVITY: 1.61

MELTING/FREEZING POINT: Not available.

SOLUBILITY IN WATER: Soluble

BOILING POINT: Not available.

VAPOR PRESSURE: 62.3 psig (Dimethyl ether propellant)

pH: Not available.

ODOR THRESHOLD: Not available.

COATING V.O.C.: < 60% **MIR:** < 1.20

COEFFICIENT OF OIL/WATER DISTRIBUTION (PARTITION COEFFICIENT): Not available.

APPEARANCE, ODOR AND COLOR: Grayish white liquid with an ether odor.

10. STABILITY and REACTIVITY

STABILITY: Stable under normal circumstances of use and handling.

DECOMPOSITION PRODUCTS: Thermal decomposition of this product may generate dusts, irritating fumes, and toxic gases (e.g., carbon monoxide, carbon dioxide).

MATERIALS WITH WHICH SUBSTANCE IS INCOMPATIBLE: This product is not compatible with strong bases, strong acids, and powerful oxidizers.

HAZARDOUS POLYMERIZATION: Will not occur.

CONDITIONS TO AVOID: Avoid contact with incompatible chemicals and elevated temperatures.

11. TOXICOLOGICAL INFORMATION

TOXICITY DATA: The following toxicology information is available for components greater than 1% in concentration.

The following data are available for Calcium carbonate:

Oral - Rat: LD₅₀: 6450 mg/kg

The following data are available for Dimethyl ether:

Inhalation-Rat LC₅₀: 308 g/m³

Inhalation-Mouse LC₅₀: 386,000 ppm/30M

Inhalation-Rat TC_{Lo}: 2 ppH/6H/30W-I

SUSPECTED CANCER AGENT: The following table summarizes the carcinogenicity listing for the components of this product. "NO" indicates that the substance is not considered to be, or suspected to be, a carcinogen by the listed agency.

CHEMICAL	IARC	NTP
Calcium carbonate	NO	NO
Dimethyl ether	NO	NO
Isopropyl alcohol	3	NO
Talc	3	NO
Silica Quartz	1	Known

REPRODUCTIVE TOXICITY INFORMATION: Listed below is information concerning the effects of this product and its components on the human reproductive system.

Mutagenicity: This product is not expected to produce mutagenic effects in humans when used as instructed.

Embryotoxicity: This product is not expected to produce embryotoxic effects in humans when used as instructed.

Teratogenicity: This product is not reported to cause teratogenic effects in humans when used as instructed.

Reproductive Toxicity: This product is not reported to cause reproductive effects in humans when used as instructed.

12. ECOLOGICAL INFORMATION

Product has not been evaluated.

13. DISPOSAL CONSIDERATIONS

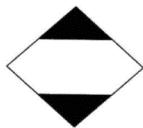
PREPARING WASTES FOR DISPOSAL: Dispose of according to pertinent state and local household waste and requirements.

14. TRANSPORTATION INFORMATION

Ground Transport:

Limited Quantity

Label:



Air Transport:

Not evaluated.

Ocean Transport:

Not evaluated

15. REGULATORY INFORMATION

ADDITIONAL U.S. REGULATIONS:

EPA REPORTING REQUIREMENTS: The following reporting requirements are applicable to components of this product:

CHEMICAL	SECTION 302 (40 CFR 355, Appendix A)	SECTION 304 (40 CFR Table 302.4)	SECTION 313 (40 CFR 372.65)
Calcium carbonate	NO	NO	NO

Dimethyl ether	NO	NO	NO
Isopropyl alcohol	NO	NO	NO
Talc	NO	NO	NO
Silica Quartz	NO	NO	NO

U.S. SARA SECTION 311/312 FOR PRODUCT: Acute health effects; chronic health effects, flammable.

U.S. TSCA INVENTORY STATUS: The components of this product are listed on the TSCA Inventory.

CALIFORNIA SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT (PROPOSITION 65):

“WARNING: This product contains a chemical known to the State of California to cause cancer.” (Quartz)

ADDITIONAL CANADIAN REGULATIONS:

CANADIAN DSL/NDSL INVENTORY STATUS: The components of this product are listed on the DSL Inventory.

16. OTHER INFORMATION

DISCLAIMER: THIS INFORMATION IS PROVIDED IN GOOD FAITH BUT WITHOUT EXPRESS OR IMPLIED WARRANTY. BUYER ASSUMES ALL RESPONSIBILITY FOR SAFETY AND USE NOT IN ACCORDANCE WITH LABEL INSTRUCTIONS. JUDGEMENTS AS TO THE SUITABILITY OF INFORMATION HEREIN FOR THE INDIVIDUAL'S OWN USE OR PURPOSES ARE NECESSARILY THE INDIVIDUAL'S OWN RESPONSIBILITY. ALTHOUGH REASONABLE CARE HAS BEEN TAKEN IN THE PREPARATION OF SUCH INFORMATION, AS MANUFACTURER OR DISTRIBUTOR, WE EXTEND NO WARRANTIES, MAKE NO REPRESENTATIONS, AND ASSUME NO RESPONSIBILITY AS TO THE ACCURACY OR SUITABILITY OF SUCH INFORMATION FOR APPLICATION TO THE INDIVIDUAL'S PURPOSES OR THE CONSEQUENCES OF ITS USE.



MATERIAL SAFETY DATA SHEET

Section 1: Product & Company Identification

Product Name: HydroForce® All-Purpose Degreaser (bulk)

Product Number (s): 14407 – 14410, 14421, 14423, 74407

Product Use: General purpose degreaser

Manufacturer / Supplier Contact Information:

In United States:

CRC Industries, Inc.

885 Louis Drive

Warminster, PA 18974

www.crcindustries.com

1-215-674-4300 (General)

(800) 521-3168 (Technical)

(800) 272-4620 (Customer Service)

In Canada:

CRC Canada Co.

2-1246 Lorimar Drive

Mississauga, Ontario L5S 1R2

www.crc-canada.ca

1-905-670-2291

In Mexico:

CRC Industries Mexico

Av. Benito Juárez 4055 G

Colonia Orquídea

San Luís Potosí, SLP CP 78394

www.crc-mexico.com

52-444-824-1666

24-Hr Emergency – CHEMTREC: (800) 424-9300 or (703) 527-3887

Section 2: Hazards Identification

Emergency Overview

CAUTION: May Cause Eye Irritation.

As defined by OSHA's Hazard Communication Standard, this product is hazardous.

Appearance & Odor: Clear purple liquid, pleasant odor

Potential Health Effects:

ACUTE EFFECTS:

EYE: May cause mild irritation including redness and burning.

SKIN: No adverse effects expected for a single exposure. Prolonged or repeated contact can cause irritation and defatting of the skin.

INHALATION: Inhalation of a small amount is not expected to cause health effects. Prolonged exposure may cause dizziness or throat irritation.

INGESTION: Ingestion of a small amount is not expected to cause health effects. Ingestion of a larger amount may cause irritation to gastrointestinal tract.

CHRONIC EFFECTS: None known

TARGET ORGANS: None known

Medical Conditions Aggravated by Exposure: pre-existing skin or eye disorders

See Section 11 for toxicology and carcinogenicity information on product ingredients.

Product Name: HydroForce® All Purpose Degreaser (bulk)

Product Number (s): 14407 – 14410, 14421, 14423, 74407

Section 3: Composition/Information on Ingredients

COMPONENT	CAS NUMBER	% by Wt.
Water	7732-18-5	80 - 90
Trisodium citrate dihydrate	6132-04-3	3 - 8
Dipropylene glycol monomethyl ether	34590-94-8	2 - 5
Detergent blend	proprietary	8 - 12

Section 4: First Aid Measures

Eye Contact: Immediately flush with plenty of water for 15 minutes. Call a physician if irritation persists.

Skin Contact: Remove contaminated clothing and wash affected area with soap and water. Call a physician if irritation persists. Wash contaminated clothing prior to re-use.

Inhalation: Remove person to fresh air. Keep person calm. If not breathing, give artificial respiration. If breathing is difficult give oxygen. Call a physician.

Ingestion: Do not induce vomiting. Call a physician for advice.

Note to Physicians: Treat symptomatically.

Section 5: Fire-Fighting Measures

Flammable Properties: This product is nonflammable.

Flash Point: None (TCC)

Upper Explosive Limit: None

Autoignition Temperature: None

Lower Explosive Limit: None

Fire and Explosion Data:

Suitable Extinguishing Media: Use extinguishing agents appropriate for surrounding fire.

Products of Combustion: If heated, product may produce oxides of carbon.

Explosion Hazards: Containers, when exposed to heat from fire, may build pressure and rupture.

Protection of Fire-Fighters: Firefighters should wear self-contained, NIOSH-approved breathing apparatus for protection against suffocation and possible toxic decomposition products. Proper eye and skin protection should be provided. Use water spray to keep fire-exposed containers cool and to knock down vapors which may result from product decomposition.

Section 6: Accidental Release Measures

Personal Precautions: Use personal protection recommended in Section 8.

Environmental Precautions: Take precautions to prevent contamination of ground and surface waters. Do not flush into sewers or storm drains.

Methods for Containment & Clean-up: Dike area to contain spill. Ventilate the area with fresh air. If in confined space or limited air circulation area, clean-up workers should wear appropriate respiratory protection. Recover or absorb spilled material using an absorbent designed for chemical spills. Place used absorbents into proper waste containers.

Product Name: HydroForce® All Purpose Degreaser (bulk)

Product Number (s): 14407 – 14410, 14421, 14423, 74407

Section 7: Handling and Storage

Handling Procedures: Avoid contact with skin and eyes. Properly clean any spilled residue with a wet cloth. Wash hands after use and before handling food items. For product use instructions, please see the product label.

Storage Procedures: Store in a cool dry area out of direct sunlight. Containers should be tightly closed while in storage. Keep out of reach of children.

Aerosol Storage Level: NA

Section 8: Exposure Controls/Personal Protection

Exposure Guidelines:

COMPONENT	OSHA		ACGIH		OTHER		UNIT
	TWA	STEL	TWA	STEL	TWA	SOURCE	
Water	NE	NE	NE	NE	NE		
Trisodium citrate dihydrate	NE	NE	NE	NE	NE		
Dipropylene glycol monomethyl ether	100	NE	100	150 (s)	NE		ppm
Detergent blend	NE	NE	NE	NE	NE		
N.E. – Not Established (c) – ceiling (s) – skin (v) – vacated							

Controls and Protection:

Engineering Controls: Area should have ventilation to provide fresh air. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at the source, preventing dispersion into the general work area. Use mechanical means if necessary to maintain vapor levels below the exposure guidelines. If working in a confined space, follow applicable OSHA regulations.

Respiratory Protection: None required for normal work where adequate ventilation is provided. If engineering controls are not feasible or if exposure exceeds the applicable exposure limits, use a NIOSH-approved cartridge respirator with organic vapor cartridge. Air monitoring is needed to determine actual employee exposure levels. Use a self-contained breathing apparatus in confined spaces and for emergencies.

Eye/face Protection: For normal conditions, wear safety glasses. Where there is reasonable probability of liquid contact, wear splash-proof goggles.

Skin Protection: Use protective gloves such as nitrile or rubber. Also, use full protective clothing if there is prolonged or repeated contact of liquid with skin.

Section 9: Physical and Chemical Properties

Physical State: liquid

Color: purple

Odor: pleasant

Odor Threshold: ND

Specific Gravity: 1.038

Initial Boiling Point: ~ 212°F

Freezing Point: ~ 30°F

Product Name: HydroForce® All Purpose Degreaser (bulk)

Product Number (s): 14407 – 14410, 14421, 14423, 74407

Vapor Pressure: ND

Vapor Density: ND (air = 1)

Evaporation Rate: slow

Solubility: soluble in water

Coefficient of water/oil distribution: ND

pH: 9.5

Volatile Organic Compounds:	(concentrate)	wt %:	4.0	g/L:	41.5	lbs./gal:	0.35
	(at dilution)	wt %:	0.4	g/L:	4.15	lbs./gal:	0.04

Section 10: Stability and Reactivity

Stability: Stable

Conditions to Avoid: Keep away from heat and direct sunlight.

Incompatible Materials: Strong oxidizers

Hazardous Decomposition Products: Carbon monoxide, carbon dioxide

Possibility of Hazardous Reactions: No

Section 11: Toxicological Information

Long-term toxicological studies have not been conducted for this product. The following information is available for components of this product.

Acute Toxicity:

<u>Component</u>	<u>Oral LD50 (rat)</u>	<u>Dermal LD50 (rabbit)</u>	<u>Inhalation LC50 (rat)</u>
Water	> 90 mL/kg	No data	No data
Trisodium citrate dihydrate	No data	No data	No data
Dipropylene glycol monomethyl ether	5.5 mL/kg	10 mL/kg	No data
Detergent blend	No data	No data	No data

Chronic Toxicity:

<u>Component</u>	<u>OSHA Carcinogen</u>	<u>IARC Carcinogen</u>	<u>NTP Carcinogen</u>	<u>Irritant</u>	<u>Sensitizer</u>
Water	No	No	No	No	No
Trisodium citrate dihydrate	No	No	No	E (mild)	Unknown
Dipropylene glycol monomethyl ether	No	No	No	E (mild) / R (mild)	No
Detergent blend	No	No	No	E (severe) / S (mild)	Unknown

E – Eye	S – Skin	R - Respiratory
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Reproductive Toxicity: Detergent Blend: Non-mutagenic for bacteria and/or yeast

Teratogenicity: No information available

Mutagenicity: No information available

Synergistic Effects: No information available

Section 12: Ecological Information

Ecological studies have not been conducted for this product. The following information is available for components of this product.

Product Name: HydroForce® All Purpose Degreaser (bulk)

Product Number (s): 14407 – 14410, 14421, 14423, 74407

Ecotoxicity: Trisodium citrate dihydrate - 48 Hr EC50, Daphnia magna: 5600 mg/L

Detergent blend – 72 Hr EC50 Algae: 0.5 mg/L

Persistence / Degradability: Readily biodegradable

Bioaccumulation / Accumulation: No information available

Mobility in Environment: No information available

Section 13: Disposal Considerations

Waste Classification: This product is not a RCRA hazardous waste. (See 40 CFR Part 261.20 – 261.33)
Wastes should be collected and properly disposed. Do not dump into bodies of water or on the ground. Empty containers may be recycled.

All disposal activities must comply with federal, state, provincial and local regulations. Local regulations may be more stringent than state, provincial or national requirements.

Section 14: Transport Information

US DOT (ground): Not Regulated

ICAO/IATA (air): Not Regulated

IMO/IMDG (water): Not Regulated

Special Provisions: None

Section 15: Regulatory Information

U.S. Federal Regulations:

Toxic Substances Control Act (TSCA):

All ingredients are either listed on the TSCA inventory or are exempt.

Comprehensive Environmental Response, Compensation and Liability Act (CERCLA):

Reportable Quantities (RQ's) exist for the following ingredients: None

Spills or releases resulting in the loss of any ingredient at or above its RQ require immediate notification to the National Response Center (800-424-8802) and to your Local Emergency Planning Committee.

Superfund Amendments Reauthorization Act (SARA) Title III:

Section 302 Extremely Hazardous Substances (EHS): None

Section 311/312 Hazard Categories:	Fire Hazard	No
	Reactive Hazard	No
	Release of Pressure	No
	Acute Health Hazard	No
	Chronic Health Hazard	No

Section 313 Toxic Chemicals: This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:
None

Clean Air Act:

Section 112 Hazardous Air Pollutants (HAPs): None

Product Name: HydroForce® All Purpose Degreaser (bulk)

Product Number (s): 14407 – 14410, 14421, 14423, 74407

U.S. State Regulations:

California Safe Drinking Water and Toxic Enforcement Act (Prop 65):

This product may contain the following chemicals known to the state of California to cause cancer, birth defects or other reproductive harm: None

Consumer Products VOC Regulations: Product # 14407 (32oz. bottle) is not compliant for sale in California. In other states with Consumer Products VOC regulations, # 14407 is compliant as a general purpose degreaser.
All other products are compliant as general purpose degreasers in all states.

State Right to Know:

New Jersey: 34590-94-8
Pennsylvania: 34590-94-8
Massachusetts: 34590-94-8
Rhode Island : 34590-94-8

Canadian Regulations:

Controlled Products Regulations:

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

WHMIS Hazard Class: D2B

Canadian DSL Inventory: All ingredients are either listed on the DSL Inventory or are exempt.

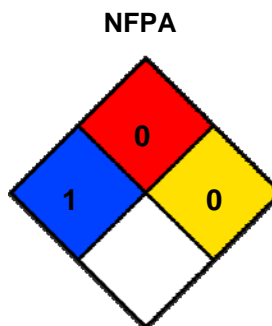
European Union Regulations:

RoHS Compliance: This product is compliant with Directive 2002/95/EC of the European Parliament and of the Council of 27 January 2003. This product does not contain any of the restricted substances as listed in Article 4(1) of the RoHS Directive.

Additional Regulatory Information: None

Section 16: Other Information

HMIS® (II)	
Health:	1
Flammability:	0
Reactivity:	0
PPE:	B



Ratings range from 0 (no hazard) to 4 (severe hazard)

Prepared By: Michelle Rudnick
CRC #: 4361
Revision Date: 01/02/2013

Changes since last revision: Section 9: Volatile Organic Compounds
Section 15: Consumer Products VOC Regulations

Product Name: HydroForce® All Purpose Degreaser (bulk)

Product Number (s): 14407 – 14410, 14421, 14423, 74407

The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. This information is accurate to the best of CRC Industries' knowledge or obtained from sources believed by CRC to be accurate. Before using any product, read all warnings and directions on the label. For further clarification of any information contained on this MSDS consult your supervisor, a health & safety professional, or CRC Industries.

ACGIH: American Conference of Governmental Industrial Hygienists
CAS: Chemical Abstract Service
CFR: Code of Federal Regulations
DOT: Department of Transportation
DSL: Domestic Substance List
g/L: grams per Liter
HMIS: Hazardous Materials Identification System
IARC: International Agency for Research on Cancer
IATA: International Air Transport Association
ICAO: International Civil Aviation Organization
IMDG: International Maritime Dangerous Goods
IMO: International Maritime Organization
lbs./gal: pounds per gallon
LC: Lethal Concentration
LD: Lethal Dose

NA: Not Applicable
ND: Not Determined
NIOSH: National Institute of Occupational Safety & Health
NFPA: National Fire Protection Association
NTP: National Toxicology Program
OSHA: Occupational Safety and Health Administration
PMCC: Pensky-Martens Closed Cup
PPE: Personal Protection Equipment
ppm: Parts per Million
RoHS: Restriction of Hazardous Substances
STEL: Short Term Exposure Limit
TCC: Tag Closed Cup
TWA: Time Weighted Average
WHMIS: Workplace Hazardous Materials Information System

Material Safety Data Sheet

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

John Deere Hy-Gard™ Low Vis Transmission/Hydraulic Oil

Product Use: Transmission Fluid, Hydraulic Oil

Product Number(s): CPS240216

Company Identification

Chevron Products Company

Global Lubricants

6001 Bollinger Canyon Rd.

San Ramon, CA 94583

United States of America

chevron-lubricants

Transportation Emergency Response

CHEMTREC: (800) 424-9300 or (703) 527-3887

Health Emergency

Chevron Emergency Information Center: Located in the USA. International collect calls accepted. (800) 231-0623 or (510) 231-0623

Product Information

email : lubemsds chevrontexaco.com

SECTION 2 COMPOSITION/ INFORMATION ON INGREDIENTS

COMPONENTS	CAS NUMBER	AMOUNT
Highly refined mineral oil (C15 - C50)	Mixture	80 - 100 %weight
Zinc alkyl dithiophosphate	68649-42-3	1 - 5 %weight

SECTION 3 HAZARDS IDENTIFICATION

IMMEDIATE HEALTH EFFECTS

Eye: Not expected to cause prolonged or significant eye irritation.

Skin: Contact with the skin is not expected to cause prolonged or significant irritation. Not expected to be harmful to internal organs if absorbed through the skin. High-Pressure Equipment Information: Accidental high-velocity injection under the skin of materials of this type may result in serious injury. Seek medical attention at once should an accident like this occur. The initial wound at the injection site may not appear to be serious at first; but, if left untreated, could result in disfigurement or amputation of the affected part.

Ingestion: Not expected to be harmful if swallowed.

Inhalation: Not expected to be harmful if inhaled. Contains a petroleum-based mineral oil. May cause respiratory irritation or other pulmonary effects following prolonged or repeated inhalation of oil mist at airborne levels above the recommended mineral oil mist exposure limit. Symptoms of respiratory irritation may include coughing and difficulty breathing.

SECTION 4 FIRST AID MEASURES

Eye: No specific first aid measures are required. As a precaution, remove contact lenses, if worn, and flush eyes with water.

Skin: No specific first aid measures are required. As a precaution, remove clothing and shoes if contaminated. To remove the material from skin, use soap and water. Discard contaminated clothing and shoes or thoroughly clean before reuse.

Ingestion: No specific first aid measures are required. Do not induce vomiting. As a precaution, get medical advice.

Inhalation: No specific first aid measures are required. If exposed to excessive levels of material in the air, move the exposed person to fresh air. Get medical attention if coughing or respiratory discomfort occurs.

Note to Physicians: In an accident involving high-pressure equipment, this product may be injected under the skin. Such an accident may result in a small, sometimes bloodless, puncture wound. However, because of its driving force, material injected into a fingertip can be deposited into the palm of the hand. Within 24 hours, there is usually a great deal of swelling, discoloration, and intense throbbing pain. Immediate treatment at a surgical emergency center is recommended.

SECTION 5 FIRE FIGHTING MEASURES

Leaks/ruptures in high pressure system using materials of this type can create a fire hazard when in the vicinity of ignition sources (eg. open flame, pilot lights, sparks, or electric arcs).

FIRE CLASSIFICATION:

OSHA Classification (29 CFR 1910.1200): Not classified by OSHA as flammable or combustible.

NFPA RATINGS: Health: 0 Flammability: 1 Reactivity: 0

FLAMMABLE PROPERTIES:

Flashpoint: (Cleveland Open Cup) 150 °C (302 °F) (Min)

Autoignition: No Data Available

Flammability (Explosive) Limits (% by volume in air): Lower: Not Applicable Upper: Not Applicable

EXTINGUISHING MEDIA: Use water fog, foam, dry chemical or carbon dioxide (CO₂) to extinguish flames.

PROTECTION OF FIRE FIGHTERS:

Fire Fighting Instructions: This material will burn although it is not easily ignited. For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus.

Combustion Products: Highly dependent on combustion conditions. A complex mixture of airborne solids, liquids, and gases including carbon monoxide, carbon dioxide, and unidentified organic compounds will be evolved when this material undergoes combustion.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Protective Measures: Eliminate all sources of ignition in vicinity of spilled material.

Spill Management: Stop the source of the release if you can do it without risk. Contain release to prevent further contamination of soil, surface water or groundwater. Clean up spill as soon as possible, observing precautions in Exposure Controls/Personal Protection. Use appropriate techniques such as applying non-combustible absorbent materials or pumping. Where feasible and appropriate, remove contaminated soil. Place contaminated materials in disposable containers and dispose of in a manner consistent with applicable regulations.

Reporting: Report spills to local authorities and/or the U.S. Coast Guard's National Response Center at (800) 424-8802 as appropriate or required.

SECTION 7 HANDLING AND STORAGE

Precautionary Measures: DO NOT USE IN HIGH PRESSURE SYSTEMS in the vicinity of flames, sparks and hot surfaces. Use only in well ventilated areas. Keep container closed.

Keep out of the reach of children.

General Handling Information: Avoid contaminating soil or releasing this material into sewage and drainage systems and bodies of water.

Static Hazard: Electrostatic charge may accumulate and create a hazardous condition when handling this material. To minimize this hazard, bonding and grounding may be necessary but may not, by themselves, be sufficient. Review all operations which have the potential of generating and accumulating an electrostatic charge and/or a flammable atmosphere (including tank and container filling, splash filling, tank cleaning, sampling, gauging, switch loading, filtering, mixing, agitation, and vacuum truck operations) and use appropriate mitigating procedures. For more information, refer to OSHA Standard 29 CFR 1910.106, 'Flammable and Combustible Liquids', National Fire Protection Association (NFPA 77, 'Recommended Practice on Static Electricity', and/or the American Petroleum Institute (API) Recommended Practice 2003, 'Protection Against Ignitions Arising Out of Static, Lightning, and Stray Currents'.

Container Warnings: Container is not designed to contain pressure. Do not use pressure to empty container or it may rupture with explosive force. Empty containers retain product residue (solid, liquid, and/or vapor) and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition. They may explode and cause injury or death. Empty containers should be completely drained, properly closed, and promptly returned to a drum reconditioner or disposed of properly.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

GENERAL CONSIDERATIONS:

Consider the potential hazards of this material (see Section 3), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.

ENGINEERING CONTROLS:

Use in a well-ventilated area.

PERSONAL PROTECTIVE EQUIPMENT

Eye/Face Protection: No special eye protection is normally required. Where splashing is possible, wear safety glasses with side shields as a good safety practice.

Skin Protection: No special protective clothing is normally required. Where splashing is possible, select protective clothing depending on operations conducted, physical requirements and other substances in the workplace. Suggested materials for protective gloves include: Nitrile Rubber, Silver Shield, Viton.

Respiratory Protection: No respiratory protection is normally required.

If user operations generate an oil mist, determine if airborne concentrations are below the occupational exposure limit for mineral oil mist. If not, wear an approved respirator that provides adequate protection from the measured concentrations of this material. For air-purifying respirators use a particulate cartridge.

Use a positive pressure air-supplying respirator in circumstances where air-purifying respirators may not provide adequate protection.

Occupational Exposure Limits:

Component	Agency	TWA	STEL	Ceiling	Notation
Highly refined mineral oil (C15 - C50)	ACGIH	5 mg/m3	10 mg/m3	--	--
Highly refined mineral oil (C15 - C50)	OSHA Z-1	5 mg/m3	--	--	--

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Attention: the data below are typical values and do not constitute a specification.

Color: Colorless to yellow

Physical State: Liquid
Odor: Petroleum odor
pH: Not Applicable
Vapor Pressure: 0.01 mmHg 37.8 °C (100 °F)
Vapor Density (Air = 1): >1
Boiling Point: >260°C (500°F)
Solubility: Soluble in hydrocarbons; insoluble in water
Freezing Point: Not Applicable
Specific Gravity: 0.87 - 0.88 15.6°C (60.1°F) / 15.6°C (60.1°F)
Viscosity: 7 cSt 100°C (212°F) (Min)

SECTION 10 STABILITY AND REACTIVITY

Chemical Stability: This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

Incompatibility With Other Materials: May react with strong acids or strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.

Hazardous Decomposition Products: None known (None expected)

Hazardous Polymerization: Hazardous polymerization will not occur.

SECTION 11 TOXICOLOGICAL INFORMATION

IMMEDIATE HEALTH EFFECTS

Eye Irritation: The eye irritation hazard is based on evaluation of data for similar materials or product components.

Skin Irritation: The skin irritation hazard is based on evaluation of data for similar materials or product components.

Skin Sensitization: No product toxicology data available.

Acute Dermal Toxicity: The acute dermal toxicity hazard is based on evaluation of data for similar materials or product components.

Acute Oral Toxicity: The acute oral toxicity hazard is based on evaluation of data for similar materials or product components.

Acute Inhalation Toxicity: The acute inhalation toxicity hazard is based on evaluation of data for similar materials or product components.

ADDITIONAL TOXICOLOGY INFORMATION:

This product contains petroleum base oils which may be refined by various processes including severe solvent extraction, severe hydrocracking, or severe hydrotreating. None of the oils requires a cancer warning under the OSHA Hazard Communication Standard (29 CFR 1910.1200). These oils have not been listed in the National Toxicology Program (NTP) Annual Report nor have they been classified by the International Agency for Research on Cancer (IARC) as: carcinogenic to humans (Group 1), probably carcinogenic to humans (Group 2A), or possibly carcinogenic to humans (Group 2B). These oils have not been classified by the American Conference of Governmental Industrial Hygienists (ACGIH) as: confirmed human carcinogen (A1), suspected human carcinogen (A2), or confirmed animal carcinogen with unknown relevance to humans (A3).

SECTION 12 ECOLOGICAL INFORMATION

ECOTOXICITY

The toxicity of this material to aquatic organisms has not been evaluated. Consequently, this material should be kept out of sewage and drainage systems and all bodies of water.

ENVIRONMENTAL FATE

This material is not expected to be readily biodegradable.

SECTION 13 DISPOSAL CONSIDERATIONS

Use material for its intended purpose or recycle if possible. Oil collection services are available for used oil recycling or disposal. Place contaminated materials in containers and dispose of in a manner consistent with applicable regulations. Contact your sales representative or local environmental or health authorities for approved disposal or recycling methods.

SECTION 14 TRANSPORT INFORMATION

The description shown may not apply to all shipping situations. Consult 49CFR, or appropriate Dangerous Goods Regulations, for additional description requirements (e.g., technical name) and mode-specific or quantity-specific shipping requirements.

DOT Shipping Description: PETROLEUM LUBRICATING OIL, NOT REGULATED AS A HAZARDOUS MATERIAL FOR TRANSPORTATION UNDER 49 CFR

Additional Information: NOT HAZARDOUS BY U.S. DOT. ADR/RID HAZARD CLASS NOT APPLICABLE.

IMO/IMDG Shipping Description: PETROLEUM LUBRICATING OIL; NOT REGULATED AS DANGEROUS GOODS FOR TRANSPORT UNDER THE IMDG CODE

ICAO/IATA Shipping Description: PETROLEUM LUBRICATING OIL; NOT REGULATED AS DANGEROUS GOODS FOR TRANSPORT UNDER ICAO

SECTION 15 REGULATORY INFORMATION

EPCRA 311/312 CATEGORIES: 1. Immediate (Acute) Health Effects: NO

2. Delayed (Chronic) Health Effects: NO

3. Fire Hazard: NO

4. Sudden Release of Pressure Hazard: NO

5. Reactivity Hazard: NO

REGULATORY LISTS SEARCHED:

01-1=IARC Group 1

03=EPCRA 313

01-2A=IARC Group 2A

04=CA Proposition 65

01-2B=IARC Group 2B

05=MA RTK

02=NTP Carcinogen

06=NJ RTK

07=PA RTK

The following components of this material are found on the regulatory lists indicated.

Zinc alkyl dithiophosphate

03, 06

CHEMICAL INVENTORIES:

All components comply with the following chemical inventory requirements: AICS (Australia), DSL (Canada), EINECS (European Union), ENCS (Japan), KECI (Korea), TSCA (United States).

One or more components does not comply with the following chemical inventory requirements: IECSC (China), PICCS (Philippines).

NEW JERSEY RTK CLASSIFICATION:

Under the New Jersey Right-to-Know Act L. 1983 Chapter 315 N.J.S.A. 34:5A-1 et. seq., the product is to be identified as follows: PETROLEUM OIL (Automatic transmission fluid)

WHMIS CLASSIFICATION:

This product is not considered a controlled product according to the criteria of the Canadian Controlled Products Regulations.

SECTION 16 OTHER INFORMATION

NFPA RATINGS: Health: 0 Flammability: 1 Reactivity: 0

HMIS RATINGS: Health: 1 Flammability: 1 Reactivity: 0

(0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme, PPE:- Personal Protection Equipment Index recommendation, - Chronic Effect Indicator). These values are obtained using the guidelines or published evaluations prepared by the National Fire Protection Association (NFPA) or the National Paint and Coating Association (for HMIS ratings).

LABEL RECOMMENDATION:

Label Category : INDUSTRIAL OIL 1 - IND1

REVISION STATEMENT: This is a new Material Safety Data Sheet.

Revision Date: February 03, 2007

ABBREVIATIONS THAT MAY HAVE BEEN USED IN THIS DOCUMENT:

TLV - Threshold Limit Value	TWA - Time Weighted Average
STEL - Short-term Exposure Limit	PEL - Permissible Exposure Limit
	CAS - Chemical Abstract Service Number
ACGIH - American Conference of Government Industrial Hygienists	IMO/IMDG - International Maritime Dangerous Goods Code
API - American Petroleum Institute	MSDS - Material Safety Data Sheet
CVX - Chevron	NFPA - National Fire Protection Association (USA)
DOT - Department of Transportation (USA)	NTP - National Toxicology Program (USA)
IARC - International Agency for Research on Cancer	OSHA - Occupational Safety and Health Administration

Prepared according to the OSHA Hazard Communication Standard (29 CFR 1910.1200) and the ANSI MSDS Standard (Z400.1) by the Chevron Energy Technology Company, 100 Chevron Way, Richmond, California 94802.

The above information is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made available subsequent to the date hereof may suggest modifications of the information, we do not assume any responsibility for the results of its use. This information is furnished upon condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.

MATERIAL SAFETY DATA SHEET

Jesco Resources, Inc.

Multi-Purpose SD Polyurea Grease (Non Clay HT)
CXTY6341, CXTY24419, CXTY24421, CXTY24422, CXTY24420
Last Revision: 9/2/08

Date Issued: 10/3/08

1.0 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Manufacturer/Supplier:
Jesco Resources, Inc.
1437 Gentry, P.O. Box 12337
North Kansas City, MO 64116

Emergency Spill Information:
1-800-255-3924 Chem.-Tel (USA)
Other Product Safety Information:
816-471-4590

2.0 COMPOSITION/INFORMATION ON INGREDIENTS

<u>Component</u>	<u>CAS#</u>	<u>Range % by wt.</u>
Solvent Refined Heavy Paraffinic Distillate	64742-54-7	20 - 90
Polyurea Thickener	mixture	1 - 20
Calcium carbonate	1317-65-3	1 - 20

Regulated by OSHA.
Regulated under SARA Title III.

3.0 HAZARDS IDENTIFICATION

Emergency Overview: This product has been evaluated and does not require any hazard warning on the label under OSHA criteria.

Potential Health Effects:

Eye Contact: No significant health hazard identified.

Skin Contact: Prolonged or repeated contact may cause skin irritation.

Inhalation: No significant health hazards identified.

Ingestion: Do not take internally. Harmful or fatal if swallowed.

HMIS Code: (Health:1) (Flammability:1) (Reactivity:0)

NFPA Code: (Health:1) (Flammability:1) (Reactivity:0)

4.0 FIRST AID MEASURES

Eye: Flush eyes with plenty of water.

Skin: Wash exposed skin with soap and water. Get medical attention if irritation develops.

Inhalation: If adverse effects occur, remove to uncontaminated area. Get medical attention.

Ingestion: If a large amount is swallowed, get medical attention. Do not induce vomiting.

5.0 FIRE FIGHTING MEASURES

Flashpoint: 400F **Method:** C.O.C.

UEL: Not determined.

LEL: Not determined.

Auto ignition Temperature: Not determined.

Date Issued: 10/3/08

5.0 FIRE FIGHTING MEASURES cont.**Flammability Classification:** Not Flammable.**Extinguishing Media:** Agents approved for Class B (e.g., dry chemical, carbon dioxide, foam, steam) or water fog.**Unusual Fire and Explosion Hazards:** None identified.**Fire Fighting Equipment:** Firefighters should wear full bunker gear, including a positive pressure self-contained breathing apparatus.**Hazardous Combustion Products:** Incomplete burning can produce carbon monoxide and/or carbon dioxide and other harmful products.

6.0 ACCIDENTAL RELEASE MEASURES

Remove any source of ignition. Absorb with dry inert material, sand, clay, etc., and shovel up for disposal.

7.0 HANDLING AND STORAGE**Handling:** No special requirements if handled with reasonable care.**Storage:** Do not store in high temperature areas or where subject to open flames.

8.0 EXPOSURE CONTROLS/PERSONAL PROTECTION**Eye:** None required; however, use of eye protection is good industrial practice.**Skin:** Wear protective gloves if prolonged or repeated contact is likely.**Inhalation:** None required; however, use of adequate ventilation is good industrial practice.**Engineering Controls:** Control airborne concentrations below the exposure guidelines.**Exposure Guidelines:**

Component	CAS#	OSHA PEL	ACGIH TLV
Solvent Refined Heavy Paraffinic Distillate	64742-54-7	5 mg/m3	5 mg/m3 (oil mist)
Polyurea Thickener	mixture	none	none
Calcium carbonate	1317-65-3	15mg/m3	none

9.0 CHEMICAL AND PHYSICAL PROPERTIES

Appearance and Odor	: Smooth dark green grease with petroleum oil odor.
pH	: Not determined.
Vapor Pressure	: .1 20 C(mm Hg)
Vapor Density	: Not determined.
Boiling Point	: >700F
Melting Point	: Not determined.
Solubility	: Not determined.
Specific Gravity	: 0.9233 (water = 1)

Date Issued: 10/3/08

10.0 STABILITY AND REACTIVITY

Stability: Stable.

Conditions to Avoid: None identified.

Materials to Avoid: Avoid chlorine, fluorine, and other strong oxidizers.

Hazardous Decomposition: None identified.

11.0 TOXICOLOGICAL INFORMATION

Toxicological testing has not been conducted on this product.

12.0 ECOLOGICAL INFORMATION

Ecological testing has not been conducted on this product.

13.0 DISPOSAL INFORMATION

Disposal must be in accordance with applicable federal, state, or local regulations. Enclosed-controlled incineration is recommended unless directed otherwise by applicable ordinances.

14.0 TRANSPORTATION INFORMATION

U.S. Dept. of Transportation

Shipping Name: not regulated

Hazard Class:

Identification number:

15.0 REGULATORY INFORMATION

SARA Title III Hazardous Categorization (40 CFR 370): Does not contain components regulated under SARA Title III.

OSHA Hazard Communication Standard: Contains components listed by OSHA.

BY:

Dr. Carl Kernizan

Technical Director

1437 Gentry

North Kansas City, MO 64116

This material safety data sheet conforms to the requirements of ANSI Z400.1.

This material safety data sheet and the information it contains are offered to you in good faith as accurate. It may not be valid for this material if used in combination with any other materials or in any process. It is the user's responsibility to satisfy oneself as to the suitability and completeness of this information for own particular use.

MATERIAL SAFETY DATA SHEET**1. PRODUCT AND COMPANY IDENTIFICATION****Product Name:** CCWI 181**Synonyms:** Water-Based Mastic**Manufacturer/Supplier**

Carlisle HVAC Products

900 Hensley Lane

Wylie, TX 75098

Internet Address:<http://www.carlisleHVAC.com/>**Phone Numbers****Medical Emergency:****CHEMTREC (USA):** (800) 424-9300**CHEMTREC (International):****MSDS Assistance:** (972) 442-6545**Fax On Demand:** NA**Technical Assistance:** (888) 229-2199**Customer Service:** (888) 229-0199**2. COMPONENT INFORMATION**

Component	CAS No.	Percent Range	Hazardous in Blend
Ethylene Glycol	107-21-1	0.5 - 2	
Methanol	67-56-1	0.2 - 2	

This product is not hazardous according OSHA 29 CFR 1910.1200.**Hazards:**

Flammable/Combustible No Acute No Chronic No Carcinogen No
Toxin No Toxin No
Pressure No Reactive No Exposure Limit No Target Organ No Other No

2A. OTHER INGREDIENTS Greater than 3%

Component	CAS No.
Latex Co-Polymer	24937-78-8
Calcium Carbonate	1317-65-3
Hydrated Alumina	21645-51-2
Chlorinated Paraffin	63449-39-8

3. HAZARDS IDENTIFICATION**Emergency and Hazards Overview:**

May cause moderate irritation to eyes. May be harmful if swallowed. Read and understand all health and safety information on the product label and Material Safety Data Sheet before use.

Ratings**Health** 1 **Flammability** 0 **Reactivity** 0**Primary Route of Exposure:** Skin x Inhalation x Eye x Ingestion x**Health Effect Information****Eye Contact:** May cause eye irritation if wiped or rubbed into eyes.**Skin Contact:** May cause mild skin irritation on prolonged or repeated contact.**Inhalation:** Breathing high concentrations of vapors may cause nausea & irritation of nose, throat, & respiratory tract. Respiratory symptoms associated with pre-existing lung disorders may be aggravated by exposure to this material.**Ingestion:** Ingestion of large quantity may cause initial central nervous system stimulation, followed by depression.

Medical Conditions Aggravated by Exposure: Prolonged exposure to vapors could aggravate pre-existing disorders in lungs, kidney and liver.

4. FIRST AID INFORMATION

Eye Contact: Flush with water for 15 minutes. Get medical attention immediately.

Skin Contact: Wipe off and wash skin with soap and water. Promptly remove contaminated clothing and wash before reuse.

Inhalation: Remove to fresh air. If breathing has stopped, start artificial respiration. Oxygen may be administered. Consult physician immediately

Ingestion: Do not induce vomiting unless directed to do so by a physician. Consult a physician immediately.

Notes to Physician: This product contains ethylene glycol, Hexahydro-1, 3,5-triethyl-s-triazine (not in a reportable amount).

5. FIRES AND EXPLOSION INFORMATION

Flammable Properties

Flash Point: No flash to boiling

Test Method: Closed cup

Flame extension: NA

Test Method: NA

Flammable Limits in Air

Upper Percent: NA

Lower Percent: NA

Auto ignition Temperature: NA

Test Method: NA

NFPA Classification: H 1 F 0 R 0

Extinguishing Media: CO₂, foam, dry chemical or water spray.

Fire Fighting Measures

Special Fire Fighting Procedures and Equipment: Firemen must wear full-face air-supplied masks and full protective clothing.

Unusual Fire and Explosion Conditions: This product is not sensitive to physical shock or static discharge. Exposure of closed container to temperatures above the boiling point could cause pressure buildup and container rupture.

Hazardous Combustion By-Products: CO, CO₂, unburned hydrocarbons, or nitrous oxides.

6. ACCIDENTAL RELEASE MEASURES

Personnel Safeguards: Evacuate non-essential personnel to safe areas. Clean-up responders should wear proper protective clothing and gloves before entering the affected area.

Regulatory Notifications: Certain component of this product is defined as hazardous according to U.S. EPA. Spill reporting requirements and reportable quantities vary by region. Consult all applicable state and local regulations. For Canada, observe all precautions noted above.

Containment and Clean up: Prevent product from entering drinking water supplies or streams. Observe above precautions, collect liquid with inert, noncombustible material and remove for disposal.

7. HANDLING AND STORAGE INFORMATION

Handling: Normal use condition doesn't produce respirable Silica. However, sanding, grinding, and burning might release respirable Silica. Keep out of reach of children. Launder contaminated clothing. Wash hands with soap and water after use, especially before eating or drinking.

Storage: Store in a dry, well ventilated environment away from heat, above 35° F and below 110° F. Keep containers closed when not in use. Do not pressurize, cut weld or grind containers.

Empty Container Warnings

Drums: Drums may be reused after wash.

Plastic: Plastic containers may be reused after wash.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION INFORMATION

Exposure Limits and Guidelines

Component	CAS No.	Exposure Limit
Methanol	67-56-1	200 ppm OSHA PEL 200 ppm ACGIH TWA, 250 ppm STEL
Ethylene Glycol	107-21-1	50 ppm OSHA PEL/Ceiling

Personal Protective Equipment

Eye/Face Protection: Wear safety goggles or face shield. Contact lenses should not be worn.

Skin Protection: Use protective rubber gloves (Hycron, neoprene, or nitrile).

Respiratory Protection: Provide adequate ventilation to maintain vapors below PEL/TWA. If vapor levels are exceeded, use NIOSH approved respirator, both during and immediately after application, until vapor levels are below limits.

Personal Hygiene: Avoid rubbing eyes during handling. Use good personal hygiene practices to avoid incidental ingestion.

Engineering Controls / Work Practices

Ventilation: Provide local exhaust or area ventilation to maintain concentration of vapors below PEL/TWA.

Other: Source of clean water should be available in the work area for flushing eyes and skin. Wash thoroughly with soap and water after use and before eating.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: White/Gray Mastic	Vapor Pressure: 17 mm Hg @ 20°C
Odor: Typical latex with slight ammonia odor	Vapor Density (air=1): <air
Physical state: Mastic	Percent Volatile by Weight: 24 – 28
pH: 8.0 – 9.0	Volatile Organic Content: 38 g/l (according to SCAQMD calculation method)
DOT Corrosivity: NA	Molecular Weight: NA
Boiling Point: 212°F	Average Carbon Number: NA
Melting Point: NA	Viscosity @ 77 F: Thixotropic
Specific Gravity: 1.39	
Pour Point: NA	
Solubility in Water: Miscible with water	
Octanol / Water Coefficient: Log K _{ow} = NA	

10. STABILITY AND REACTIVITY INFORMATION

Chemical Stability: Stable

Conditions to Avoid: Avoid extreme heat, fire and temperature.

Incompatible Materials to Avoid: Avoid strong acids, strong oxidizers.

11. TOXICOLOGICAL INFORMATION (will only print available data)

Ethylene Glycol

Primary Eye Irritation: Irritating

Primary Skin Irritation: NA

Acute Dermal Toxicity: Product toxicity has not been determined.

Sub-acute Dermal Toxicity: NA

Dermal Sensitization: NA

Inhalation Toxicity: Product toxicity has not been determined.

Inhalation Sensitization: NA

Oral Toxicity: Product toxicity has not been determined. Following are component data:

LD₅₀, Ethylene Glycol: Rat 4,000 mg/kg

Mutagenicity: NA

Carcinogenicity: NA

Reproductive Toxicity: Product toxicity has not been determined. Following are component data:

Ethylene Glycol: Pregnant Rat 1.25g/kg and above: increased malformed fetus

Pregnant Mice 750 mg/kg and above: increased malformed fetus

Teratogenicity: NA

Immunotoxicity: NA

Neurotoxicity: NA

No other toxicological information available

12. ECOLOGICAL INFORMATION

Ethylene Glycol

Aquatic Toxicity: Not known

Terrestrial Toxicity: Not known

Chemical Fate and Transport: Not known

No other ecological information available

13. DISPOSAL INFORMATION

Regulatory Information: Consult all regulations (federal, state, provincial, local etc.) or a qualified waste disposal firm when characterizing waste for disposal.

Waste Disposal Methods: Recover free liquid. Absorb residue and dispose of according to local, state and Federal EPA regulation. Empty container: may contain explosive vapors. Do Not cut, puncture or weld on or nearby.

14. TRANSPORTATION INFORMATION

U.S. Department of Transportation (DOT)

Highway / Rail: Not regulated by DOT

International Highway (Transportation of Dangerous Goods-TDG): Not regulated

International Ocean (International Maritime Dangerous Goods – IMDG): Not regulated

International Air (International Air Transportation Authority – IATA): Not regulated

The DOT description is provided to assist in the proper shipping classification of this product and may not be suitable for all shipping descriptions.

Other: No other information available

15. REGULATORY INFORMATION

Regulatory Lists

U.S. TSCA Inventory: All components of this material are on the US TSCA Inventory or exempt from listing on the TSCA Inventory.

Sara Section 313: This product contains the following Sara, Title III, Section 313 Chemicals:

<u>Chemical</u>	<u>CAS Number</u>	<u>Percent in Product</u>
Methanol	67-56-1	0.2 - 2
Ethylene Glycol	107-21-1	0.5 - 2

IARC Group: NA

Regulatory Lists Searched

This product contains a mixture of one or more components found on the following State List at or above OSHA de minimis quantities

Health & Safety: NA

Environmental: NA

International: NA

State: FL, MA, MN, PA, NJ, WA

National Inventories: NA

SARA 311 / 312 Categories (For the chemicals above)

Acute: Yes **Chronic:** Yes **Fire:** Yes **Pressure:** No **Reactive:** No

Regulated: No

California Proposition 65 Information: Warning! None in the list

Canadian WHMIS Classification**Methanol**

Class: Class B2 and D2B

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations (CPR). This MSDS contains all the information required by the CPR.

Canadian Environmental Protection Act (CEPA)

All reportable chemical substance is listed on the Domestic Substances List (DSL) or otherwise complies with CEPA new substance notification requirements.

National Pollution Release Inventory (NPRI)

This product contains the following chemical subject to the reporting requirements of the CEPA subsection 16(1), NPRI.

Chemical	CAS Number	Percent in Product
Methanol	67-56-1	0.2 – 2
Ethylene Glycol	107-21-1	0.5 – 2

Other Regulations: No other information available.

16. OTHER INFORMATION**Health and Environmental Label Language**

All ingredients contained in this product are included on the US EPA Toxic Substances Control Act (TSCA) inventory or exempt from listing on the TSCA inventory. All ingredients contained in this product complies with the requirements of the Canadian Environmental Protection Act (CEPA) and are listed on the Domestic Substance List (DSL) or Non-Domestic Substance List (NDSL)

MSDS Revisions

Previous Version Date: 1 March 2011

Section

Old Information:

New Information:

Prepared By: R&D Department

Date: 1 February 2014

Disclaimer of Warranty: The information contained herein is based upon data and information available to us, and reflects our best professional judgment. This product may be formulated in part with components purchased from other companies. In many instances, especially when proprietary or trade secret materials are used, CCWI Company must rely upon the hazard evaluation of such components submitted by that product's manufacturer or importer. No warranty of merchantability, fitness for any use, or any other warranty is expressed or implied regarding the accuracy of such data or information. The results to be obtained from the use thereof, or that any such use does not infringe any patent, since the information contained herein may be applied under conditions of use beyond our control and with which we may be unfamiliar, we do not assume responsibility for the results of such application. This information is furnished upon the condition that the person receiving it shall make his own determination of the suitability of the material for his particular use.

Issued: 1 February 2014
Supersedes: 1 March 2011
Page 6 of 7



333 Hollenbeck St.
Rochester NY 14621
Information: 585-336-2200

Emergency Phone:
INFOTRAC: 1-800-535-5053
OUTSIDE US: 1-352-323-3500

MATERIAL SAFETY DATA SHEET

REVISION DATE: 03/17/2006
DATE PRINTED: 03/17/2006

REVISION NUMBER: 5
PREPARED BY: EH&S DEPARTMENT

1. CHEMICAL PRODUCT

PRODUCT NAME: **ENVIRO CARE LIQUI-BAC**
SDS FORM NUMBER: 7023

NFPA/HMIS HAZARD CODES (minimal=0; slight=1; moderate=2; serious=3; severe=4)

Health: 1/1 Fire: 0/0
Reactivity: 0/0 Special/Protective Equipment: None/B

2. HAZARDS IDENTIFICATION

EFFECTS FROM ACUTE EXPOSURE:

INGESTION: May cause irritation.
SKIN CONTACT: Prolonged contact may lead to irritation and dermatitis.
INHALATION: Causes mild respiratory irritation.
EYE CONTACT: May irritate eyes.
CHRONIC EFFECTS: None known.
EFFECTS/CARCINOGENICITY: None listed under OSHA, IARC, or NTP.
ROUTES OF ENTRY: Dermal - Skin.

3. COMPOSITION/INFORMATION ON INGREDIENTS

PRODUCT COMPOSITION CAS #	%	ACGIH TLV	OSHA PELs
Non-Pathogenic Bacterial Mix No CAS	10	NA	NA

4. FIRST AID MEASURES

INGESTION: Contact Physician.
SKIN: Wash with soap and water.
INHALATION: Move person to fresh air.
EYES: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention if irritation persists.
NOTES TO PHYSICIAN: None.

5. FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (F): None (C): NA
METHOD: TCC
FLAMMABLE LIMITS IN AIR
- LOWER (%): NA

ENVIRO CARE LIQUI-BAC

- UPPER (%): NA

SENSITIVITY TO MECHANICAL IMPACT(Y/N): NO
SENSITIVITY TO STATIC DISCHARGE: Sensitivity to static discharge is not expected.
SUITABLE EXTINGUISHING MEDIA: Water. Dry chemical. Foam.
FIRE FIGHTING PROCEDURES: Non-combustible material.

6. ACCIDENTAL RELEASE MEASURES

SPILL PROCEDURES:

SMALL SPILLS: Mop up all possible. Flush residue with water.
LARGE SPILLS: Dike to contain. Pick up with absorbant material. Put in suitable container for disposal. Flush remainder with water.

PERSONAL PRECAUTIONS: NA
ENVIRONMENTAL PRECAUTIONS: NA
METHODS FOR CLEANING UP: NA

7. HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Keep out of reach of children. Avoid contact with skin and eyes.
OTHER PRECAUTIONS: Keep out of reach of children.
SPECIFIC USE(S): NA

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

PROTECTIVE EQUIPMENT:



EXPOSURE CONTROLS: None known.
RESPIRATORY PROTECTION: None normally required.
PROTECTIVE GLOVES: Rubber gloves.
EYE PROTECTION: Safety Glasses.
OTHER PERSONAL PROTECTION EQUIPMENT: None required.
VENTILATION: None required.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR: Opaque white liquid. Odorless.
BOILING POINT (F): 212 (C) NA
VAPOR PRESSURE: NA
VAPOR DENSITY (AIR=1): NA
SOLUBILITY IN WATER: NA
SPECIFIC GRAVITY: 1.02 - 1.05
VOC Content (%): 0.50 (EPA Method 24)
VOV Content (%): NE
EVAPORATION RATE: NE
PH: 8.0 - 8.8

10. STABILITY AND REACTIVITY

ENVIRO CARE LIQUI-BAC

STABILITY DATA: STABLE
POLYMERIZATION: Will Not Occur.
HAZARDOUS DECOMPOSITION: Acrylic monomers
INCOMPATIBILITY (MATERIALS TO AVOID): None known.
CONDITIONS/HAZARDS TO AVOID: None known.

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY: NE
EFFECTS OF CHRONIC EXPOSURE: NE
OTHER TOXIC EFFECTS: NE

12. ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION: No data at this time
CHEMICAL FATE INFORMATION: No data at this time.
MOBILITY: NA
PERSISTENCE/DEGRADABILITY: NA
BIOACCUMULATIVE POTENTIAL: NA
OTHER ADVERSE EFFECTS: NA

13. DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHODS: Dispose in accordance with Federal, State and Local regulations.

14. TRANSPORT INFORMATION

Please refer to the Bill of Lading/Receiving documents for up to date shipping information.

15. REGULATORY INFORMATION

PRODUCT COMPOSITION CAS #	%	TSCA:	EINECS:	Canada DSL:	CA PROP 65:
Non-Pathogenic Bacterial Mix No CAS	10	Not Listed	Not Listed	Not Listed	Not Listed

PRODUCT COMPOSITION CAS #	%	CERCLA:	SARA 302:	SARA 313:
Non-Pathogenic Bacterial Mix No CAS	10	Not Listed	Not Listed	Not Listed

None of the components of this material are included in the Massachusetts Substance List nor are present at or above reportable levels.

None of the components of this material are included in the New Jersey Substance List nor are present at or above reportable levels.

None of the components of this material are included in the Pennsylvania Substance List nor are present at or above reportable levels.

ENVIRO CARE LIQUI-BAC

16. OTHER INFORMATION

Health and safety information presented on this form is generally applicable at recommended dilutions, varying only in degree. This information was compiled from current, reliable sources and is believed to be correct. As data, and/or regulations change, and conditions of use and handling are beyond our control, no warranty, express or implied, is made as to completeness or continuing accuracy of this information.

***** END OF MSDS *****

MATERIAL SAFETY DATA SHEET

78500
07 00

DATE OF PREPARATION
Jul 19, 2014

SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER

78500

PRODUCT NAME

MINWAX® Paste Finishing Wax, Natural

MANUFACTURER'S NAME

MINWAX Company
10 Mountainview Road
Upper Saddle River, NJ 07458

Telephone Numbers and Websites

Product Information	(800) 523-9299 www.minwax.com
Regulatory Information	(216) 566-2902 www.paintdocs.com
Medical Emergency	(216) 566-2917
Transportation Emergency*	(800) 424-9300
*for Chemical Emergency ONLY (spill, leak, fire, exposure, or accident)	

SECTION 2 — COMPOSITION/INFORMATION ON INGREDIENTS

% by Weight	CAS Number	Ingredient	Units	Vapor Pressure
68	64742-88-7	Med. Aliphatic Hydrocarbon Solvent		
		ACGIH TLV	100 PPM	1.27 mm
		OSHA PEL	100 PPM	

SECTION 3 — HAZARDS IDENTIFICATION

ROUTES OF EXPOSURE

INHALATION of vapor or spray mist.
EYE or SKIN contact with the product, vapor or spray mist.

EFFECTS OF OVEREXPOSURE

EYES: Irritation.

SKIN: Prolonged or repeated exposure may cause irritation.

INHALATION: Irritation of the upper respiratory system.

May cause nervous system depression. Extreme overexposure may result in unconsciousness and possibly death.

SIGNS AND SYMPTOMS OF OVEREXPOSURE

Headache, dizziness, nausea, and loss of coordination are indications of excessive exposure to vapors or spray mists.
Redness and itching or burning sensation may indicate eye or excessive skin exposure.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

None generally recognized.

CANCER INFORMATION

For complete discussion of toxicology data refer to Section 11.

HMIS Codes

Health	2
Flammability	2
Reactivity	0

SECTION 4 — FIRST AID MEASURES

EYES: Flush eyes with large amounts of water for 15 minutes. Get medical attention.

SKIN: Wash affected area thoroughly with soap and water.

Remove contaminated clothing and launder before re-use.

INHALATION: If affected, remove from exposure. Restore breathing. Keep warm and quiet.

INGESTION: Do not induce vomiting. Get medical attention immediately.

SECTION 5 — FIRE FIGHTING MEASURES

FLASH POINT 108 °F PMCC	LEL 1.0	UEL 6.0	FLAMMABILITY CLASSIFICATION Combustible, Flash above 99 and below 200 °F
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EXTINGUISHING MEDIA

Carbon Dioxide, Dry Chemical, Foam

UNUSUAL FIRE AND EXPLOSION HAZARDS

Closed containers may explode when exposed to extreme heat.

Application to hot surfaces requires special precautions.

During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIRE FIGHTING PROCEDURES

Full protective equipment including self-contained breathing apparatus should be used.

Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

SECTION 6 — ACCIDENTAL RELEASE MEASURES**STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED**

Remove all sources of ignition. Ventilate the area.

Remove with inert absorbent.

SECTION 7 — HANDLING AND STORAGE**STORAGE CATEGORY**

DOL Storage Class II

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Contents are COMBUSTIBLE. Keep away from heat and open flame.

Consult NFPA Code. Use approved Bonding and Grounding procedures.

Keep container closed when not in use. Transfer only to approved containers with complete and appropriate labeling. Do not take internally.

Keep out of the reach of children.

SECTION 8 — EXPOSURE CONTROLS/PERSONAL PROTECTION**PRECAUTIONS TO BE TAKEN IN USE**

Use only with adequate ventilation.

Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.

Wash hands after using.

This coating may contain materials classified as nuisance particulates (listed "as Dust" in Section 2) which may be present at hazardous levels only during sanding or abrading of the dried film. If no specific dusts are listed in Section 2, the applicable limits for nuisance dusts are ACGIH TLV 10 mg/m³ (total dust), 3 mg/m³ (respirable fraction), OSHA PEL 15 mg/m³ (total dust), 5 mg/m³ (respirable fraction).

Removal of old paint by sanding, scraping or other means may generate dust or fumes that contain lead. Exposure to lead dust or fumes may cause brain damage or other adverse health effects, especially in children or pregnant women. Controlling exposure to lead or other hazardous substances requires the use of proper protective equipment, such as a properly fitted respirator (NIOSH approved) and proper containment and cleanup. For more information, call the National Lead Information Center at 1-800-424-LEAD (in US) or contact your local health authority.

VENTILATION

Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

RESPIRATORY PROTECTION

If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2.

When sanding or abrading the dried film, wear a dust/mist respirator approved by NIOSH/MSHA for dust which may be generated from this product, underlying paint, or the abrasive.

PROTECTIVE GLOVES

Wear gloves which are recommended by glove supplier for protection against materials in Section 2.

EYE PROTECTION

Wear safety spectacles with unperforated sideshields.

OTHER PRECAUTIONS

Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT WEIGHT	6.80 lb/gal	814 g/l
SPECIFIC GRAVITY	0.82	
BOILING POINT	300 - 395 °F	148 - 201 °C
MELTING POINT	Not Available	
VOLATILE VOLUME	72%	
EVAPORATION RATE	Slower than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	Not Available	
VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)		
4.64 lb/gal	556 g/l	Less Water and Federally Exempt Solvents
4.64 lb/gal	556 g/l	Emitted VOC

SECTION 10 — STABILITY AND REACTIVITY

STABILITY — Stable

CONDITIONS TO AVOID

None known.

INCOMPATIBILITY

None known.

HAZARDOUS DECOMPOSITION PRODUCTS

By fire: Carbon Dioxide, Carbon Monoxide

HAZARDOUS POLYMERIZATION

Will not occur

SECTION 11 — TOXICOLOGICAL INFORMATION

CHRONIC HEALTH HAZARDS

No ingredient in this product is an IARC, NTP or OSHA listed carcinogen.

Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

TOXICOLOGY DATA

CAS No.	Ingredient Name			
64742-88-7	Med. Aliphatic Hydrocarbon Solvent			
	LC50 RAT	4HR		Not Available
	LD50 RAT			Not Available

SECTION 12 — ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

No data available.

SECTION 13 — DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD

Waste from this product may be hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.

Waste must be tested for ignitability to determine the applicable EPA hazardous waste numbers.

Incinerate in approved facility. Do not incinerate closed container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

SECTION 14 — TRANSPORT INFORMATION

Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (ocean, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport.

US Ground (DOT)

UN1325, FLAMMABLE SOLIDS, ORGANIC, N.O.S. (PETROLEUM DISTILLATES),
4.1, PG II

Bulk Containers may be Shipped as:

UN1325, FLAMMABLE SOLIDS, ORGANIC, N.O.S. (PETROLEUM DISTILLATES),
4.1, PG II

Canada (TDG)

UN1325, FLAMMABLE SOLIDS, ORGANIC, N.O.S. (PETROLEUM DISTILLATES),
CLASS 4.1, PG II

IMO

UN1325, FLAMMABLE SOLIDS, ORGANIC, N.O.S. (PETROLEUM DISTILLATES),
CLASS 4.1, PG II

IATA/ICAO

UN1325, FLAMMABLE SOLIDS, ORGANIC, N.O.S. (PETROLEUM DISTILLATES),
4.1, PG II

SECTION 15 — REGULATORY INFORMATION**SARA 313 (40 CFR 372.65C) SUPPLIER NOTIFICATION**

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element
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No ingredients in this product are subject to SARA 313 (40 CFR 372.65C) Supplier Notification.

CALIFORNIA PROPOSITION 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

TSCA CERTIFICATION

All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

SECTION 16 — OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.



MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Product Name Tri Clean 2x (4372)
CAS # Mixture
Product use Cleaner
Manufacturer Nu-Calgon
2008 Altom Court
St. Louis, MO 63146 US
Phone: 314-469-7000 / 800-554-5499
Emergency Phone: 1-800-424-9300 (CHEMTREC)

2. Hazards Identification

Emergency overview DANGER
CAUSES EYE BURNS. CAUSES SKIN BURNS.

Potential short term health effects

Routes of exposure Eye, Skin contact, Inhalation, Ingestion.

Eyes Causes chemical burns. May cause blindness.

Skin Causes chemical burns. Harmful contact may not cause immediate pain.

Inhalation May cause respiratory tract irritation or chemical burns.

Ingestion Harmful if swallowed. May cause chemical burns to mouth, throat and stomach.

Target organs Eyes. Respiratory system. Skin.

Chronic effects Prolonged or repeated exposure to dilutions can cause drying, defatting and dermatitis.

Signs and symptoms The product causes burns of eyes, skin and mucous membranes.

OSHA Regulatory Status This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Potential environmental effects Components of this product have been identified as having potential environmental concerns.

3. Composition / Information on Ingredients

Ingredient(s)	CAS #	Percent
Lauryldimethylamine oxide	1643-20-5	5 - 10
Alkyl polyglycoside	110615-47-9	3 - 7
Potassium hydroxide	1310-58-3	10 - 30
Silicic acid, sodium salt	1344-09-8	10 - 30
Potassium carbonate	584-08-7	1 - 5

4. First Aid Measures

First aid procedures

Eye contact Immediately flush with cool water. Remove contact lenses, if applicable, and continue flushing for 15 minutes. Obtain medical attention immediately.

Skin contact Immediately flush with cool water for 15 minutes while removing contaminated clothing and shoes. Discard or wash well before reuse. Obtain medical advice immediately.

Inhalation If symptoms develop move victim to fresh air. If symptoms persist, obtain medical attention.

Ingestion Do not induce vomiting. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Never give anything by mouth if victim is unconscious, or is convulsing. Obtain medical attention.

General advice If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Avoid contact with eyes and skin. Keep out of reach of children.

5. Fire Fighting Measures

Flammable properties	Not flammable by WHMIS/OSHA criteria.
Extinguishing media	
Suitable extinguishing media	Not available
Unsuitable extinguishing media	Not available
Protection of firefighters	
Specific hazards arising from the chemical	Not available
Protective equipment for firefighters	Firefighters should wear full protective clothing including self contained breathing apparatus.
Hazardous combustion products	May include and are not limited to: Oxides of carbon. Oxides of nitrogen. Oxides of sulphur.
Explosion data	
Sensitivity to mechanical impact	Not available
Sensitivity to static discharge	Not available

6. Accidental Release Measures

Personal precautions	Keep unnecessary personnel away. Do not touch or walk through spilled material. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep people away from and upwind of spill/leak.
Environmental precautions	Do not discharge into lakes, streams, ponds or public waters.
Methods for containment	Stop leak if you can do so without risk. Prevent entry into waterways, sewers, basements or confined areas.
Methods for cleaning up	Before attempting clean up, refer to hazard data given above. Small spills may be absorbed with non-reactive absorbent and placed in suitable, covered, labelled containers. Prevent large spills from entering sewers or waterways. Contact emergency services and supplier for advice. Never return spills to original containers for re-use.

7. Handling and Storage

Handling	DANGER -- CORROSIVE Do not get in eyes, on skin or on clothing. Avoid breathing vapors or mists of this product. Use good industrial hygiene practices in handling this material. Keep container tightly closed. Use only with adequate ventilation. Wash thoroughly after handling.
Storage	Keep out of the reach of children. Store in a closed container away from incompatible materials.

8. Exposure Controls / Personal Protection

Exposure limits	
Ingredient(s)	Exposure Limits
Alkyl polyglycoside	ACGIH-TLV Not established OSHA-PEL Not established
Lauryldimethylamine oxide	ACGIH-TLV Not established OSHA-PEL Not established
Potassium carbonate	ACGIH-TLV Not established OSHA-PEL Not established
Potassium hydroxide	ACGIH-TLV Ceiling: 2 mg/m3 OSHA-PEL Not established
Silicic acid, sodium salt	ACGIH-TLV Not established OSHA-PEL Not established
Engineering controls	General ventilation normally adequate.
Personal protective equipment	
Eye / face protection	Wear chemical goggles.
Hand protection	Rubber gloves. Confirm with a reputable supplier first.
Skin and body protection	As required by employer code.
Respiratory protection	Where exposure guideline levels may be exceeded, use an approved NIOSH respirator.
General hygiene considerations	Use good industrial hygiene practices in handling this material. When using do not eat or drink. Wash hands before breaks and immediately after handling the product.

9. Physical and Chemical Properties

Appearance	Clear
Color	Orange
Form	aqueous solution
Odor	Fresh.
Odor threshold	Not available
Physical state	Liquid
pH	13.5 (Concentrate)
Melting point	Not available
Freezing point	Not available
Boiling point	Not available
Pour point	Not available
Evaporation rate	Not available
Flash point	Not available
Auto-ignition temperature	Not available
Flammability limits in air, lower, % by volume	Not available

Flammability limits in air, upper, % by volume	Not available
Vapor pressure	Not available
Vapor density	Not available
Specific gravity	Not available
Octanol/water coefficient	Not available
Bulk density	9.87
Percent volatile	Not available

10. Stability and Reactivity

Reactivity	This product may react with strong oxidizing agents.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Chemical stability	Stable under recommended storage conditions.
Conditions to avoid	Do not mix with other chemicals.
Incompatible materials	Acids. Oxidizers.
Hazardous decomposition products	May include and are not limited to: Oxides of carbon. Oxides of nitrogen. Oxides of sulphur.

11. Toxicological Information

Component analysis - LC50

Ingredient(s)	LC50
Alkyl polyglycoside	Not available
Lauryldimethylamine oxide	Not available
Potassium carbonate	Not available
Potassium hydroxide	Not available
Silicic acid, sodium salt	Not available

Component analysis - Oral LD50

Ingredient(s)	LD50
Alkyl polyglycoside	5000 mg/kg rat
Lauryldimethylamine oxide	2700 mg/kg mouse
Potassium carbonate	1870 mg/kg rat; 2570 mg/m3 mouse
Potassium hydroxide	214 mg/kg rat
Silicic acid, sodium salt	1153 mg/kg rat

Effects of acute exposure

Eye	Causes chemical burns. May cause blindness.
Skin	Causes chemical burns. Harmful contact may not cause immediate pain.
Inhalation	May cause respiratory tract irritation or chemical burns.
Ingestion	Harmful if swallowed. May cause chemical burns to mouth, throat and stomach.
Sensitization	Non-hazardous by WHMIS/OSHA criteria.
Chronic effects	Non-hazardous by WHMIS/OSHA criteria.
Carcinogenicity	Non-hazardous by WHMIS/OSHA criteria.
Mutagenicity	Non-hazardous by WHMIS/OSHA criteria.
Reproductive effects	Non-hazardous by WHMIS/OSHA criteria.
Teratogenicity	Non-hazardous by WHMIS/OSHA criteria.
Name of Toxicologically Synergistic Products	Not available

12. Ecological Information

Ecotoxicity See below

Ecotoxicity - Freshwater Fish - Acute Toxicity Data

Potassium hydroxide	1310-58-3	96 Hr LC50 Gambusia affinis: 80 mg/L [static]
Silicic acid, sodium salt	1344-09-8	96 Hr LC50 Lepomis macrochirus: 301-478 mg/L; 96 Hr LC50 Brachydanio rerio: 3185 mg/L [semi-static]

Ecotoxicity - Water Flea - Acute Toxicity Data

Silicic acid, sodium salt	1344-09-8	96 Hr EC50 Daphnia magna: 216 mg/L
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Persistence / degradability Not available

Bioaccumulation / accumulation Not available

Mobility in environmental media Not available

Environmental effects Not available

Aquatic toxicity Not available

Partition coefficient Not available

Chemical fate information Not available

Other adverse effects Not available

13. Disposal Considerations

Disposal instructions Dispose in accordance with all applicable regulations.

Waste from residues / unused products Not available

Contaminated packaging Not available

14. Transport Information

U.S. Department of Transportation (DOT)

Basic shipping requirements:

Proper shipping name Corrosive liquid, basic, inorganic, n.o.s. (POTASSIUM HYDROXIDE RQ = 5556 lbs)

Hazard class 8

UN number UN3266

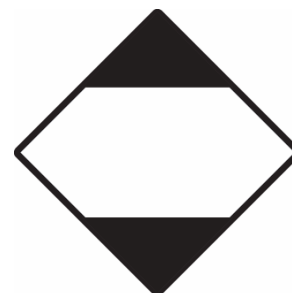
Packing group II

Additional information:

Special provisions B2, IB2, T11, TP2, TP27

Packaging exceptions <0.3 Gallons - Limited Quantity

ERG number 154



Transportation of Dangerous Goods (TDG - Canada)

Basic shipping requirements:

Proper shipping name CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (POTASSIUM HYDROXIDE)

Hazard class 8

UN number UN3266

Packing group II

Additional information:

Special provisions 16

Packaging exceptions <1L - Limited Quantity



15. Regulatory Information

Canadian federal regulations

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Canada - WHMIS - Ingredient Disclosure List

Lauryldimethylamine oxide	1643-20-5	1 %
Potassium carbonate	584-08-7	1 %
Potassium hydroxide	1310-58-3	1 %

WHMIS status

Controlled

WHMIS classification

Class E - Corrosive Material

WHMIS labeling



Occupational Safety and Health Administration (OSHA)

29 CFR 1910.1200 hazardous chemical Yes

US Federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

U.S. - CERCLA/SARA - Hazardous Substances and their Reportable Quantities

Potassium hydroxide 1310-58-3 1000 Lb final RQ; 454 kg final RQ

U.S. - CWA (Clean Water Act) - Hazardous Substances

Potassium hydroxide 1310-58-3 Present

CERCLA (Superfund) reportable quantity

Potassium hydroxide: 1000.0000

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - Yes
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

Section 302 extremely hazardous substance No

Section 311 hazardous chemical Yes

Clean Air Act (CAA) Not available

Clean Water Act (CWA) Hazardous substance

State regulations This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

U.S. - California - 8 CCR Section 339 - Director's List of Hazardous Substances

Potassium hydroxide 1310-58-3 Present

U.S. - Louisiana - Reportable Quantity List for Pollutants

Potassium hydroxide 1310-58-3 1000 Lb final RQ; 454 kg final RQ

U.S. - Massachusetts - Right To Know List

Potassium hydroxide 1310-58-3 Present

U.S. - Minnesota - Hazardous Substance List

Potassium hydroxide 1310-58-3 Present

U.S. - New Jersey - Right to Know Hazardous Substance List

Potassium hydroxide 1310-58-3 sn 1571

U.S. - New York - Reporting of Releases Part 597 - List of Hazardous Substances

Potassium hydroxide 1310-58-3 1000 Lb RQ (air); 100 lb RQ (land/water)

U.S. - Pennsylvania - RTK (Right to Know) List

Potassium hydroxide 1310-58-3 Environmental hazard

U.S. - Rhode Island - Hazardous Substance List

Potassium hydroxide 1310-58-3 Toxic (caustic); Flammable (caustic)

Inventory name**Country(s) or region**

Canada

Canada

United States & Puerto Rico

Inventory name

Domestic Substances List (DSL)

Non-Domestic Substances List (NDSL)

Toxic Substances Control Act (TSCA) Inventory

On inventory (yes/no)*

Yes

No

Yes

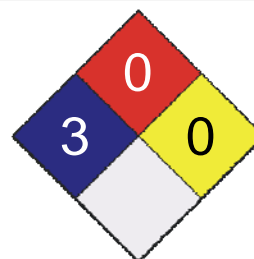
A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

16. Other Information

LEGEND HMIS/NFPA	
Severe	4
Serious	3
Moderate	2
Slight	1
Minimal	0

Disclaimer**Issue date****Effective date****Expiry date****Prepared by****Other information**

Health	/ 3
Flammability	0
Physical Hazard	0
Personal Protection	X



Information contained herein was obtained from sources considered technically accurate and reliable. While every effort has been made to ensure full disclosure of product hazards, in some cases data is not available and is so stated. Since conditions of actual product use are beyond control of the supplier, it is assumed that users of this material have been fully trained according to the requirements of all applicable legislation and regulatory instruments. No warranty, expressed or implied, is made and supplier will not be liable for any losses, injuries or consequential damages which may result from the use of or reliance on any information contained in this document.

30-Mar-2012

31-Mar-2012

31-Mar-2015

Dell Tech Laboratories Ltd. (519) 858-5021

For an updated MSDS, please contact the supplier/manufacturer listed on the first page of the document.

This MSDS conforms to the ANSI Z400.1/Z129.1-2010 Standard.

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : OASIS 499 HBV DISINFECTANT

Other means of identification : not applicable

Recommended use : Cleaner and disinfectant

Restrictions on use : Reserved for industrial and professional use.

Product dilution information : 0.39 % - 1.56 %

Company : Ecolab Inc.
370 N. Wabasha Street
St. Paul, Minnesota USA 55102
1-800-352-5326

Emergency telephone : 1-800-328-0026 (US/Canada), 1-651-222-5352 (outside US)

Issuing date : 06/16/2014

SECTION 2. HAZARDS IDENTIFICATION
GHS Classification
Product AS SOLD

Acute toxicity (Oral) : Category 4
Acute toxicity (Dermal) : Category 4
Skin corrosion : Category 1A
Serious eye damage : Category 1

Product AT USE DILUTION

Acute toxicity (Dermal) : Category 4
Eye irritation : Category 2B

GHS Label element
Product AS SOLD

Hazard pictograms :



Signal Word : Danger

Hazard Statements : Harmful if swallowed or in contact with skin.
Causes severe skin burns and eye damage.

Precautionary Statements : **Prevention:**
Wash skin thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves/ protective clothing/ eye protection/ face protection.
Response:
IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. IF

SAFETY DATA SHEET

OASIS 499 HBV DISINFECTANT

IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/ physician. Wash contaminated clothing before reuse.

Storage:

Store locked up.

Disposal:

Dispose of contents/ container to an approved waste disposal plant.

Product AT USE DILUTION

Hazard pictograms



Signal Word

: Caution

Hazard Statements

: Harmful in contact with skin.
Causes eye irritation.

Precautionary Statements

: **Prevention:**

Wash skin thoroughly after handling.

Response:

IF ON SKIN: Wash with plenty of soap and water. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a POISON CENTER or doctor/ physician if you feel unwell. If eye irritation persists: Get medical advice/ attention. Wash contaminated clothing before reuse.

Disposal:

Dispose of contents/ container to an approved waste disposal plant.

Other hazards

: None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Product AS SOLD

Pure substance/mixture : Mixture

Chemical Name	CAS-No.	Concentration (%)
Octyl decyl dimethyl ammonium chloride	32426-11-2	6.51
Dioctyl dimethyl ammonium chloride	5538-94-3	2.604
Didecyl dimethyl ammonium chloride	7173-51-5	3.906
Alkyl (C14, 50%; C12, 40%; C16, 10%) dimethyl benzyl ammonium chloride	68424-85-1	8.68
alcohol ethoxylate	68439-46-3	5 - 10
ethanol	64-17-5	1 - 5
ethylenediamine tetraacetate	64-02-8	1 - 5
sodium metasilicate	6834-92-0	1 - 5
Fragrance	Proprietary Ingredient	0.1 - 1

Product AT USE DILUTION

Chemical Name	CAS-No.	Concentration (%)
Octyl decyl dimethyl ammonium chloride	32426-11-2	0.1016
Dioctyl dimethyl ammonium chloride	5538-94-3	0.0406
Didecyl dimethyl ammonium chloride	7173-51-5	0.0609
Alkyl (C14, 50%; C12, 40%; C16, 10%) dimethyl benzyl ammonium chloride	68424-85-1	0.1354
alcohol ethoxylate	68439-46-3	0 - 0.1

SAFETY DATA SHEET

OASIS 499 HBV DISINFECTANT

SECTION 4. FIRST AID MEASURES

Product AS SOLD

- In case of eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.
- In case of skin contact : Wash off immediately with plenty of water for at least 15 minutes. Use a mild soap if available. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.
- If swallowed : Rinse mouth with water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention immediately.
- If inhaled : Remove to fresh air. Treat symptomatically. Get medical attention if symptoms occur.
- Protection of first-aiders : If potential for exposure exists refer to Section 8 for specific personal protective equipment.
- Notes to physician : Treat symptomatically.

Product AT USE DILUTION

- In case of eye contact : Rinse with plenty of water.
- In case of skin contact : Wash off immediately with plenty of water for at least 15 minutes. Use a mild soap if available. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention if irritation develops and persists.
- If swallowed : Rinse mouth. Get medical attention if symptoms occur.
- If inhaled : Get medical attention if symptoms occur.

See toxicological information (Section 11)

SECTION 5. FIRE-FIGHTING MEASURES

Product AS SOLD

- Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- Unsuitable extinguishing media : None known.
- Specific hazards during fire fighting : Not flammable or combustible.
- Hazardous combustion products : Carbon oxides
- Special protective equipment for fire-fighters : Use personal protective equipment.
- Specific extinguishing methods : Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local

SAFETY DATA SHEET

OASIS 499 HBV DISINFECTANT

regulations. In the event of fire and/or explosion do not breathe fumes.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Product AS SOLD

Personal precautions, protective equipment and emergency procedures : Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Avoid inhalation, ingestion and contact with skin and eyes. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Ensure clean-up is conducted by trained personnel only. Refer to protective measures listed in sections 7 and 8.

Environmental precautions : Do not allow contact with soil, surface or ground water.

Methods and materials for containment and cleaning up : Stop leak if safe to do so. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Flush away traces with water. For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway.

Product AT USE DILUTION

Personal precautions, protective equipment and emergency procedures : Ensure clean-up is conducted by trained personnel only. Refer to protective measures listed in sections 7 and 8.

Environmental precautions : Do not allow contact with soil, surface or ground water.

Methods and materials for containment and cleaning up : Stop leak if safe to do so. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Flush away traces with water. For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway.

SECTION 7. HANDLING AND STORAGE

Product AS SOLD

Advice on safe handling : Do not ingest. Do not breathe dust/ fume/ gas/ mist/ vapors/ spray. Do not get in eyes, on skin, or on clothing. Wash hands thoroughly after handling. Use only with adequate ventilation.

Conditions for safe storage : Do not store near acids. Keep out of reach of children. Keep container tightly closed. Store in suitable labeled containers.

Storage temperature : 0 °C to 50 °C

Product AT USE DILUTION

Advice on safe handling : Wash hands thoroughly after handling. Use only with adequate ventilation.

Conditions for safe storage : Keep out of reach of children. Keep container tightly closed. Store in suitable labeled containers.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Product AS SOLD

Ingredients with workplace control parameters

SAFETY DATA SHEET

OASIS 499 HBV DISINFECTANT

Ingredients	CAS-No.	Form of exposure	Permissible concentration	Basis
ethanol	64-17-5	TWA	1,000 ppm	ACGIH
		TWA	1,000 ppm 1,900 mg/m ³	NIOSH REL
		TWA	1,000 ppm 1,900 mg/m ³	OSHA Z1

Engineering measures : Effective exhaust ventilation system. Maintain air concentrations below occupational exposure standards.

Personal protective equipment

Eye protection : Safety goggles
Face-shield

Hand protection : Wear the following personal protective equipment:
Standard glove type.
Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.

Skin protection : Personal protective equipment comprising: suitable protective gloves, safety goggles and protective clothing

Respiratory protection : When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. Remove and wash contaminated clothing before re-use.
Wash face, hands and any exposed skin thoroughly after handling.
Provide suitable facilities for quick drenching or flushing of the eyes and body in case of contact or splash hazard.

Product AT USE DILUTION

Engineering measures : Effective exhaust ventilation system. Maintain air concentrations below occupational exposure standards.

Personal protective equipment

Eye protection : No special protective equipment required.

Hand protection : No special protective equipment required.

Skin protection : No special protective equipment required.

Respiratory protection : No personal respiratory protective equipment normally required.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

	Product AS SOLD	Product AT USE DILUTION
Appearance	: liquid	liquid
Color	: purple	purple
Odor	: Disinfectants	Disinfectants
pH	: 12.0 - 13.5, 100 %	10.54 - 10.93
Flash point	: 58 °C, Does not sustain combustion.	

SAFETY DATA SHEET

OASIS 499 HBV DISINFECTANT

Odor Threshold	: no data available
Melting point/freezing point	: no data available
Initial boiling point and boiling range	: no data available
Evaporation rate	: no data available
Flammability (solid, gas)	: no data available
Upper explosion limit	: no data available
Lower explosion limit	: no data available
Vapor pressure	: no data available
Relative vapor density	: no data available
Relative density	: 0.99 - 1.01
Water solubility	: soluble
Solubility in other solvents	: no data available
Partition coefficient: n-octanol/water	: no data available
Autoignition temperature	: no data available
Thermal decomposition	: no data available
Viscosity, kinematic	: no data available
Explosive properties	: no data available
Oxidizing properties	: no data available
Molecular weight	: no data available
VOC	: no data available

SECTION 10. STABILITY AND REACTIVITY

Product AS SOLD

Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: No dangerous reaction known under conditions of normal use.
Conditions to avoid	: None known.
Incompatible materials	: Acids
Hazardous decomposition products	: Carbon oxides

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure : Inhalation, Eye contact, Skin contact

Potential Health Effects

Product AS SOLD

Eyes	: Causes serious eye damage.
Skin	: Causes severe skin burns.

SAFETY DATA SHEET

OASIS 499 HBV DISINFECTANT

Ingestion	: Causes digestive tract burns.
Inhalation	: May cause nose, throat, and lung irritation.
Chronic Exposure	: Health injuries are not known or expected under normal use.

Product AT USE DILUTION

Eyes	: Causes eye irritation.
Skin	: Harmful in contact with skin.
Ingestion	: Health injuries are not known or expected under normal use.
Inhalation	: Health injuries are not known or expected under normal use.
Chronic Exposure	: Health injuries are not known or expected under normal use.

Experience with human exposure

Product AS SOLD

Eye contact	: Redness, Pain, Corrosion
Skin contact	: Redness, Pain, Corrosion
Ingestion	: Corrosion, Abdominal pain
Inhalation	: Respiratory irritation, Cough

Product AT USE DILUTION

Eye contact	: Redness, Irritation
Skin contact	: No information available.
Ingestion	: No symptoms known or expected.
Inhalation	: No symptoms known or expected.

Toxicity

Product AS SOLD

Acute oral toxicity	: Acute toxicity estimate : 1,316 mg/kg
Acute inhalation toxicity	: no data available
Acute dermal toxicity	: Acute toxicity estimate : > 1,000 mg/kg
Skin corrosion/irritation	: no data available
Respiratory or skin sensitization	: Does not cause skin sensitization.
Carcinogenicity	
IARC	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
OSHA	No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
NTP	No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

SAFETY DATA SHEET

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Reproductive effects : no data available
Germ cell mutagenicity : no data available
Teratogenicity : no data available
STOT-single exposure : no data available
STOT-repeated exposure : no data available
Aspiration toxicity : no data available

Ingredients

Acute inhalation toxicity : Octyl decyl dimethyl ammonium chloride
4 h LC50 rat: 0.07 mg/l

Diocetyl dimethyl ammonium chloride
4 h LC50 rat: 0.07 mg/l

Didecyl dimethyl ammonium chloride
4 h LC50 rat: 0.07 mg/l

Alkyl (C14, 50%; C12, 40%; C16, 10%) dimethyl benzyl ammonium chloride
4 h LC50 rat: > 0.054 mg/l

ethanol
4 h LC50 rat: 117 mg/l

SECTION 12. ECOLOGICAL INFORMATION

Product AS SOLD Ecotoxicity

Environmental Effects : This product has no known ecotoxicological effects.

Product

Toxicity to fish : no data available
Toxicity to daphnia and other aquatic invertebrates : no data available
Toxicity to algae : no data available

Ingredients

Toxicity to fish : Octyl decyl dimethyl ammonium chloride
96 h LC50 Fish: 1 mg/l

Didecyl dimethyl ammonium chloride
96 h LC50 Fish: 1 mg/l

Alkyl (C14, 50%; C12, 40%; C16, 10%) dimethyl benzyl ammonium chloride
96 h LC50 Fish: 0.515 mg/l

alcohol ethoxylate
96 h LC50 Fish: 8.5 mg/l

ethanol
96 h LC50 Fish: 11,000 mg/l

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ethylenediamine tetraacetate
96 h LC50 Fish: 121 mg/l

sodium metasilicate
96 h LC50 Fish: 210 mg/l

Ingredients

Toxicity to daphnia and other aquatic invertebrates : Dioctyl dimethyl ammonium chloride
48 h EC50 Daphnia : 0.1 mg/l

Persistence and degradability

no data available

Bioaccumulative potential

no data available

Mobility in soil

no data available

Other adverse effects

no data available

SECTION 13. DISPOSAL CONSIDERATIONS

Product AS SOLD

Disposal methods : The product should not be allowed to enter drains, water courses or the soil. Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations. Dispose of wastes in an approved waste disposal facility.

Disposal considerations : Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.

RCRA - Resource Conservation and Recovery Authorization Act Hazardous waste : D002 (Corrosive)

Product AT USE DILUTION

Disposal methods : The product should not be allowed to enter drains, water courses or the soil. Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations. Dispose of wastes in an approved waste disposal facility.

Disposal considerations : Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.

SECTION 14. TRANSPORT INFORMATION

Product AS SOLD

SAFETY DATA SHEET

OASIS 499 HBV DISINFECTANT

The shipper/consignor/sender is responsible to ensure that the packaging, labeling, and markings are in compliance with the selected mode of transport.

Land transport (DOT)

Not dangerous goods

Sea transport (IMDG/IMO)

UN number : 1993
Description of the goods : FLAMMABLE LIQUID, N.O.S.
(Ethanol)
Class : 3
Packing group : III
Marine pollutant : no

Product AT USE DILUTION

Not intended for transport.

SECTION 15. REGULATORY INFORMATION

Product AS SOLD

EPA Registration number : 6836-78-1677

EPCRA - Emergency Planning and Community Right-to-Know

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : Acute Health Hazard

SARA 302 : SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 : SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

California Prop 65

This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

The ingredients of this product are reported in the following inventories:

1907/2006 (EU) :
not determined

Switzerland. New notified substances and declared preparations :
not determined

United States TSCA Inventory :
On TSCA Inventory

Canadian Domestic Substances List (DSL) :
All components of this product are on the Canadian DSL.

Australia Inventory of Chemical Substances (AICS) :

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not determined

New Zealand. Inventory of Chemical Substances :
not determined

Japan. ENCS - Existing and New Chemical Substances Inventory :
not determined

Japan. ISHL - Inventory of Chemical Substances (METI) :
not determined

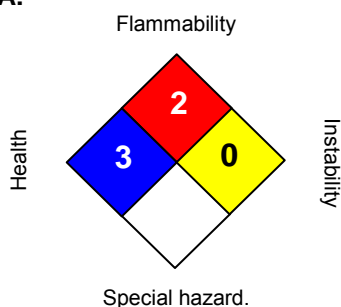
Korea. Korean Existing Chemicals Inventory (KECI) :
not determined

Philippines Inventory of Chemicals and Chemical Substances (PICCS) :
not determined

China. Inventory of Existing Chemical Substances in China (IECSC) :
not determined

SECTION 16. OTHER INFORMATION

Product AS SOLD
NFPA:

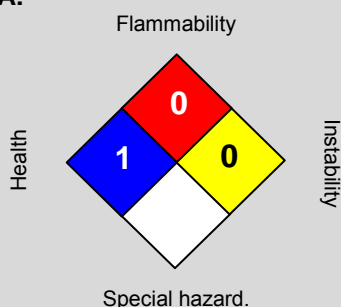


HMIS III:

HEALTH	3
FLAMMABILITY	2
PHYSICAL HAZARD	0

0 = not significant, 1 = Slight,
2 = Moderate, 3 = High
4 = Extreme, = Chronic

Product AT USE DILUTION
NFPA:



HMIS III:

HEALTH	1
FLAMMABILITY	0
PHYSICAL HAZARD	0

0 = not significant, 1 = Slight,
2 = Moderate, 3 = High
4 = Extreme, = Chronic

Issuing date : 06/16/2014
Version : 1.0
Prepared by : Regulatory Affairs

SAFETY DATA SHEET

OASIS 499 HBV DISINFECTANT

REVISED INFORMATION: Significant changes to regulatory or health information for this revision is indicated by a bar in the left-hand margin of the SDS.

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Material Safety Data Sheet

according to ANSI Z400.1- 2004 and 29 CFR 1910.1200



OFF!™ DEEP WOODS® INSECT REPELLENT VII

Version 1.

Print Date 09/09/2009

Revision Date 07/30/2009

MSDS Number 3500000012887

SITE_FORM Number

300000000000000003296.002

1. PRODUCT AND COMPANY IDENTIFICATION

Product information

Trade name : OFF!™ DEEP WOODS® INSECT REPELLENT VII

Use of the Substance/Preparation Company : Insect Repellent

: S.C. Johnson & Son, Inc.
1525 Howe Street
Racine WI 53403-2236

Emergency telephone : 24 Hour Transport & Medical Emergency Phone (866) 231-5406
24 Hour International Emergency Phone (952) 852-4647

2. HAZARDS IDENTIFICATION

Emergency Overview

Appearance / Odor : clear / liquid / pleasant

Immediate Concerns

: Warning
CAUSES EYE IRRITATION.
FLAMMABLE:
May be harmful if swallowed. Avoid contact with eyes and lips.
Keep away from heat, sparks and flame.

Potential Health Effects

Routes of exposure : Eye, Skin, Inhalation, Ingestion.

Eyes : May cause:
Moderate eye irritation

Skin : May cause skin reactions in rare cases.

Inhalation : Inhalation may cause central nervous system effects.

Ingestion : May be harmful if swallowed.
Causes headache, drowsiness or other effects to the central nervous system.

Aggravated Medical Condition : None known.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No.	Weight %
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Material Safety Data Sheet

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Ethyl alcohol	64-17-5	30.00 - 60.00
Water	7732-18-5	30.00 - 60.00
N,N-Diethyl-m-toluamide	134-62-3	25.00

4. FIRST AID MEASURES

- Eye contact : Flush immediately with plenty of water for at least 15 to 20 minutes. Get medical attention if irritation develops and persists.
- Skin contact : Wash off with soap and water. Get medical attention if irritation develops and persists.
- Inhalation : If breathing is affected, get medical attention. Remove to fresh air.
- Ingestion : Do NOT induce vomiting. Drink 1 or 2 glasses of water. Never give anything by mouth to an unconscious person. Get medical attention immediately.

5. FIRE-FIGHTING MEASURES

- Suitable extinguishing media : Alcohol foam, carbon dioxide, dry chemical, water fog
- Specific hazards during fire fighting : Material may burn in heat of fire. Burns with colourless flame.
- Further information : Wear full protective clothing and positive pressure self-contained breathing apparatus. Cool and use caution when approaching or handling fire-exposed containers.
- Flash point : 84 °F
Method: Tag Closed Cup (TCC)
- Lower explosion limit : Note: no data available
- Upper explosion limit : Note: no data available

6. ACCIDENTAL RELEASE MEASURES

- Personal precautions : Remove all sources of ignition.
- Environmental precautions : Use appropriate containment to avoid environmental contamination.

Material Safety Data Sheet

according to ANSI Z400.1- 2004 and 29 CFR 1910.1200



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Methods for cleaning up : Soak up with inert absorbent material.
Sweep up and shovel into suitable containers for disposal.
Dike large spills.

7. HANDLING AND STORAGE

Handling

Advice on safe handling : Use only as directed.
KEEP OUT OF REACH OF CHILDREN AND PETS.
Avoid contact with eyes and lips.

Advice on protection against fire and explosion : Keep away from heat and sources of ignition.

Storage

Requirements for storage areas and containers : Keep in a dry, cool and well-ventilated place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits

Components	CAS-No.	mg/m3	ppm	Basis
Ethyl alcohol	64-17-5	-	1,000 ppm	ACGIH TWA
Ethyl alcohol	64-17-5	1,900 mg/m3	1,000 ppm	OSHA TWA

Personal protective equipment

Respiratory protection

Industrial setting : Substantial amounts of mist/vapors can be controlled with local exhaust ventilation or respiratory protection.

Household setting : No personal respiratory protective equipment normally required.

Hand protection

Industrial setting : For prolonged or repeated contact use protective gloves.

Household setting : not required under normal use

Eye protection

Material Safety Data Sheet

according to ANSI Z400.1- 2004 and 29 CFR 1910.1200



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Industrial setting : If prolonged or repeated contact is possible:
Safety glasses with side-shields

Household setting : No special requirements.

Hygiene measures : Use only with adequate ventilation. Wash thoroughly after
handling. Wear suitable protective clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form : liquid

Color : clear

Odor : pleasant

pH : 5.3

Boiling point : no data available

Freezing point : no data available

Flash point : 84 °F
Method: Tag Closed Cup (TCC)

Evaporation rate : no data available

Lower explosion limit : no data available

Upper explosion limit : no data available

Vapour pressure : no data available

Water solubility : soluble

Partition coefficient: n-
octanol/water : no data available

Specific Gravity : 0.93

10. STABILITY AND REACTIVITY

Conditions to avoid : Heat, flames and sparks.

Material Safety Data Sheet

according to ANSI Z400.1- 2004 and 29 CFR 1910.1200



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Materials to avoid	:	Do not mix with oxidizing agents.
Hazardous decomposition products	:	When exposed to fire, produces normal products of combustion.
Hazardous reactions	:	Stable

11. TOXICOLOGICAL INFORMATION

Acute oral toxicity	:	LD50 4,103 mg/kg
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Acute inhalation toxicity	:	LC50 > 2.07 mg/l
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Acute dermal toxicity	:	LD50 > 5,000 mg/kg
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Chronic effects

Carcinogenicity	:	no data available
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Mutagenicity	:	no data available
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Reproductive effects	:	no data available
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Teratogenicity	:	no data available
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Sensitisation	:	Not known to be a sensitizer.
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12. ECOLOGICAL INFORMATION

Ecotoxicity effects	:	no data available
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13. DISPOSAL CONSIDERATIONS

Industrial setting	:	Observe all applicable Federal, Provincial and State regulations and Local/Municipal ordinances regarding disposal.
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Household setting	:	Consumer may discard empty container in trash, or recycle
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Material Safety Data Sheet

according to ANSI Z400.1- 2004 and 29 CFR 1910.1200



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where facilities exist.

14. TRANSPORT INFORMATION

Land transport

▪ U.S. DOT and Canadian TDG Surface Transportation:

UN-Number 1993
Proper shipping name Flammable liquid, n.o.s.
Class: 3
Packaging group: III

Sea transport

▪ IMDG:

Class: 3
Packaging group: III
Proper shipping name Flammable liquid, n.o.s.
UN-Number: 1993

Air transport

▪ ICAO/IATA:

Class: 3
Packaging group: III
Proper shipping name Flammable liquid, n.o.s.
UN/ID No.: UN 1993

Note: SC Johnson typically does not ship products via air, therefore it has not been determined if the product container meets current IATA/ICAO package criteria. Refer to IATA/ICAO Dangerous Goods Regulations for detailed instructions when shipping this item by air.

15. REGULATORY INFORMATION

Notification status : All ingredients of this product are listed or are excluded from listing on the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

Notification status : All ingredients of this product comply with the New Substances Notification requirements under the Canadian Environmental Protection Act (CEPA).

California Prop. 65 : This product is not subject to the reporting requirements under

Material Safety Data Sheet

according to ANSI Z400.1- 2004 and 29 CFR 1910.1200



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California's Proposition 65.
: This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Registration # / Agency
4822-399/EPA

16. OTHER INFORMATION

HMIS Ratings

Health	2
Flammability	3
Reactivity	0

NFPA Ratings

Health	2
Fire	3
Reactivity	0
Special	

Further information

This document has been prepared using data from sources considered to be technically reliable. It does not constitute a warranty, expressed or implied, as to the accuracy of the information contained herein. Actual conditions of use are beyond the seller's control. User is responsible to evaluate all available information when using product for any particular use and to comply with all Federal, State, Provincial and Local laws and regulations.

Prepared by:	SC Johnson Global Safety Assessment & Regulatory Affairs (GSARA)
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Permatex, Inc.
 10 Columbus Blvd.
 Hartford, CT 06106 USA
 Telephone: 1-87-Permatex
 (877) 376-2839
 Emergency: 800-255-3924
 International Emergency: 813-348-0585

Material Safety Data Sheet

1. PRODUCT IDENTIFICATION

Product Name: FAST ORANGE PUMICE LOTION 1GAL
Item No: 25219
Product Type: Waterless hand cleaner

2. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	Percent	ACGIH 8 Hr. TWA:	OSHA 8 Hr. TWA:
Water 7732-18-5	75-85	Not Listed	Not Listed
PUMICE 1332-09-8	5-15	10 mg/m ³ (inhal); 3 mg/m ³ (resp)	15 mg/m ³ (total); 5 mg/m ³ (resp)
D-Limonene 5989-27-5	5-15	Not Established	Not Established
ETHOXYLATED C11-C16 ALCOHOL 127036-24-2	1-10	Not Listed	Not Listed
SILICA, QUARTZ 14808-60-7	0.1-1.0	0.1 mg/m ³ TWA respirable	0.1 mg/m ³ TWA respirable

3. HAZARDS IDENTIFICATION

Toxicity: Oral LD50 greater than 5000 mg/kg. Primary irritation tests show that this product is not a primary irritant.
Primary Routes of Entry: Eye and skin contact, ingestion, inhalation.
Signs and Symptoms of Exposure: None under normal conditions of use.

Ingredients	Percent	NTP:	ACGIH Carcinogens	IARC:
D-Limonene 5989-27-5	5-15	male rat-clear evidence; female rat-no evidence; male mice-no evidence; female mice-no evidence		
SILICA, QUARTZ 14808-60-7	0.1-1.0	Known Carcinogen	Not known	Group 1; Vol. 68; 1997

Medical Conditions Recognized as Being Aggravated by Exposure: None known

4. FIRST AID MEASURES

Ingestion: If swallowed, seek medical advice immediately and show this container or label
Inhalation: Immediate medical attention is not required.
Skin Contact: none under normal use
Eye Contact: In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice

5. FIRE FIGHTING MEASURES

Flash Point (°F/C): 193 degrees F. Method: Setaflash Closed Cup
Recommended Extinguishing Media: Carbon dioxide, chemical powder
Special Fire-Fighting Procedures: No special procedures.
Hazardous Products Formed by Fire or Thermal Decomposition: None anticipated
Unusual Fire/Explosion Hazards: None
Lower Explosive Limit: Not determined.

Upper Explosive Limit: Not determined.

6. ACCIDENTAL RELEASE MEASURES

Spill Procedures: Rinse away with water or wipe up with a towel.

7. HANDLING AND STORAGE

Storage: Hand cleaner should be stored at temperatures between 40 degrees F. and 100 degrees F.
Handling: Follow all general safety precautions.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Eyes: Not required
Skin: Not required
Ventilation: Provide adequate ventilation
Respiratory Protection: not required under normal use

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: White lotion with pumice
Odor: orange
Boiling Point (°F): Not determined.
pH: 7.0
Solubility in Water: SOLUBLE
Specific Gravity: 1.03
VOC Content(Wt.%): 7 % by weight
Vapor Pressure: Not Determined
Vapor Density (Air=1): Not Determined
Evaporation Rate: Not Determined

10. STABILITY AND REACTIVITY

Chemical Stability: Stable at normal conditions
Hazardous Polymerization: WILL NOT OCCUR
Incompatabilities: None known
Conditions to Avoid: Freezing
Hazardous Products Formed by Fire or Thermal Decomposition: None anticipated

11. TOXICOLOGICAL INFORMATION

See Section 3

12. ECOLOGICAL INFORMATION

No data available

13. DISPOSAL CONSIDERATIONS

Recommended Method of Disposal: Dispose of uncontaminated material through sewer system with permission of the authority responsible for that system.

US EPA Waste Number: NH - Not a RCRA Hazardous Waste Material

14. TRANSPORTATION INFORMATION

DOT (49CFR 172)

Domestic Ground Transport

DOT Shipping Name: Unrestricted
Hazard Class: NONE
UN/ID Number: None
Marine Pollutant: None

IATA

Proper Shipping Name: not regulated
Class or Division: None
UN/NA Number: None

IMDG

Proper Shipping: Unrestricted

Hazard Class: None
UN Number: None

15. REGULATORY INFORMATION

SARA 313 Chemicals: The following component(s) is listed as a SARA Section 313 Toxic Chemical.

SARA 313 Information
NONE

CALIFORNIA PROP 65:

No California Prop 65 chemicals are known to be present at or above the No Significant Risk Level.

TSCA Inventory Status:

Listed on Inventory: **YES** All components of this product are listed (or exempt) on the EPA TSCA inventory.

16. OTHER INFORMATION

Estimated NFPA Rating: HEALTH 1, FLAMMABILITY 2, REACTIVITY 0

Estimated HMIS Classification: HEALTH 1, FLAMMABILITY 2, PHYSICAL HAZARD 0

NFPA is a registered trademark of the National Fire Protection Assn.

HMIS is a registered trademark of the National Paint and Coatings Assn.

Prepared By: Denise Boyd, Health and Safety Manager
Company: Permatex. Inc. 10 Columbus Blvd. Hartford, CT USA
06106

Revision Date: 01/23/2003

Revision 1

Number:

Telephone Number: 1-87-Permatex (877) 376-2839

Value Pro Pink Hand Soap

NFPA/HMIS : Health -0
Flammability -0
Reactivity -0

Complies with USDL Safety and Health Regulations, (29 CFR 1910.200)

Material Safety Data Sheet
US Department Of Labor

SECTION - 1 CHEMICAL AND COMPANY IDENTIFICATION

PRODUCT USE: Hand Soap

American Formula
P.O. BOX 43164
Atlanta, GA 30336

EMERGENCIES: 1-800-255-3924

REVISION DATE: 10/30/03

SECTION - 2 COMPOSITION ON INGREDIENTS

CAS # CHEMICAL NAMES Wt% TLV (UNITS)

NONE

N/E = not established

SECTION - 3 HAZARDS INFORMATION

Primary Route(s) of Entry: Skin contact /absorption and inhalation

Signs and Symptoms of Overexposure: Gastrointestinal irritation (nausea, vomiting, diarrhea), irritation to nose, throat, and respiratory tract.

Target Organ Effects: None expected.

IMMEDIATE HEALTH EFFECTS

EYES: Exposure may cause noticeable pain, and severe irritation.

SKIN: Exposure may cause mild skin irritation. Prolonged or repeated exposure may dry the skin. Symptoms may include redness, burning, and drying and cracking. Additional symptoms of skin contact may include: allergic reaction. Skin absorption is possible, but harmful effects are not expected from this route of exposure under normal handling and use.

INHALATION: Exposure to vapor or mist is possible. Short term inhalation is no likely to cause harmful effects: breathing large amounts may be harmful. Symptoms are more typically seen at air concentrations exceeding the recommended exposure limits.

INGESTION: Single dose oral toxicity is low. Swallowing small amounts during normal handling is not likely to cause harmful effects: swallowing large amounts may be harmful.

REPRODUCTIVE / DEVELOPMENTAL INFORMATION

No Data

CARCINOGENIC INFORMATION: This material is not listed as a carcinogen by IARC, NTP, or OSHA

LONG TERM EFFECTS: No Data

SECTION - 4 FIRST AID MEASURES

EYES- Immediately flush with water. Remove contact lenses if applicable, and continue flushing with water. call a physician if irritation persists.

SKIN- Flush with water. Wash thoroughly with soap and water. Call physician if irritation persists.

INHALATION- If symptoms develop, move victim to fresh air. If symptoms persist call a physician.

INGESTION- Do not induce vomiting. Rinse mouth with water, then drink one glass of water. Call a physician immediately. Never give anything by mouth if victim is unconscious, is rapidly losing consciousness or is convulsing.

SECTION - 5 FIRE FIGHTING MEASURES

Flash Point No Flash at Boil (C.C. method)

Explosive limits Not Applicable

Autoignition Temperature Not Applicable

Hazardous Products of Combustion Not Applicable

Extinguishing Media Not Applicable

Fire Fighting Instructions Avoid contact with this material. Avoid walking in spilled material. Wear protective clothing for skin and eyes

SECTION - 6 ACCIDENTAL RELEASE MEASURES

Small Spill: Absorb with an inert solid and scoop up for disposal, then rinse soiled area with water down the drain.

Large Spill: Stop leak at the source and collect into a suitable container, then treat as a small spill.

SECTION - 7 HANDLING AND STORAGE

Handling: Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed.

Storage: Store in a cool, dry place. Keep container closed when not in use.

SECTION - 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Eye Protection: Chemical Splash goggle in compliance with OSHA regulations are advised: however, OSHA regulations also permit other type safety glasses. Consult your safety representative.

Skin Protection: Wear rubber gloves (consult your safety equipment supplier). To prevent repeated or prolonged skin contact, wear impervious clothing and boots.

Respiratory Protection: If workplace exposure limits of product or any component are exceeded (see exposure guidelines), NIOSH/OSHA approved air supplied respirator is advised in the absence of proper environmental control. OSHA relations also permit other NIOSH/OSHA respirators (negative pressure type) under specific conditions (see your industrial hygienist). Engineering or administrative controls should be implemented to reduce exposure.

Engineering Controls: Provide sufficient mechanical (general and local exhaust) ventilation to maintain exposure below level of overexposure (from known, suspected or apparent adverse effects).

SECTION - 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance and odor Thick, pink liquid with a pleasant odor

pH Concentrate 6.8 - 7.5

Vapor Pressure Unknown

Vapor Density Unknown

Boiling Point 212 Degrees Fahrenheit

Solubility in Water Complete

Percent Volatile 90%

Specific Gravity (H₂O =1) 1.01 +/- 0.02

SECTION - 10 STABILITY AND REACTIVITY

Chemical Stability Stable

Conditions to Avoid Temperature Extremes

Incompatibility None

Hazardous Decomposition Will not Occur

Hazardous Polymerization Will not Occur

SECTION - 11 TOXICOLOGICAL INFORMATION

No Data Available

SECTION - 12 ECOLOGICAL INFORMATION

No Data Available

SECTION - 13 DISPOSAL CONSIDERATION

Waste Disposal Information: Dispose of in accordance with all applicable Federal, State, and Local regulations.

RCRA Information: If this material becomes a waste, it would not be considered hazardous under 40 CFR 261.22.

SECTION - 14 TRANSPORT INFORMATION

DOT Information 49 CFR 172.101

DOT Description:

33440 Class 55

DOT Hazard Class:

Non Hazardous

Hazardous Component:

None

Reportable Quantity (RQ) - 49 CFR 172.101

Not Applicable

SECTION - 15 REGULATORY INFORMATION

US Federal Regulations

TSCA (Toxic Substances Control Act) Status

TSCA (United States) The intentional ingredients of this product are listed.

CERCLA RQ - 40 CFR 355 Appendix A

None

SARA 302 Components 40 CFR Appendix A

None

Section 311/312 Hazard Class 40 CFR 370.2 Immediate () Delayed () Fire () Reactivity () Sudden Release of Pressure ()

SARA 313 Components - 40 CFR 372

State and Local Regulations

California Proposition 65 None

California SCAQMD Rule 443.1 VOC's None

North Carolina Administrative Code 2D.1104 and 2B.0610 None

South Carolina Regulation 62.5 Standard Number 8 None

SECTION - 16 OTHER INFORMATION

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not.

Recipients are advised to confirm in advance of need that the information is current, applicable and suitable to their circumstances.

This information was compiled from current manufacturer's MSDS's of the component parts of the product. as well as other sources, such as:

Code of Federal Regulations 29, Revised as of July 1, 1994.

Code of Federal Regulations 40, Revised as of July 1, 1994.

ACGIH, Guide to Occupational Exposure Values, 1996.

ANSI Z129.1-1994, Precautionary Labeling for Hazardous Industrial Chemicals.

Hazard Communication Handbook, A Right To Know Compliance Guide. Craig A. Moyer & Michael Francis. Clark Broadman Company. Ltd. New York, NY 1992

RCRA Regulations and Keyword Index, Compiled and Published by McCoy and Associates, Inc Lakewood, Colorado. 1992



MATERIAL SAFETY DATA SHEET

MSDS Number: 1100C

Section 1

PRODUCT AND COMPANY IDENTIFICATION

Trade Name: OATEY CANADIAN PVC REGULAR CLEAR CEMENT
Product Nos.: Clear - 31015, 31016, 31470, 31471, 31472
Product Use: Cement for PVC Plastic Pipe
Formula: PVC Resin in Solvent Solution
Synonyms: PVC Plastic Pipe Cement
Firm Name & Address: Oatey Company 4700 West 160th Street, Cleveland, Ohio 44135
www.oatey.com
Firm Phone No: (216) 267-7100
Emergency Phone Nos.: For Emergency First Aid call 1-877-740-5015. For chemical transportation emergencies ONLY, call Chemtrec at 1-800-424-9300. Outside the U.S. 1-703-527-3887.
Prepared by: Technical Department
Preparation Date: 09/11/2012

Section 2 HAZARDS IDENTIFICATION

Emergency Overview:

Clear liquid with an ether-like odor. Extremely flammable liquid and vapor. Vapors may cause flash fire. May cause eye and skin irritation. Inhalation of vapors or mist may cause respiratory irritation and central nervous system effects. Swallowing may cause irritation, nausea, vomiting, diarrhea and kidney or liver disorders. Aspiration hazard. May be fatal if swallowed. Symptoms may be delayed.

Section 3 COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENTS:	%wt/wt :	CAS NUMBER:	ACGIH TLV TWA:	OSHA PEL TWA	OTHER:
Tetrahydrofuran	15 - 40%	109-99-9	50 ppm(skin) 100 ppm STEL	200 ppm	25 ppm (Mfg)
Methyl Ethyl Ketone	10 - 30%	78-93-3	200 ppm 300 ppm	200 ppm	None
Acetone	10 - 20%	67-64-1	500 ppm 750 ppm STEL	1000 ppm	None
PVC Resin (Non-hazardous)	10 - 20%	9002-86-2	10 mg/m3	15 mg/m3	None
Cyclohexanone	7 - 13%	108-94-1	20 ppm(skin) 50 ppm STEL	50 ppm	None

OSHA Hazard Classification: Flammable, irritant, organ effects

Section 4 FIRST AID MEASURES

Skin: Remove contaminated clothing immediately. Wash all exposed areas with soap and water. Get medical attention if irritation develops. Remove dried cement with Oatey Plumber's Hand Cleaner or baby oil.
Eyes: If material gets into eyes or if fumes cause irritation, immediately flush eyes with plenty of water until chemical is removed. If irritation persists, get medical attention immediately.
Inhalation: If symptoms of exposure develop, remove to fresh air. If breathing becomes difficult, administer oxygen. Administer artificial respiration if breathing has stopped. Seek immediate medical attention.
Ingestion: **DO NOT INDUCE VOMITING.** Rinse mouth with water. Never give anything by mouth to

a person who is unconscious or drowsy. Get immediate medical attention by calling a Poison Control Center, or hospital emergency room. If medical advice cannot be obtained, then take the person and product to the nearest medical emergency treatment center or hospital.

Section 5 FIRE FIGHTING MEASURES

Flashpoint / 14 - 23 Degrees F. (-10 to -5 Degrees C) / CCCFP
Method:
Flammability: LEL = 1.8 % Volume, UEL = 11.8 % Volume
Extinguishing: Use dry chemical, CO2, or foam to extinguish fire. Cool fire exposed container
Media: with water. Water may be ineffective as an extinguishing agent.
Special Fire: Firefighters should wear positive pressure self-contained breathing apparatus
Fighting: and full protective clothing for fires in areas where chemicals are used or
Procedure: stored
Unusual Fire: Extremely flammable liquid. Keep away from heat and all sources of ignition
And Explosion: including sparks, flames, lighted cigarettes and pilot lights. Containers may
Hazards: rupture or explode in the heat of a fire. Vapors are heavier than air and may
travel to a remote ignition source and flash back. This product contains
tetrahydrofuran that may form explosive organic peroxide when exposed to air or
light or with age.
Hazardous: Combustion will produce toxic and irritating vapors including carbon monoxide,
Decomposition: carbon dioxide and hydrogen chloride.
Products:

Section 6 ACCIDENTAL RELEASE MEASURES

Spill or Leak: Remove all sources of ignition and ventilate area. Stop leak if it can be done
Procedures: without risk. Personnel cleaning up the spill should wear appropriate personal
protective equipment, including respirators if vapor concentrations are high.
Soak up spill with an inert absorbent such as sand, earth or other non-
combusting material. Put absorbent material in covered, labeled metal
containers. Prevent liquid from entering watercourses, sewers and natural
waterways. Report releases to authorities as required. See Section 13 for
disposal information.

Section 7 HANDLING AND STORAGE

Handling: Avoid contact with eyes, skin and clothing. Avoid breathing vapors or mists.
Use with adequate ventilation (equivalent to outdoors). Wash thoroughly after
handling. Do not eat, drink or smoke in the work area. Keep product away from
heat, sparks, flames and all other sources of ignition. No smoking in storage
or use areas. Keep containers closed when not in use.
Storage: Store in a cool, dry, well-ventilated area away from incompatible materials.
Keep containers closed when not in use.
Other: "Empty" containers retain product residue and can be hazardous. Follow all MSDS
precautions in handling empty containers. Do not cut or weld on or near empty
or full containers.

Section 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Ventilation: Open doors & windows. Provide ventilation capable of maintaining emissions at
the point of use below recommended exposure limits. If used in enclosed area,
use exhaust fans. Exhaust fans should be explosion-proof or set up in a way
that flammable concentrations of solvent vapors are not exposed to electrical
fixtures or hot surfaces.
Respiratory: For operations where the exposure limit may be exceeded, a NIOSH approved
Protection: organic vapor respirator or supplied air respirator is recommended. Equipment
selection depends on contaminant type and concentration, select in accordance
with 29 CFR 1910.134 and good industrial hygiene practice. For firefighting,
use self-contained breathing apparatus.
Skin: Rubber gloves are suitable for normal use of the product. For long exposures
Protection: chemical resistant gloves may be required such as 4H(tm) or Silver Shield(tm)
to avoid prolonged skin contact.
Eye: Safety glasses with side shields or safety goggles.
Protection:

Section 9**PHYSICAL AND CHEMICAL PROPERTIES**

Boiling Point:	151 Degrees F / 66 Degrees C
Melting Point:	Not applicable
Vapor Pressure:	145 mmHg @ 20 Degrees C
Vapor Density:	(Air = 1) 2.5
Volatile Components:	84-88%
Solubility In Water:	Negligible
pH:	Not applicable
Specific Gravity:	0.90 +/- 0.02 @ 20 Degrees C
Evaporation Rate:	(BUAC = 1) = 5.5 - 8.0
Appearance:	Clear Liquid
Odor:	Ether-Like
Will Dissolve In:	Tetrahydrofuran
Material Is:	Liquid

Section 10**STABILITY AND REACTIVITY**

Stability:	Stable.
Conditions To Avoid:	Avoid heat, sparks, flames and other sources of ignition.
Hazardous Decomposition Products:	Combustion will produce toxic and irritating vapors including carbon monoxide, carbon dioxide and hydrogen chloride.
Incompatibility/ Materials To Avoid:	Oxidizing agents, alkalis, amines, ammonia, acids, chlorine compounds, chlorinated inorganics (potassium, calcium and sodium hypochlorite) and hydrogen peroxides. May attack plastic, resins and rubber.
Hazardous Polymerization:	Will not occur.

Section 11**TOXICOLOGICAL INFORMATION**

Inhalation:	Vapors or mists may cause mucous membrane and respiratory irritation, coughing, headache, dizziness, dullness, nausea, shortness of breath and vomiting. High concentrations may cause central nervous system depression, narcosis and unconsciousness. May cause kidney, liver and lung damage.								
Skin:	May cause irritation with redness, itching and pain. Methyl ethyl ketone and cyclohexanone may be absorbed through the skin causing effects similar to those listed under inhalation.								
Eye:	Vapors may cause irritation. Direct contact may cause irritation with redness, stinging and tearing of the eyes. May cause eye damage.								
Ingestion:	Swallowing may cause abdominal pain, nausea, vomiting and diarrhea. Aspiration during swallowing or vomiting can cause chemical pneumonia and lung damage. May cause kidney and liver damage.								
Chronic Toxicity:	Prolonged or repeated overexposure cause dermatitis and damage to the kidney, liver, lungs and central nervous system.								
Toxicity Data:	<table><tbody><tr><td>Acetone:</td><td>Oral rat LD50: 5,800 mg/kg Inhalation rat LC50: 50,100 mg/m3/8 hours</td></tr><tr><td>Cyclohexanone:</td><td>Oral rat LD50: 1,620 mg/kg Inhalation rat LC50: 8,000 ppm/4 hours Skin rabbit LD50: 1 mL/kg</td></tr><tr><td>Tetrahydrofuran:</td><td>Oral rat LD50: 1,650 mg/kg Inhalation rat LC50: 21,000 ppm/3 hours</td></tr><tr><td>Methyl Ethyl Ketone:</td><td>Oral rat LD50: 2,737 mg/kg Inhalation rat LC50: 23,500 mg/m3/8 hours Skin rabbit LD50: 6,480 mg/kg</td></tr></tbody></table>	Acetone:	Oral rat LD50: 5,800 mg/kg Inhalation rat LC50: 50,100 mg/m3/8 hours	Cyclohexanone:	Oral rat LD50: 1,620 mg/kg Inhalation rat LC50: 8,000 ppm/4 hours Skin rabbit LD50: 1 mL/kg	Tetrahydrofuran:	Oral rat LD50: 1,650 mg/kg Inhalation rat LC50: 21,000 ppm/3 hours	Methyl Ethyl Ketone:	Oral rat LD50: 2,737 mg/kg Inhalation rat LC50: 23,500 mg/m3/8 hours Skin rabbit LD50: 6,480 mg/kg
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Methyl Ethyl Ketone:	Oral rat LD50: 2,737 mg/kg Inhalation rat LC50: 23,500 mg/m3/8 hours Skin rabbit LD50: 6,480 mg/kg								
Sensitization:	None of the components are known to cause sensitization.								
Carcinogenicity:	None of the components are listed as a carcinogen or suspect carcinogen by NTP, IARC or OSHA. The National Toxicology Program has reported that exposure of mice and rats to tetrahydrofuran (THF) vapor levels up to 1800 ppm 6 hr/day, 5 days/week for their lifetime caused an increased incidence of kidney tumors in male rats and liver tumors in female mice. The significance of these findings for human health is unclear at this time, and								

may be related to "species specific" effects. Elevated incidences of tumors in humans have not been reported for THF. ACGIH has classified cyclohexanone (CYH) and tetrahydrofuran as "A3," Confirmed Animal Carcinogens with Unknown Relevance to Humans.

Mutagenicity: Cyclohexanone has been positive in bacterial and mammalian assays. Acetone, methyl ethyl ketone and tetrahydrofuran are generally thought not to be mutagenic.

Reproductive Toxicity: Methyl ethyl ketone and cyclohexanone have been shown to cause embryofetal toxicity and birth defects in laboratory animals. Acetone and tetrahydrofuran has been found to cause adverse developmental effects only when exposure levels cause other toxic effects to the mother.

Medical Conditions Aggravated By Exposure: Persons with pre-existing skin, lung, kidney or liver disorders may be at increased risk from exposure to this product.

Section 12 ECOLOGICAL INFORMATION

This product is not expected to be toxic to aquatic organisms.

Cyclohexanone: 96 hour LC50 values for fish is over 100 mg/l.

Tetrahydrofuran: 96 hour LC50 fathead minnow: 2160 mg/L.

Acetone: 96 hour LC50 for fish is greater than 100 mg/L.

Methyl Ethyl Ketone: 96 hour LC50 for fish is greater than 100 mg/L.

VOC Information: This product emits VOC's (volatile organic compounds) in its use. Make sure that use of this product complies with local VOC emission regulations, where they exist.

VOC Level: Maximum 510 g/L per SCAQMD Test Method 316A.

Section 13 DISPOSAL CONSIDERATIONS

Waste Disposal: Dispose in accordance with current local, state and federal regulations.

RCRA Hazardous Waste Number: U002, U057, U159, U213

EPA Hazardous Waste ID Number: D001, D035, F003, F0005

EPA Hazard Waste Number: Ignitable Waste. Toxic Waste (Methyl Ethyl Ketone content)

Section 14 TRANSPORT INFORMATION

	<u>Less than 1 Liter (0.3 gal)</u>	<u>Greater than 1 Liter (0.3 gal)</u>
DOT		
UN/NA Number:	None	UN1133
Proper Shipping Name:	Consumer Commodity	Adhesives
Hazard Class:	ORM-D	3
Packing Group:	None	PGII
Hazard Labels:	None	Flammable Liquid
IMDG		
UN Number:	UN1133	UN1133
Proper Shipping Name:	Adhesives	Adhesives
Hazard Class:	3	3
Packing Group:	II	II
Label:	None (Limited Quantities are expected from labeling)	Class 3 (Flammable Liquid)
Flashpoint (deg C)	-10 to -5 Degrees C	-10 to -5 Degrees C

2008 North American Emergency Response Guidebook Number: 127

Section 15 REGULATORY INFORMATION

Hazard Category for Acute Health, Chronic Health, Flammable
Section 311/312:

Section 302 This product does not contain chemicals regulated under SARA Section 302.
Extremely Hazardous
Substances (TPQ):
Section 313 Toxic This product does not contain chemicals subject to SARA Title III Section
Chemicals: 313 Reporting requirements.
CERCLA 103 Spills of this product over the RQ (reportable quantity) must be reported
Reportable to the National Response Center. The RQ for the product, based on the RQ
Quantity: for Tetrahydrofuran (40% maximum) of 1,000 lbs, is 2,500 lbs.
Many states have more stringent release reporting requirements. Report
spills required under federal, state and local regulations.
California This product contains trace amounts of chemicals known to the State of
Proposition 65: California to cause cancer. Under normal use conditions, exposure to
these chemicals at levels above the State of California "No Significant
Risk Level" (NSRL) are unlikely. The use of proper personal protective
equipment (PPE) and ventilation guidelines noted in Section 8 will
minimize exposure to these chemicals.
TSCA Inventory All of the components of this product are listed on the TSCA inventory.
Canadian WHIMS Class B, Division 2; Class D, Division 2, Subdivision B; Class D,
Classification: Division 2, Subdivision A. This product has been classified in accordance
with the hazard criteria of the Controlled Products Regulations (CPR) and
the MSDS contains all the information required by the CPR.

Section 16**OTHER INFORMATION**

NFPA and HMIS:

NFPA Hazard Signal: Health: 2 Flammability: 3 Reactivity: 1 Special: None

HMIS Hazard Signal: Health: 2* Flammability: 3 Reactivity: 1 PPE: G

Disclaimer:

The information herein has been compiled from sources believed to be reliable, up-to-date, and is accurate to the best of our knowledge. However, we cannot give any guarantees regarding information from other sources, and expressly do not make warranties, nor assume any liability for its use.

Template: tmpl-cn-e1

MATERIAL SAFETY DATA SHEET

SECTION 1 CHEMICAL PRODUCT AND COMPANY INFORMATION

Product Name: Power-Pac Refrigeration Condenser Cleaner (Aerosol) Date Prepared May 15, 2009
 Product Number(s): A-4101 Replaces Mar 19, 2001
 Product Use: Metal degreasing
 Company Name: North American Research Corporation
 P.O. Box 1318
 Lewisville, TX 75067
 Telephone Numbers: (972) 492-1800, (800) 527-7520, Fax (972) 394-6755
 Emergencies: Infotrac (800) 535-5053 (24 hours, everyday)

SECTION 2 COMPOSITION / INFORMATION ON INGREDIENTS

OSHA Hazardous Components (29 CFR 1910.1200):

	CAS Registry No.	OSHA PEL	ACGIH TLV	Other Limits	% (Optional)
Trichloroethylene	79-01-6	50 ppm	50 ppm	NE	>95
Carbon Dioxide	124-38-9	10,000 ppm	5,000 ppm	NE	1-5

SECTION 3 HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:

A dense, nonflammable, colorless, clear liquid; irritating odor at high concentrations
 WARNING Harmful if inhaled. Can cause skin and eye irritation. Contents under pressure.

POTENTIAL HEALTH EFFECTS

INHALATION: Headaches, dizziness, anesthesia, and unconsciousness.

SKIN: Irritation

EYE: Irritation

INGESTION: Trichloroethylene can be aspirated into the lungs, which can cause chemical pneumonia and systemic effects. Ingestion can cause adverse health effects as described in the INHALATION section above.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Exposure to high levels of vapor (8000+ ppm) may cause cardiac arrhythmias.

CHRONIC EFFECTS: Repeated overexposure may cause liver and kidney effects and dermatitis.

CARCINOGENICITY: OSHA: No IARC: Yes NTP: No

SECTION 4 FIRST AID MEASURES

INHALATION: Remove to fresh air. If breathing has stopped, administer artificial respiration. Contact physician or emergency medical facility immediately.

SKIN: Remove contaminated clothing and shoes. Wash contact area with soap and water for at least 15 minutes. Get prompt medical attention. Wash clothing before reuse.

EYES: Immediately flush eyes with large amounts of water for at least 15 minutes while frequently lifting the upper and lower eyelids. If irritation persists, call a physician.

INGESTION: DO NOT induce vomiting. Contact a physician or emergency medical facility immediately. Never give anything by mouth to an unconscious person.

SECTION 5 FIRE-FIGHTING MEASURES

FLASHPOINT: None METHOD: TCC FLAMMABLE LIMITS: Not determined

AUTOIGNITION TEMP: Not determined

EXTINGUISHING MEDIA: Nonflammable, use agent suitable for surrounding fire.

HAZARDOUS COMBUSTION PRODUCTS: Thermal Hydrogen chloride, phosgene, chlorine.

FIRE FIGHTING INSTRUCTIONS

Approach fire from upwind to avoid hazardous vapors and toxic decomposition products. Use flooding quantities of water as fog or spray to keep fire-exposed containers cool. Aerosol cans may explode if heated above 120°F.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Spill/Leak Procedures: Usually not a problem with aerosols. Area should be ventilated. Use absorbent to pick up excess material. All used and unused product should be disposed of in accordance with federal, state, and local regulations.

SECTION 7 STORAGE AND HANDLING

STORAGE CONDITIONS:

Store in labeled, original containers in a cool, dry, well-ventilated area. Replace aerosol over-cap when not in use. Do not remove or deface label. Keep aerosol cans below 120°F to avoid bursting.

HANDLING PROCEDURES:

Avoid contact with skin and avoid breathing vapors. Do not eat, drink, or smoke in work area. Wash hands before eating, drinking, or using the restroom. Any clothing or shoes which become contaminated should be removed immediately and thoroughly washed before wearing again. Do not use in poorly ventilated or confined spaces. Vapors are heavier than air and will collect in low areas.

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE LIMITS: See section 2.

RESPIRATORY PROTECTION: Wear NIOSH/MSHA approved respirator where exposure limits may be exceeded. Follow OSHA regulations 29 CFR 1910.134.

EYE PROTECTION: Wear safety glasses, chemical splash goggles, and/or face shield (ANSI Z87.1 or approved equivalent).

HAND PROTECTION: Wear solvent resistant gloves such as Viton, polyvinyl alcohol, or equivalent.

OTHER PROTECTION: Use chemically resistant apron or other impervious clothing to avoid skin contact.

ENGINEERING CONTROLS (Ventilation): Use in a well ventilated area equivalent to outdoors. Do not use in confined spaces. Local, mechanical exhaust may be necessary to maintain levels below exposure limits.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR: Colorless, clear liquid; irritating odor at high concentrations.

SPECIFIC GRAVITY: 1.45 25/25°C

VAPOR PRESSURE: 58 mm Hg 20°C/68°F

VAPOR DENSITY: 4.5 (Air = 1)

SOLUBILITY IN WATER: 0.1 gm/100 gm 25°C

pH: Not applicable

BOILING POINT: 188°F (86.7°C)

EVAPORATION RATE (Butyl Acetate = 1): 1 (fast)

VOLATILES, % BY VOLUME: 100

SECTION 10 STABILITY AND REACTIVITY

STABILITY: Stable

CONDITIONS TO AVOID: Ignition sources (sparks, open flame, heated surfaces).

INCOMPATIBILITY (Materials to Avoid): Strong oxidizers. Avoid storing in aluminum containers or contact with aluminum powder or zinc powder.

HAZARDOUS POLYMERIZATION: Will not occur.

HAZARDOUS DECOMPOSITION PRODUCTS: Hydrogen chloride, phosgene, chlorine.

SECTION 11 TOXICOLOGICAL INFORMATION

Long-term toxicological studies have not been conducted for this product. See SECTION 3 of this MSDS for acute symptoms of overexposure and carcinogenicity information.

SECTION 12 ECOLOGICAL INFORMATION

No data available.

SECTION 13 DISPOSAL CONSIDERATIONS

This material, if discarded, may be a hazardous waste under U.S. EPA RCRA regulations. All disposal activities must comply with federal, state, and local regulations. Contact your local state environmental agency for specific rules. Do not dump into sewers, on the ground, or into any body of water.

SECTION 14 TRANSPORT INFORMATION

U.S. Department of Transportation:

Consumer Commodity, ORM-D

SECTION 15 REGULATORY INFORMATION

TSCA: All components of this product are listed or are excluded from listing on the U.S. Toxic Substances Control Act (TSCA) Chemical Substances Inventory.

CERCLA: Trichloroethylene (79-01-6); RQ 100 lbs.

SARA TITLE III:

Section 311/312 Hazard Category: Acute: Yes Chronic: Yes Fire: No Pressure: No Reactive Hazard: No

Section 313 Reportable Ingredients: Trichloroethylene (79-01-6)

CALIFORNIA (Proposition 65):

The State of California has listed Trichloroethylene under Prop 65 as a chemical known to the state to cause cancer.

SECTION 16 OTHER INFORMATION

NFPA RATING: Health – 2, Flammability – 1, Reactivity – 0

HMIS RATING: Health – 2, Flammability – 1, Reactivity – 0

HMIS ratings are to be used with a fully implemented HMIS program. HMIS is a registered mark of the National Paint and Coatings Association (NPCA).

NOTICE: This document has been prepared using data from sources considered technically reliable. It does not constitute a warranty, express or implied, as to accuracy of the information contained within. Actual conditions of use and handling are beyond seller's control. User is responsible to evaluate all available information when using product for any particular use and to comply with all federal, state, provincial, and local laws and regulations.

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MATERIAL SAFETY DATA SHEET

333 Hollenbeck St.
Rochester NY 14621
Information: 716-336-2200

Emergency Phone:
INFOTRAC: 1-800-535-5053
OUTSIDE US: 1-352-323-3500

PRODUCT NAME:
Hang Time)

POWER TIME, Extra Strength Clinging Foam Cleaner (formerly

REVISION DATE:	06/12/2000	REVISION NUMBER:	1
DATE PRINTED:	07/24/2001	PREPARED BY:	Walter Friedlander

1. CHEMICAL PRODUCT

MSDS FORM NUMBER: 7116
NFPA/HMIS HAZARD CODES (minimal=0; slight=1; moderate=2; serious=3; severe=4)

Health: 3/3
Fire: 0/0
Reactivity: 1/1
Special/Protective Acid/C
Equipment:

2. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Components

PRODUCT COMPOSITION CAS REGISTRATION NO.	APPROX. WEIGHT PERCENT	ACGIH TLV	ACGIH UNIT	OSHA PEL	OSHA UNIT
Phosphoric acid 7664-38-2	30	1	mg./M3	1	mg./M3
Amine oxide detergent 1643-20-5	5 max.	NA	NA	NA	NA
Nonyl phenol ethoxylate 9016-45-9	5 max.	NA	NA	NA	NA
Quaternary ammonium compounds 68424-85-1	0.5 max.	NA	NA	NA	NA

3. PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT (F):	245 F approx.	(C)	NA
VAPOR PRESSURE:	As water		
VAPOR DENSITY (AIR=1):	As water		
Solubility in Water:	COMPLETE		
SPECIFIC GRAVITY:	1.172 +/- 0.01		
VOC Content (%):	Approx. 65		
EVAPORATION RATE:	Less than water		
PH:	1.5		
Appearance and Odor:	Clear red. Amber liquid. Peach fragrance.		

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POWER TIME, Extra Strength Clinging Foam Cleaner (formerly Hang Time)

4. FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (F): None (C): NA

METHOD: None

EXTINGUISHING MEDIA: As for surrounding fire. Product will not burn.

FIRE FIGHTING PROCEDURES: Corrosive material. Avoid exposure to mist and splashes. Fire-fighters should wear self-contained breathing apparatus and full protective clothing when fighting chemical fires. Cool exposed containers with water spray.

5. STABILITY AND REACTIVITY

STABILITY DATA: STABLE

POLYMERIZATION: Will Not Occur.

HAZARDOUS DECOMPOSITION: If evaporated to dryness, as in a fire, may release: Soot. Smoke. Carbon Monoxide. Oxides of Phosphorus. Oxides of Nitrogen.

INCOMPATIBILITY (MATERIALS TO AVOID): Do not mix with: Alkalines. Chlorine containing materials. Peroxides. Reducing agents. Avoid contact with aluminum, zinc, other soft metals or galvanized metals. Reaction will generate hydrogen gas. This gas is flammable and/or explosive in presence of ignition source.

CONDITIONS/HAZARDS TO AVOID: None.

6. HAZARDS IDENTIFICATION

EFFECTS FROM ACUTE EXPOSURE:

INGESTION:

Severe burns to mucous membranes of mouth, throat and digestive tract.

SKIN CONTACT:

Causes moderate skin irritation. Prolonged contact causes severe burns which may not be immediately painful or visible.

INHALATION:

Causes moderate respiratory irritation. Possible damage to mucous membranes of nose and throat.

EYE CONTACT:

Causes severe eye irritation. MAY CAUSE EYE BURNS. May cause permanent eye damage. May cause blindness.

CHRONIC EFFECTS:

Dermatitis. Possible respiratory damage from inhalation of dust or mist.

POWER TIME, Extra Strength Clinging Foam Cleaner (formerly Hang Time)**EFFECTS/CARCINOGENICITY:**

None listed under OSHA, IARC, or NTP.

ROUTES OF ENTRY:

Routes of entry for solids and liquids include eye and skin contact, ingestion and inhalation.

EMERGENCY AND FIRST AID MEASURES:

INGESTION: DO NOT INDUCE VOMITING. Drink several glasses of water or milk. Get immediate medical attention. Never give anything by mouth to an unconscious person. **SKIN:** Flush with water for at least 15 minutes while removing all contaminated clothing and shoes. Get medical attention if irritation or burns develop. **INHALATION:** If inhaled, remove to fresh air. If not breathing give artificial respiration, preferably mouth-to-mouth. If breathing is difficult give oxygen. Get medical attention. **EYES:** In case of contact, or suspected contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention immediately after flushing.

NOTES TO PHYSICIAN: None.

7. HANDLING AND STORAGE**SPILL PROCEDURES:**

SMALL SPILLS: Reclaim as much as possible. Flush residue with water.

LARGE SPILLS: Dike to contain. Pick up with absorbant material. Put in suitable container for disposal. Flush remainder with water.

WASTE DISPOSAL METHODS:

Dispose in accordance with Federal, State and Local regulations.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

Caution: Concentrated acidic liquid. Avoid contact with eyes, skin and clothing. Do not breathe mist or vapors. Store only in original container and keep closed. Store in a cool, dry area. Store in a well ventilated area. Mix only with water.

OTHER PRECAUTIONS:

Do not reuse container. Read and follow label instructions. Keep out of reach of children.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**EXPOSURE CONTROLS:**

None known.

RESPIRATORY PROTECTION:

None normally required. Use NIOSH approved acid respirator with dust/mist filter if spray mist in air exceeds exposure limits.

PROTECTIVE GLOVES:

Rubber or plastic gloves recommended to minimize skin contact.

EYE PROTECTION:

Goggles. Face shield.

OTHER PERSONAL PROTECTION**EQUIPMENT:**

Rubber boots. Appropriate protective clothing as needed to prevent skin contact. Liquid may penetrate leather shoes and cause delayed burns. Eyewash fountains and safety showers must be easily accessible.

VENTILATION:

Not normally required. General mechanical and/or local exhaust as needed to meet exposure limits if mist in air. Corrosion resistant equipment recommended. When cleaning aluminum or galvanized surfaces, use explosion proof

POWER TIME, Extra Strength Clinging Foam Cleaner (formerly Hang Time)

equipment to remove any hydrogen gas.

Health and safety information presented on this form is generally applicable at recommended dilutions, varying only in degree. This information was compiled from current, reliable sources and is believed to be correct. As data, and/or regulations change, and conditions of use and handling are beyond our control, no warranty, express or implied, is made as to completeness or continuing accuracy of this information.

***** END OF MSDS *****



525-0614, PAINT SPRAY, 4.5 OZ AEROSOL CAN

MSDS Number

CLDWF

National Stock Number

2805-01-337-1179

Product Name

525-0614, PAINT SPRAY, 4.5 OZ AEROSOL CAN

Manufacturer

RAABE CORP THE PRECISION COLOR COMPANY

Product Identification

Product ID:525-0614, PAINT SPRAY, 4.5 OZ AEROSOL CAN

MSDS Date:05/06/1997

FSC:2805

NIIN:01-337-1179

Status Code:A

Kit Part:Y

MSDS Number: CLDWF

Responsible Party

RAABE CORPORATION THE PRECISION COLOR COMPANY

N92 W14701 ANTHONY AVE.

MENOMONEE FALLS , WI 53051-1630

US

Emergency Phone: 414-255-9500

Info Phone: 414-255-9500/800-966-7580

Cage: 0A3L4

Contractor

RAABE CORPORATION THE PRECISION COLOR COMPANY

1090

MENOMONEE FALLS, WI 53051-1630

US

414-255-9500/800-966-7580

Cage: 0A3L4

Ingredients

N-BUTANE

CAS: 106-97-8

RTECS: EJ4200000

OSHA PEL800 PPM

ACGIH TLV: 1900 MG/M3;800 PPM

PROPANE

CAS: 74-98-6

RTECS: TX2275000

OSHA PEL1800 MG/M3;1000 PPM

ACGIH TLV: 1000 PPM



TITANIUM DIOXIDE

CAS: 13463-67-7

RTECS: XR2275000

OSHA PEL10 MG/M3

ACGIH TLV: 10 MG/M3

ACETONE

CAS: 67-64-1

RTECS: AL3150000

OSHA PEL750 PPM

ACGIH TLV: 1780 MG/M3;750 PPM

EPA Report Quantity: 5000 LBS

DOT Report Quantity: 5000 LBS

N-BUTYL ACETATE

CAS: 123-86-4

RTECS: AF7350000

OSHA PEL710 MG/M3;150 PPM

ACGIH TLV: 713 MG/M3;150 PPM

EPA Report Quantity: 5000 LBS

DOT Report Quantity: 5000 LBS

PROPYLENE GLYCOL METHYL ETHER ACETATE

CAS: 108-65-6

RTECS: AI8925000

Hazards

Health Hazards Acute and Chronic:EYES: MAY CAUSE IRRITATION. SKIN: MAY CAUSE IRRITATION. INHALATION: EXTREMELY HIGH CONCENTRATIONS MAY CAUSE DROWSINESS, STAGGERING, CONFUSION, UNCONSCIOUSNESS, COMA, OR DEATH. EXCESSIVE INHALATION OF VAPORS CAN CAUSE NASAL AND RESPIRATORY IRRITATION. INGESTION: NO COMMENTS. CHRONIC EFFECTS: CHRONIC EXPOSURE HAS BEEN FOUND TO CAUSE KIDNEY DAMAGE AND EYE DAMAGE IN LAB ANIMALS. REPORTS HAVE ASSOCIATED REPEATED AND PROLONGED OVEREXPOSURE TO SOLVENTS WITH PERMANENT BRAIN AND NERVOUS SYSTEM DAMAGE. BREATHING AIR CONTAINING N-BUTYL ACETATE, MAY CAUSE DELAYED LUNG INJURY.

Explanation of Carcinogenicity:THIS PRODUCT CONTAINS NO REPORTED CARCINOGENS OR SUSPECTED CARCINOGENS.

Effects of Overexposure:EYES: IRRITATION. SKIN: IRRITATION. INHALATION: DROWSINESS, STAGGERING, CONFUSION, UNCONSCIOUSNESS, COMA, OR DEATH. NASAL AND RESPIRATORY IRRITATION. CHRONIC: LUNG INJURY, BRAIN AND NERVOUS SYSTEM DAMAGE.

Medical Condition Aggravated by Exposure:SKIN CONTACT MAY AGGRAVATE AN EXISTING DERMATITIS.

First Aid

First Aid:EYE CONTACT: FLUSH WITH PLENTY OF WATER. GET MEDICAL ATTENTION IF IRRITATION PERSISTS. SKIN CONTACT: WASH WITH SOAP AND WATER AND SEEK MEDICAL ATTENTION. REMOVE CONTAMINATED CLOTHING AND



LAUNDER BEFORE REUSE. INHALATION: MOVE TO FRESH AIR. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION AND GET MEDICAL ATTENTION. INGESTION: DECISION WHETHER TO INDUCE VOMITING OR NOT MUST BE MADE BY A PHYSICIAN AFTER CAREFUL CONSIDERATION OF ALL MATERIALS INGESTED.

Fire Fighting

Flash Point: -17.7°C , 1°F

Lower Limits: 1.3

Upper Limits: 13.1

Extinguishing Media: WATER SPRAY SHOULD NOT BE USED EXCEPT TO KEEP DOWN VAPORS OR COOL CLOSED CONTAINERS TO PREVENT BUILD-UP OF PRESSURE. IF WATER IS USED, FOG NOZZLES ARE PREFERRED.

Fire Fighting Procedures: FULL PROTECTIVE EQUIPMENT INCLUDING SELF-CONTAINED BREATHING APPARATUS TO AVOID INHALATION OF VAPORS SHOULD BE USED.

Unusual Fire/Explosion Hazard: AEROSOL CONTAINERS MAY EXPLODE WHEN EXPOSED TO EXTREME HEAT.

Accidental Release

Spill Release Procedures: REMOVE SOURCES OF IGNITION. AVOID HEAT, SPARKS, FLAMES, AND ANYTHING THAT COULD CAUSE A FIRE. VENTILATE AREA AND ADJACENT LOW LYING AREAS. AVOID BREATHING SOLVENT VAPORS. REMOVE WITH INERT ABSORBANT MATERIALS AND NON-SPARKING TOOLS.

Handling

Handling and Storage Precautions: WASH HANDS AFTER HANDLING. STORE IN A COOL DRY AREA WITH VENTILATION SUITABLE FOR STORING THESE INGREDIENTS. KEEP AWAY FROM HEAT, SPARKS, AND FLAME. STORE IN A COOL PLACE AWAY FROM DIRECT SUNLIGHT OR ANY SOURCE OF IGNITION. DO NOT STORE AT TEMPERATURES ABOVE 120°F . CONTENTS UNDER PRESSURE.

Other Precautions: DO NOT USE, STORE NEAR HEAT, SPARKS, OPEN FLAME. KEEP AWAY FROM HEAT SUCH AS SUNLIGHT, HEATERS, STOVES THAT COULD CAUSE CONTAINER TO BURST. DO NOT PUNCTURE OR INCINERATE. DO NOT CRUSH OR PLACE IN GARBAGE COMPACTOR. DO NOT STORE ABOVE 120°F . VAPORS HEAVIER THAN AIR, MAY TRAVEL TO DISTANT IGNITION SOURCE AND FLASH BACK.

Exposure Controls

Respiratory Protection: IF EXPOSURE LIMITS EXCEEDED, A NIOSH/ OSHA APPROVED SUITABLE RESPIRATOR IS RECOMMENDED.

Ventilation: SUFFICIENT VENTILATION, IN VOLUME AND PATTERN, SHOULD BE PROVIDED TO KEEP AIR CONTAMINATION BELOW PERMISSIBLE EXPOSURE LIMITS.

Protective Gloves: CHEMICAL RESISTANT PLASTIC OR RUBBER GLOVES RECOMMENDED FOR PROLONGED CONTACT.

Eye Protection: CHEMICAL GOGGLES WITH SIDE SHIELDS OR FACE SHIELD RECOMMENDED.

Other Protective Equipment: APPROPRIATE IMPERVIOUS CLOTHING IS RECOMMENDED IF PROLONGED OR REPEATED CONTACT IS LIKELY.

Work Hygienic Practices: WASH HANDS BEFORE EATING OR SMOKING. SMOKE IN DESIGNATED AREAS ONLY.

Supplemental Safety and Health

THIS ENTRY DESCRIBES SECOND PART (P/N 525-0614 PAINT SPRAY, SERIAL NUMBER XXXXX) OF A FOUR PART KIT. SEE THIS SAME NSN FOR LEAD ACID BATTERY, SERIAL NUMBER XXXXX; AND FOR LUBRICATING OIL, SERIAL NUMBER XXXXX; AND FOR SERIAL NUMBER CLDVW, GASOLINE ENGINE; FOR DATA ON OTHER THREE KIT PARTS,

Chemical Properties

HCC: V3

Boiling Pt: -0.4°C , 31°F

B.P. Text: 31°F TO 302°F

Vapor Pres: 108

Vapor Density: N/

Spec Gravity: 0.756 (6.29 LB/GAL)



Evaporation Rate & Reference:0.39 (N-BUTYL ACETATE= 1)
Percent Volatiles by Volume:36.6

Stability

STRONG OXIDIZING AGENTS.
Stability Condition to Avoid:HEAT, SPARKS, OPEN FLAME. PRODUCT IS
STABLE UNDER NORMAL STORAGE CONDITIONS.
Hazardous Decomposition Products:THERMAL DECOMPOSITION : CARBON
DIOXIDE, CARBON MONOXIDE, AND UNIDENTIFIABLE ORGANIC MATERIALS.

Disposal

Waste Disposal Methods:PLACE IN CLOSED CONTAINERS. DISPOSE OF PRODUCT
IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS.

Toxicology

Toxicological Information:NO SPECIFIC INFORMATION IS AVAILABLE. REFER
TO HEALTH EFFECTS.

Other Information

Disclaimer (provided with this information by the compiling agencies):
This information is formulated for use by elements of the Department
of Defense. The United States of America in no manner whatsoever,
expressly or implied, warrants this information to be accurate and
disclaims all liability for its use. Any person utilizing this
document should seek competent professional advice to verify and
assume responsibility for the suitability of this information to their
particular situation.

Ecology

Ecological:NO SPECIFIC ECOLOGICAL INFORMATION IS AVAILABLE FOR THIS
PRODUCT.

Transport

Transport Information:DOMESTIC GROUND SHIPMENT OF PAINT AEROSOLS AND
ALL LIQUID PAINT PRODUCTS IN CONTAINERS OF 1-QUART OR LESS:
CONSUMER COMMODITY, ORM-D. DOMESTIC AIR SHIPMENT OF PAINT AEROSOLS
AND ALL LIQUID PAINT IN C ONTAINERS OF 1 QUART OR LESS: CONSUMER
COMMODITY, CLASS 9, ID 8000, MISCELLANEOUS LABEL. INTERNATIONAL AIR
SHIPMENTS OF PAINT AEROSOLS, FLAMMABLE, N.O.S.; CLASS 2.1, UN1950,
FLAMMABLE GAS LABEL. INTER NATIONAL AIR SHIPMENT OF LIQUID PAINT IN
CONTAINERS OF 1-QUART OR LESS: PAINT, CLASS 3, UN 1263, FLAMMABLE
LIQUID LABEL. ALL SHIPMENTS OF LIQUID PAINT OF MORE THAN I QUART:
PAINT, CLASS 3, UN 1263, PA CKING GROUP I I, FLAMMA BLE LIQUID.

Regulatory

SARA Title III Information:THIS PRODUCT CONTAINS NONE OF THE SUBSTANCES
SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF TITLE I I I
OF SARA AND 40CFR PART 372.



Material Name: PURPLE PRIMER/CLEANER

***** Section 1 - Product and Company Identification *****

MSDS #1401E

Part Numbers: 019150

Manufacturer Information

William H. Harvey Company
4334 South 67th Street
Omaha, NE 68117

Phone: 402-331-1175

For Emergency First Aid call 1-877-740-5015. For chemical transportation emergencies ONLY, call Chemtrec at 1-800-424-9300. Outside the U.S. 1-703-527-3887.

***** Section 2 - Hazards Identification *****

GHS Classification:

Flammable Liquids - Category 2
Acute Toxicity Oral - Category 4
Acute Toxicity Dermal - Category 4
Acute Toxicity Inhalation - Category 4
Eye Damage/Irritation - Category 2A
Carcinogenicity - Category 2
Specific Target Organ Toxicity Single Exposure - Category 3

GHS LABEL ELEMENTS

Symbol(s)



Signal Word

Danger

Hazard Statements

Highly flammable liquid and vapor.
Harmful if swallowed.
Harmful in contact with skin.
Harmful if inhaled.
Causes serious eye irritation.
Contains a chemical classified by the US EPA as a suspected possible carcinogen.
May cause respiratory irritation.
May cause drowsiness or dizziness.

Material Name: PURPLE PRIMER/CLEANER

Precautionary Statements

Prevention

Keep away from heat/sparks/open flames and hot surfaces. - No smoking.
Keep container tightly closed.
Use explosion-proof electrical/ventilating/lighting/equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Wear protective gloves/eye protection/face protection.
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Avoid breathing fume/gas/mist/vapors.
Use only outdoors or in a well-ventilated area.

Response

If on skin (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse.
If swallowed: Call a poison center or doctor/physician if you feel unwell. Rinse mouth. Do not induce vomiting.
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a poison center or doctor/physician if you feel unwell.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center or doctor/physician.
If exposed or concerned: Get medical advice/attention.
In case of fire: Use dry chemical, CO₂, or foam to extinguish fire.

Storage

Store in a well-ventilated place. Keep cool.
Store locked up.

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations.

*** * * Section 3 - Composition / Information on Ingredients * * ***

CAS #	Component	Percent
67-64-1	Acetone	60-90
78-93-3	Methyl ethyl ketone	10-20
108-94-1	Cyclohexanone	3-10
109-99-9	Tetrahydrofuran	0-10

*** * * Section 4 - First Aid Measures * * ***

First Aid: Eyes

If material gets into eyes or if fumes cause irritation, immediately flush eyes with plenty of water until chemical is removed. If irritation persists, get medical attention immediately.

First Aid: Skin

Remove contaminated clothing immediately. Wash all exposed areas with soap and water. Get medical attention if irritation develops. Remove dried cement with hand cleaner or baby oil.

Material Name: PURPLE PRIMER/CLEANER

First Aid: Ingestion

DO NOT INDUCE VOMITING. Rinse mouth with water. Never give anything by mouth to a person who is unconscious or drowsy. Get immediate medical attention by calling a Poison Control Center, or hospital emergency room. If medical advice cannot be obtained, then take the person and product to the nearest medical emergency treatment center or hospital.

First Aid: Inhalation

If symptoms of exposure develop, remove to fresh air. If breathing becomes difficult, administer oxygen. Administer artificial respiration if breathing has stopped. Seek immediate medical attention.

*** * * Section 5 - Fire Fighting Measures * * ***

General Fire Hazards

See Section 9 for Flammability Properties.

Highly flammable liquid and vapor. Keep away from heat and all sources of ignition including sparks, flames, lighted cigarettes and pilot lights. Containers may rupture or explode in the heat of a fire. Vapors are heavier than air and may travel to a remote ignition source and flash back. This product contains tetrahydrofuran that may form explosive organic peroxide when exposed to air or light or with age.

Hazardous Combustion Products

Combustion will produce toxic and irritating vapors including carbon monoxide, carbon dioxide and hydrogen chloride.

Extinguishing Media

Use dry chemical, CO₂, or foam to extinguish fire. Cool fire exposed container with water. Water may be ineffective as an extinguishing agent.

Unsuitable Extinguishing Media

None.

Fire Fighting Equipment/Instructions

Firefighters should wear positive pressure self-contained breathing apparatus and full protective clothing for fires in areas where chemicals are used or stored.

*** * * Section 6 - Accidental Release Measures * * ***

Recovery and Neutralization

Stop leak if it can be done without risk.

Materials and Methods for Clean-Up

Remove all sources of ignition and ventilate area. Soak up spill with an inert absorbent such as sand, earth or other noncombusting material. Put absorbent material in covered, labeled metal containers.

Emergency Measures

Isolate area. Keep unnecessary personnel away.

Personal Precautions and Protective Equipment

Personnel cleaning up the spill should wear appropriate personal protective equipment, including respirators if vapor concentrations are high.

Environmental Precautions

Prevent liquid from entering watercourses, sewers and natural waterways.

Prevention of Secondary Hazards

None

***** Section 7 - Handling and Storage *****

Handling Procedures

Avoid contact with eyes, skin and clothing. Avoid breathing vapors or mists. Use with adequate ventilation (equivalent to outdoors). Wash thoroughly after handling. Do not eat, drink or smoke in the work area. Keep product away from heat, sparks, flames and all other sources of ignition. No smoking in storage or use areas. Keep containers closed when not in use. "Empty" containers retain product residue and can be hazardous. Follow all SDS precautions in handling empty containers. Do not cut or weld on or near empty or full containers.

Storage Procedures

Store in a cool, dry, well-ventilated area away from incompatible materials. Keep containers closed when not in use.

Incompatibilities

Oxidizing agents, alkalis, amines, ammonia, acids, chlorine compounds, chlorinated inorganics (potassium, calcium and sodium hypochlorite) and hydrogen peroxides. May attack plastic, resins and rubber.

***** Section 8 - Exposure Controls / Personal Protection *****

Component Exposure Limits

Acetone (67-64-1)

ACGIH: 500 ppm TWA
750 ppm STEL
OSHA: 1000 ppm TWA; 2400 mg/m³ TWA
NIOSH: 250 ppm TWA; 590 mg/m³ TWA

Methyl ethyl ketone (78-93-3)

ACGIH: 200 ppm TWA
300 ppm STEL
OSHA: 200 ppm TWA; 590 mg/m³ TWA
NIOSH: 200 ppm TWA; 590 mg/m³ TWA
300 ppm STEL; 885 mg/m³ STEL

Cyclohexanone (108-94-1)

ACGIH: 20 ppm TWA
50 ppm STEL
Skin - potential significant contribution to overall exposure by the cutaneous route
OSHA: 50 ppm TWA; 200 mg/m³ TWA
NIOSH: 25 ppm TWA; 100 mg/m³ TWA
Potential for dermal absorption

Tetrahydrofuran (109-99-9)

ACGIH: 50 ppm TWA
100 ppm STEL
Skin - potential significant contribution to overall exposure by the cutaneous route
OSHA: 200 ppm TWA; 590 mg/m³ TWA
NIOSH: 200 ppm TWA; 590 mg/m³ TWA
250 ppm STEL; 735 mg/m³ STEL

Material Name: PURPLE PRIMER/CLEANER

Engineering Measures

Open doors & windows. Provide ventilation capable of maintaining emissions at the point of use below recommended exposure limits. If used in enclosed area, use exhaust fans. Exhaust fans should be explosion-proof or set up in a way that flammable concentrations of solvent vapors are not exposed to electrical fixtures or hot surfaces.

Personal Protective Equipment: Respiratory

For operations where the exposure limit may be exceeded, a NIOSH approved organic vapor respirator or supplied air respirator is recommended. Equipment selection depends on contaminant type and concentration, select in accordance with 29 CFR 1910.134 and good industrial hygiene practice. For firefighting, use self-contained breathing apparatus.

Personal Protective Equipment: Hands

Rubber gloves are suitable for normal use of the product. For long exposures chemical resistant gloves may be required such as 4H(tm) or Silver Shield(tm) to avoid prolonged skin contact.

Personal Protective Equipment: Eyes

Safety glasses with side shields or safety goggles.

Personal Protective Equipment: Skin and Body

No additional protective equipment needed.

* * * Section 9 - Physical & Chemical Properties * * *

Appearance:	Purple	Odor:	Ether-like
Physical State:	Liquid	pH:	NA
Vapor Pressure:	145 mmHg 20°C	Vapor Density:	2.5
Boiling Point:	151°F (66°C)	Melting Point:	NA
Solubility (H2O):	Negligible	Specific Gravity:	0.81 +/- 0.02 20°C
Evaporation Rate:	(BUAC = 1) = 5.5 - 8.0	VOC:	99.96%
Octanol/H2O Coeff.:	ND	Flash Point:	14-23°F (-10 to -5°C)
Flash Point Method:	CCCFP	Upper Flammability Limit (UFL):	11.8
Lower Flammability Limit (LFL):	1.8	Burning Rate:	ND
Auto Ignition:	ND		

* * * Section 10 - Chemical Stability & Reactivity Information * * *

Chemical Stability

This is a stable material.

Hazardous Reaction Potential

Will not occur.

Conditions to Avoid

Avoid heat, sparks, flames and other sources of ignition.

Incompatible Products

Oxidizing agents, alkalis, amines, ammonia, acids, chlorine compounds, chlorinated inorganics (potassium, calcium and sodium hypochlorite) and hydrogen peroxides. May attack plastic, resins and rubber.

Hazardous Decomposition Products

Combustion will produce toxic and irritating vapors including carbon monoxide, carbon dioxide and hydrogen chloride.

* * * **Section 11 - Toxicological Information** * * *

Acute Toxicity

Component Analysis - LD50/LC50

Acetone (67-64-1)

Oral LD50 Rat 5800 mg/kg

Methyl ethyl ketone (78-93-3)

Inhalation LC50 Mouse 32 g/m³ 4 h; Oral LD50 Rat 2737 mg/kg; Dermal LD50 Rabbit 6480 mg/kg

Cyclohexanone (108-94-1)

Inhalation LC50 Rat 10.7 mg/L 4 h; Inhalation LC50 Rat 8000 ppm 4 h; Oral LD50 Rat 800 mg/kg; Dermal LD50 Rabbit 948 mg/kg

Tetrahydrofuran (109-99-9)

Inhalation LC50 Rat 53.9 mg/L 4 h; Inhalation LC50 Rat 180 mg/L 1 h; Oral LD50 Rat 1650 mg/kg

Potential Health Effects: Skin Corrosion Property/Stimulativeness

May cause irritation with redness, itching and pain. Methyl ethyl ketone and cyclohexanone may be absorbed through the skin causing effects similar to those listed under inhalation.

Potential Health Effects: Eye Critical Damage/ Stimulativeness

Vapors may cause irritation. Direct contact may cause irritation with redness, stinging and tearing of the eyes. May cause eye damage.

Potential Health Effects: Ingestion

Swallowing may cause abdominal pain, nausea, vomiting and diarrhea. Aspiration during swallowing or vomiting can cause chemical pneumonia and lung damage. May cause kidney and liver damage.

Potential Health Effects: Inhalation

Vapors or mists may cause mucous membrane and respiratory irritation, coughing, headache, dizziness, dullness, nausea, shortness of breath and vomiting. High concentrations may cause central nervous system depression, narcosis and unconsciousness. May cause kidney, liver and lung damage.

Respiratory Organs Sensitization/Skin Sensitization

This product is not reported to have any skin sensitization effects.

Generative Cell Mutagenicity

Cyclohexanone has been positive in bacterial and mammalian assays. Acetone, methyl ethyl ketone and tetrahydrofuran are generally thought not to be mutagenic.

Carcinogenicity

A: General Product Information

In 2012 USEPA Integrated Risk Information System (IRIS) reviewed a two species inhalation lifetime study on THF conducted by NTP (1998). Male rats developed renal tumors and female mice developed liver tumors while neither the female rats nor the male mice showed similar results. Because the carcinogenic mechanisms could not be identified clearly in either species for either tumor, the EPA determined that the male rat and female mouse findings are relevant to the assessment of carcinogenic potential in humans. Therefore, the IRIS review concludes that these data in aggregate indicate that there is "suggestive evidence of carcinogenic potential" following exposure to THF by all routes of exposure.

Material Name: PURPLE PRIMER/CLEANER

B: Component Carcinogenicity

Acetone (67-64-1)

ACGIH: A4 - Not Classifiable as a Human Carcinogen

Cyclohexanone (108-94-1)

ACGIH: A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans

IARC: Monograph 71 [1999]; Monograph 47 [1989] (Group 3 (not classifiable))

Tetrahydrofuran (109-99-9)

ACGIH: A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans

Reproductive Toxicity

Methyl ethyl ketone and cyclohexanone have been shown to cause embryofetal toxicity and birth defects in laboratory animals. Acetone and tetrahydrofuran has been found to cause adverse developmental effects only when exposure levels cause other toxic effects to the mother.

Specified Target Organ General Toxicity: Single Exposure

May cause respiratory irritation. Inhalation of high concentrations may cause central nervous system depression, narcosis and unconsciousness. May cause kidney, liver and lung damage.

Specified Target Organ General Toxicity: Repeated Exposure

This product is not reported to have any specific target organ toxicity repeat exposure effects.

Aspiration Respiratory Organs Hazard

Aspiration during swallowing or vomiting can cause chemical pneumonia and lung damage. May cause kidney and liver damage.

*** Section 12 - Ecological Information ***
--

Ecotoxicity

A: General Product Information

This product is not expected to be toxic to aquatic organisms.

B: Component Analysis - Ecotoxicity - Aquatic Toxicity

Acetone (67-64-1)

Test & Species

Conditions

96 Hr LC50 Oncorhynchus mykiss	4.74 - 6.33 mL/L
96 Hr LC50 Pimephales promelas	6210 - 8120 mg/L
	[static]
96 Hr LC50 Lepomis macrochirus	8300 mg/L
48 Hr EC50 Daphnia magna	10294 - 17704 mg/L
	[Static]
48 Hr EC50 Daphnia magna	12600 - 12700 mg/L

Methyl ethyl ketone (78-93-3)

Test & Species

Conditions

96 Hr LC50 Pimephales promelas	3130-3320 mg/L
	[flow-through]
48 Hr EC50 Daphnia magna	>520 mg/L
48 Hr EC50 Daphnia magna	5091 mg/L
48 Hr EC50 Daphnia magna	4025 - 6440 mg/L
	[Static]

Material Name: PURPLE PRIMER/CLEANER

Cyclohexanone (108-94-1)

Test & Species

96 Hr LC50 Pimephales promelas	481-578 mg/L [flow-through]
96 Hr LC50 Pimephales promelas	8.9 mg/L
96 Hr EC50 Chlorella vulgaris	20 mg/L
24 Hr EC50 Daphnia magna	800 mg/L

Conditions

Tetrahydrofuran (109-99-9)

Test & Species

96 Hr LC50 Pimephales promelas	1970-2360 mg/L [flow-through]
96 Hr LC50 Pimephales promelas	2700-3600 mg/L [static]
24 Hr EC50 Daphnia magna	5930 mg/L

Conditions

Persistence/Degradability

No information available for the product.

Bioaccumulation

No information available for the product.

Mobility in Soil

No information available for the product.

* * * Section 13 - Disposal Considerations * * *

Waste Disposal Instructions

See Section 7 for Handling Procedures. See Section 8 for Personal Protective Equipment recommendations.

Disposal of Contaminated Containers or Packaging

Dispose of contents/container in accordance with local/regional/national/international regulations.

* * * Section 14 - Transportation Information * * *

DOT Information

For Greater than 1 liter (0.3 gal):

Shipping Name: Flammable Liquid, n.o.s (Methyl Ethyl Ketone, Acetone)

UN #: 1993 **Hazard Class:** 3 **Packing Group:** II

Required Label(s): Flammable Liquid

For Less than 1 liter (0.3 gal):

Shipping Name: Consumer Commodity, ORM-D

IMDG Information

For Greater than 1 liter (0.3 gal):

Shipping Name: Flammable Liquid, n.o.s (Methyl Ethyl Ketone, Acetone)

UN #: 1993 **Hazard Class:** 3 **Packing Group:** II

Required Label(s): Flammable Liquid

For Less than 1 liter (0.3 gal):

Shipping Name: Flammable Liquid, n.o.s (Limited Quantity)

UN #: 1993 **Hazard Class:** 3 **Packing Group:** II

Material Name: PURPLE PRIMER/CLEANER

Required Label(s): None (Limited Quantities are expected from labeling)

*** * * Section 15 - Regulatory Information * * ***

Regulatory Information

US Federal Regulations

Component Analysis

This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65) and/or CERCLA (40 CFR 302.4).

Acetone (67-64-1)

CERCLA: 5000 lb final RQ; 2270 kg final RQ

Methyl ethyl ketone (78-93-3)

CERCLA: 5000 lb final RQ; 2270 kg final RQ

Cyclohexanone (108-94-1)

CERCLA: 5000 lb final RQ; 2270 kg final RQ

Tetrahydrofuran (109-99-9)

CERCLA: 1000 lb final RQ; 454 kg final RQ

State Regulations

Component Analysis - State

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	CA	MA	MN	NJ	PA	RI
Acetone	67-64-1	Yes	Yes	Yes	Yes	Yes	No
Methyl ethyl ketone	78-93-3	Yes	Yes	Yes	Yes	Yes	No
Cyclohexanone	108-94-1	Yes	Yes	Yes	Yes	Yes	No
Tetrahydrofuran	109-99-9	Yes	Yes	Yes	Yes	Yes	No

Component Analysis - WHMIS IDL

The following components are identified under the Canadian Hazardous Products Act Ingredient Disclosure List:

Component	CAS #	Minimum Concentration
Acetone	67-64-1	1 %
Methyl ethyl ketone	78-93-3	1 %
Cyclohexanone	108-94-1	0.1 %
Tetrahydrofuran	109-99-9	1 %

Additional Regulatory Information

A: General Product Information

This product contains trace amounts of chemicals known to the State of California to cause cancer. Under normal use conditions, exposure to these chemicals at levels above the State of California "No Significant Risk Level" (NSRL) are unlikely. The use of proper personal protective equipment (PPE) and ventilation guidelines noted in Section 8 will minimize exposure to these chemicals.

Material Name: PURPLE PRIMER/CLEANER**B: Component Analysis - Inventory**

Component	CAS #	TSCA	CAN	EEC
Acetone	67-64-1	Yes	DSL	EINECS
Methyl ethyl ketone	78-93-3	Yes	DSL	EINECS
Cyclohexanone	108-94-1	Yes	DSL	EINECS
Tetrahydrofuran	109-99-9	Yes	DSL	EINECS

*** * * Section 16 - Other Information * * *****Key/Legend**

EPA = Environmental Protection Agency; TSCA = Toxic Substance Control Act; ACGIH = American Conference of Governmental Industrial Hygienists; IARC = International Agency for Research on Cancer; NIOSH = National Institute for Occupational Safety and Health; NTP = National Toxicology Program; OSHA = Occupational Safety and Health Administration., NJTSR = New Jersey Trade Secret Registry.

Literature References

None

Other Information

NFPA and HMIS:

NFPA Hazard Signal: Health: 2 Flammability: 3 Reactivity: 1 Special: None

HMIS Hazard Signal: Health: 2 Flammability: 3 Reactivity: 1 PPE: G

Disclaimer:

The information herein has been compiled from sources believed to be reliable, up-to-date, and is accurate to the best of our knowledge. However, we cannot give any guarantees regarding information from other sources, and expressly do not make warranties, nor assume any liability for its use.

End of Sheet

Franklin International

Material Safety Data Sheet

Titebond PROvantage Heavy Duty Construction Adhesive

1. Product and company identification

Address	: Franklin International 2020 Bruck Street Columbus OH 43207
Contact person	: Franklin Technical Services
Telephone	: (800) 877-4583
In case of emergency	: Franklin Security (614) 445-1300
Reference number	: 3707
Product code	: 5251
Date of revision	: 10/29/2012.
Print date	: 10/29/2012.
Chemtrec (24 Hour)	: (800) 424 - 9300
Chemtrec International	: (703) 527 - 3887
Chemical family	: Adhesive.
Product use	: Construction adhesive Solvent Based

2. Hazards identification

Emergency overview

Physical state	: Liquid. [Paste.]
Color	: Brown. [Light]
Odor	: Solvent(s)
Signal word	: DANGER!
Hazard statements	: EXTREMELY FLAMMABLE LIQUID AND VAPOR. FLAMMABLE. VAPOR MAY CAUSE FLASH FIRE. MAY BE HARMFUL IF SWALLOWED. MAY CAUSE RESPIRATORY TRACT, EYE AND SKIN IRRITATION. POSSIBLE CANCER HAZARD - CONTAINS MATERIAL WHICH MAY CAUSE CANCER.
Precautionary measures	: Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Do not ingest. Avoid breathing vapor or mist. Use only with adequate ventilation. Avoid contact with eyes, skin and clothing. Keep away from heat, sparks and flame. Keep container tightly closed. Use personal protective equipment as required. Wash thoroughly after handling.
OSHA/HCS status	: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Potential acute health effects

Inhalation	: Slightly irritating to the respiratory system.
Ingestion	: Harmful if swallowed.
Skin	: Slightly irritating to the skin.
Eyes	: Moderately irritating to eyes.

Potential chronic health effects

Chronic effects	: Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.
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2. Hazards identification

- Carcinogenicity** : Contains material which may cause cancer. Risk of cancer depends on duration and level of exposure.
- Mutagenicity** : No known significant effects or critical hazards.
- Teratogenicity** : No known significant effects or critical hazards.
- Developmental effects** : No known significant effects or critical hazards.
- Fertility effects** : No known significant effects or critical hazards.
- Target organs** : Contains material which may cause damage to the following organs: the nervous system, peripheral nervous system, upper respiratory tract, skin, central nervous system (CNS), eye, lens or cornea.

Over-exposure signs/symptoms

- Inhalation** : Adverse symptoms may include the following:
respiratory tract irritation
coughing
- Ingestion** : No specific data.
- Skin** : Adverse symptoms may include the following:
irritation
redness
dryness
cracking
- Eyes** : Adverse symptoms may include the following:
irritation
watering
redness

Medical conditions aggravated by over-exposure : None known.

See toxicological information (Section 11)

3. Composition/information on ingredients

United States

Name	CAS number	%
methyl acetate	79-20-9	25 - 50
n-hexane	110-54-3	1 - 5
vinyl acetate	108-05-4	0.1 - 0.5

Canada

Name	CAS number	%
methyl acetate	79-20-9	25 - 50
n-hexane	110-54-3	1 - 5
methanol	67-56-1	0.1 - 0.5
vinyl acetate	108-05-4	0.1 - 0.5

Mexico

					Classification			
Name	CAS number	UN number	%	IDLH	H	F	R	Special
methyl acetate	79-20-9	UN1993	25 - 50	3100 ppm	2	3	0	-
n-hexane	110-54-3	UN1993	1 - 5	1100 ppm	1	3	0	-

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4. First aid measures

- Eye contact** : Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.
- Skin contact** : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.
- Inhalation** : Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.
- Ingestion** : Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
- Notes to physician** : No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

5. Fire-fighting measures

- Flammability of the product** : Extremely flammable liquid. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion.
- Extinguishing media**
- Suitable** : Use dry chemical, CO₂, water spray (fog) or foam.
- Not suitable** : Do not use water jet.
- Special exposure hazards** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6. Accidental release measures

- Personal precautions** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).
- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
- Small spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor. Absorb with an inert material.
- Large spill** : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

7. Handling and storage

Handling

- Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.

Storage

- Store between the following temperatures: -17 to 40°C (1.4 to 104°F). Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

8. Exposure controls/personal protection

United States

Ingredient	Exposure limits
methyl acetate	<p>ACGIH TLV (United States, 3/2012). TWA: 200 ppm 8 hour(s). TWA: 606 mg/m³ 8 hour(s). STEL: 250 ppm 15 minute(s). STEL: 757 mg/m³ 15 minute(s).</p> <p>OSHA PEL 1989 (United States, 3/1989). TWA: 200 ppm 8 hour(s). TWA: 610 mg/m³ 8 hour(s). STEL: 250 ppm 15 minute(s). STEL: 760 mg/m³ 15 minute(s).</p> <p>NIOSH REL (United States, 6/2009). TWA: 200 ppm 10 hour(s). TWA: 610 mg/m³ 10 hour(s). STEL: 250 ppm 15 minute(s). STEL: 760 mg/m³ 15 minute(s).</p> <p>OSHA PEL (United States, 6/2010). TWA: 200 ppm 8 hour(s). TWA: 610 mg/m³ 8 hour(s).</p>
n-hexane	<p>OSHA PEL 1989 (United States, 3/1989). TWA: 50 ppm 8 hour(s). TWA: 180 mg/m³ 8 hour(s).</p> <p>NIOSH REL (United States, 6/2009). TWA: 50 ppm 10 hour(s). TWA: 180 mg/m³ 10 hour(s).</p> <p>ACGIH TLV (United States, 3/2012). Absorbed through skin. TWA: 50 ppm 8 hour(s).</p> <p>OSHA PEL (United States, 6/2010). TWA: 500 ppm 8 hour(s). TWA: 1800 mg/m³ 8 hour(s).</p>
vinyl acetate	<p>ACGIH TLV (United States, 3/2012). TWA: 10 ppm 8 hour(s). TWA: 35 mg/m³ 8 hour(s). STEL: 15 ppm 15 minute(s).</p>

8. Exposure controls/personal protection

	STEL: 53 mg/m ³ 15 minute(s). OSHA PEL 1989 (United States, 3/1989). TWA: 10 ppm 8 hour(s). TWA: 30 mg/m ³ 8 hour(s). STEL: 20 ppm 15 minute(s). STEL: 60 mg/m ³ 15 minute(s). NIOSH REL (United States, 6/2009). CEIL: 4 ppm 15 minute(s). CEIL: 15 mg/m ³ 15 minute(s).
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Canada

Occupational exposure limits		TWA (8 hours)			STEL (15 mins)			Ceiling			Notations
Ingredient	List name	ppm	mg/m ³	Other	ppm	mg/m ³	Other	ppm	mg/m ³	Other	
methyl acetate	US ACGIH 3/2012	200	606	-	250	757	-	-	-	-	
	AB 4/2009	200	606	-	250	757	-	-	-	-	
	BC 9/2011	200	-	-	250	-	-	-	-	-	
	ON 7/2010	200	606	-	250	757	-	-	-	-	
	QC 9/2011	200	606	-	250	757	-	-	-	-	
n-hexane	US ACGIH 3/2012	50	-	-	-	-	-	-	-	-	[1]
	AB 4/2009	50	176	-	-	-	-	-	-	-	[1]
	BC 9/2011	20	-	-	-	-	-	-	-	-	[1]
	ON 7/2010	50	-	-	-	-	-	-	-	-	[1]
	QC 9/2011	50	176	-	-	-	-	-	-	-	[1]
methanol	US ACGIH 3/2012	200	262	-	250	328	-	-	-	-	[1]
	AB 4/2009	200	262	-	250	328	-	-	-	-	[1]
	BC 9/2011	200	-	-	250	-	-	-	-	-	[1]
	ON 7/2010	200	262	-	250	328	-	-	-	-	[1]
	QC 9/2011	200	262	-	250	328	-	-	-	-	[1]
vinyl acetate	US ACGIH 3/2012	10	35	-	15	53	-	-	-	-	
	AB 4/2009	10	35	-	15	53	-	-	-	-	
	BC 9/2011	10	-	-	15	-	-	-	-	-	
	ON 7/2010	10	35	-	15	53	-	-	-	-	
	QC 9/2011	10	35	-	15	53	-	-	-	-	

[1] Absorbed through skin.

Mexico

Occupational exposure limits

Ingredient	Exposure limits
methyl acetate	NOM-010-STPS (Mexico, 9/2000). LMPE-PPT: 200 ppm 8 hour(s). LMPE-PPT: 610 mg/m ³ 8 hour(s). LMPE-CT: 760 mg/m ³ 15 minute(s). LMPE-CT: 250 ppm 15 minute(s).
n-hexane	NOM-010-STPS (Mexico, 9/2000). LMPE-PPT: 50 ppm 8 hour(s). LMPE-PPT: 176 mg/m ³ 8 hour(s).

Consult local authorities for acceptable exposure limits.

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

Engineering measures : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

8. Exposure controls/personal protection

Personal protection

- | | |
|--|---|
| Respiratory | : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. |
| Hands | : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. |
| Eyes | : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts. |
| Skin | : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. |
| Environmental exposure controls | : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. |

9. Physical and chemical properties

- | | |
|---|---|
| Physical state | : Liquid. [Paste.] |
| Flash point | : Closed cup: -18°C (-0.4°F) |
| Auto-ignition temperature | : 252°C (485.6°F) |
| Color | : Brown. [Light] |
| Odor | : Solvent(s) |
| Boiling/condensation point | : 54.44°C (130°F) |
| Relative density | : 1.2469 |
| Volatility | : 37.28% (w/w) |
| Evaporation rate | : >1 (butyl acetate = 1) |
| VOC (less water, less exempt solvents) | : 44 g/l |
| Solubility | : Very slightly soluble in the following materials: cold water and hot water. |

10. Stability and reactivity

- | | |
|---|---|
| Chemical stability | : The product is stable. |
| Conditions to avoid | : Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. |
| Incompatible materials | : Highly reactive or incompatible with the following materials: oxidizing materials |
| Hazardous decomposition products | : Under normal conditions of storage and use, hazardous decomposition products should not be produced. |
| Possibility of hazardous reactions | : Under normal conditions of storage and use, hazardous reactions will not occur. |
| Hazardous polymerization | : Under normal conditions of storage and use, hazardous polymerization will not occur. |
| Incompatibility | : Reactive or incompatible with the following materials: oxidizing materials, acids and alkalis. |
| Conditions of reactivity | : Flammable in the presence of the following materials or conditions: open flames, sparks and static discharge and heat. |

11. Toxicological information

United States

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
methyl acetate	LD50 Dermal	Rabbit	>5 g/kg	-
	LD50 Oral	Rat	>5 g/kg	-
n-hexane	LC50 Inhalation Gas.	Rat	48000 ppm	4 hours
	LD50 Oral	Rat	15840 mg/kg	-
vinyl acetate	LC50 Inhalation Vapor	Rat	11400 mg/m3	4 hours
	LD50 Dermal	Rabbit	2335 mg/kg	-
	LD50 Oral	Rat	2900 mg/kg	-

Chronic toxicity

No known significant effects or critical hazards.

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
methyl acetate	Eyes - Moderate irritant	Rabbit	-	24 hours 100 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
n-hexane	Eyes - Mild irritant	Rabbit	-	10 milligrams	-

Conclusion/Summary

- Skin** : Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.
- Eyes** : This product may irritate eyes upon contact.
- Respiratory** : High vapor concentrations can cause headaches, dizziness, drowsiness and nausea and may lead to unconsciousness.

Sensitizer

No known significant effects or critical hazards.

Carcinogenicity

Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
vinyl acetate	A3	2B	-	-	-	-

Mutagenicity

No known significant effects or critical hazards.

Teratogenicity

No known significant effects or critical hazards.

Reproductive toxicity

No known significant effects or critical hazards.

Canada

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
methyl acetate	LD50 Dermal	Rabbit	>5 g/kg	-
	LD50 Oral	Rat	>5 g/kg	-
n-hexane	LC50 Inhalation Gas.	Rat	48000 ppm	4 hours
	LD50 Oral	Rat	15840 mg/kg	-
methanol	LC50 Inhalation Gas.	Rat	145000 ppm	1 hours
	LC50 Inhalation Gas.	Rat	64000 ppm	4 hours
	LD50 Dermal	Rabbit	15800 mg/kg	-

11. Toxicological information

vinyl acetate	LD50 Oral	Rat	5600 mg/kg	4 hours
	LC50 Inhalation Vapor	Rat	11400 mg/m3	
	LD50 Dermal	Rabbit	2335 mg/kg	
	LD50 Oral	Rat	2900 mg/kg	

Chronic toxicity

No known significant effects or critical hazards.

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
methyl acetate	Eyes - Moderate irritant	Rabbit	-	24 hours 100 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
n-hexane methanol	Eyes - Mild irritant	Rabbit	-	10 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	24 hours 100 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	40 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-

Conclusion/Summary

Skin

: Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.

Eyes

: This product may irritate eyes upon contact.

Respiratory

: High vapor concentrations can cause headaches, dizziness, drowsiness and nausea and may lead to unconsciousness.

Sensitizer

No known significant effects or critical hazards.

Carcinogenicity

Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
vinyl acetate	A3	2B	-	-	-	-

Mutagenicity

No known significant effects or critical hazards.

Teratogenicity

No known significant effects or critical hazards.

Reproductive toxicity

No known significant effects or critical hazards.

Mexico

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
methyl acetate	LD50 Dermal	Rabbit	>5 g/kg	-
	LD50 Oral	Rat	>5 g/kg	-
n-hexane	LC50 Inhalation Gas.	Rat	48000 ppm	4 hours
	LD50 Oral	Rat	15840 mg/kg	-

Chronic toxicity

No known significant effects or critical hazards.

Irritation/Corrosion

11. Toxicological information

Product/ingredient name	Result	Species	Score	Exposure	Observation
-	Eyes - Moderate irritant	Rabbit	-	24 hours 100 milligrams	-
-	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
-	Skin - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
-	Eyes - Mild irritant	Rabbit	-	10 milligrams	-

Conclusion/Summary

- Skin** : Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.
- Eyes** : This product may irritate eyes upon contact.
- Respiratory** : High vapor concentrations can cause headaches, dizziness, drowsiness and nausea and may lead to unconsciousness.

Sensitizer

No known significant effects or critical hazards.

Carcinogenicity

Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
vinyl acetate	A3	2B	-	-	-	-

Mutagenicity

No known significant effects or critical hazards.

Teratogenicity

No known significant effects or critical hazards.

Reproductive toxicity

No known significant effects or critical hazards.

12. Ecological information

Ecotoxicity : No known significant effects or critical hazards.

United States

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
methyl acetate	Acute LC50 320000 to 348000 ug/L Fresh water	Fish - Pimephales promelas - 28 to 32 days - 17.5 mm - 0.087 g	96 hours
n-hexane	Acute LC50 2500 to 2980 ug/L Fresh water	Fish - Pimephales promelas - 31 days - 20.4 mm - 0.123 g	96 hours
vinyl acetate	Acute LC50 10000 to 100000 ug/L Marine water	Crustaceans - Crangon crangon - Larvae	48 hours
	Acute LC50 14000 ug/L Fresh water	Fish - Pimephales promelas - 1 days	96 hours

Persistence/degradability

No known significant effects or critical hazards.

Canada

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure

12. Ecological information

methyl acetate	Acute LC50 320000 to 348000 ug/L Fresh water	Fish - Pimephales promelas - 28 to 32 days - 17.5 mm - 0.087 g	96 hours
n-hexane	Acute LC50 2500 to 2980 ug/L Fresh water	Fish - Pimephales promelas - 31 days - 20.4 mm - 0.123 g	96 hours
methanol	Acute EC50 16.912 mg/L Marine water	Algae - Ulva pertusa	96 hours
	Acute LC50 2500000 ug/L Marine water	Crustaceans - Crangon crangon - Adult	48 hours
vinyl acetate	Acute LC50 3289 to 4395 mg/L Fresh water	Daphnia - Daphnia magna - Neonate - <24 hours	48 hours
	Acute LC50 290 mg/L Fresh water	Fish - Danio rerio - Egg - stage	96 hours
	Acute LC50 10000 to 100000 ug/L Marine water	Crustaceans - Crangon crangon - Larvae	48 hours
	Acute LC50 14000 ug/L Fresh water	Fish - Pimephales promelas - 1 days	96 hours

Persistence/degradability

No known significant effects or critical hazards.

Mexico

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
methyl acetate	Acute LC50 320000 to 348000 ug/L Fresh water	Fish - Pimephales promelas - 28 to 32 days - 17.5 mm - 0.087 g	96 hours
n-hexane	Acute LC50 2500 to 2980 ug/L Fresh water	Fish - Pimephales promelas - 31 days - 20.4 mm - 0.123 g	96 hours

Persistence/degradability

No known significant effects or critical hazards.

13. Disposal considerations

Waste disposal







: The generation of waste should be avoided or minimized wherever possible. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

14. Transport information

14. Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
DOT Classification	1133	ADHESIVES, containing flammable liquid	3	III		Remarks Limited quantity
TDG Classification	1133	ADHESIVES, containing flammable liquid	3	III		Remarks Limited quantity
Mexico Classification	1133	ADHESIVES, containing flammable liquid	3	III		Remarks Limited quantity
ADR/RID Class	1133	ADHESIVES, containing flammable liquid	3	III		Remarks Limited quantity
IMDG Class	1133	ADHESIVES, containing flammable liquid	3	III		Remarks Limited quantity
IATA-DGR Class	1133	ADHESIVES, containing flammable liquid	3	III		Remarks Limited quantity

PG* : Packing group

15. Regulatory information

United States

HCS Classification : Flammable liquid
Irritating material
Carcinogen

U.S. Federal regulations :
TSCA 8(a) PAIR: methyl acetate; mequinol; tert-butyl acetate; 2-methylpropan-2-ol
TSCA 8(a) IUR Exempt/Partial exemption: Not determined

United States inventory (TSCA 8b): All components are listed or exempted.

SARA 302/304/311/312 extremely hazardous substances: No products were found.

SARA 302/304 emergency planning and notification: No products were found.

SARA 302/304/311/312 hazardous chemicals: methyl acetate; n-hexane

SARA 311/312 MSDS distribution - chemical inventory - hazard identification:

Titebond PROvantage Heavy Duty Construction Adhesive: Fire hazard, Immediate (acute) health hazard, Delayed (chronic) health hazard

Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs) : Listed

Clean Air Act Section 602 Class I Substances : Not listed

15. Regulatory information

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 313

	Product name	CAS number	Concentration
Form R - Reporting requirements	n-hexane	110-54-3	1 - 5
	vinyl acetate	108-05-4	0.1 - 0.5
Supplier notification	n-hexane	110-54-3	1 - 5
	vinyl acetate	108-05-4	0.1 - 0.5

SARA 313 notifications must not be detached from the MSDS and any copying and redistribution of the MSDS shall include copying and redistribution of the notice attached to copies of the MSDS subsequently redistributed.

State regulations

Massachusetts : The following components are listed: METHYL ACETATE; HEXANE

New York : The following components are listed: Vinyl acetate; Hexane

New Jersey : The following components are listed: METHYL ACETATE; ACETIC ACID, METHYL ESTER; VINYL ACETATE; ACETIC ACID ETHENYL ESTER; n-HEXANE; HEXANE

Pennsylvania : The following components are listed: ACETIC ACID, METHYL ESTER; ACETIC ACID ETHENYL ESTER; HEXANE

California Prop. 65

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Ingredient name	Cancer	Reproductive	No significant risk level	Maximum acceptable dosage level
methanol	No.	Yes.	45000 µg/day (ingestion) 47000 µg/day (inhalation)	No.

Canada

WHMIS (Canada) : Class B-2: Flammable liquid
Class D-2A: Material causing other toxic effects (Very toxic).
Class D-2B: Material causing other toxic effects (Toxic).

Canadian lists

Canadian NPRI : The following components are listed: n-Hexane

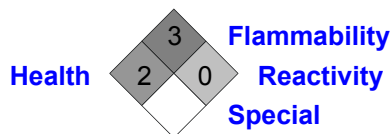
CEPA Toxic substances : None of the components are listed.

Canada inventory : Not determined.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Mexico

Classification :



International regulations

15. Regulatory information

International lists : Australia inventory (AICS): Not determined.
 China inventory (IECSC): Not determined.
 Japan inventory: Not determined.
 Korea inventory: Not determined.
 New Zealand Inventory of Chemicals (NZIoC): Not determined.
 Philippines inventory (PICCS): Not determined.

Chemical Weapons Convention List Schedule I Chemicals : Not listed

Chemical Weapons Convention List Schedule II Chemicals : Not listed

Chemical Weapons Convention List Schedule III Chemicals : Not listed

16. Other information

Label requirements : EXTREMELY FLAMMABLE LIQUID AND VAPOR. FLAMMABLE. VAPOR MAY CAUSE FLASH FIRE. MAY BE HARMFUL IF SWALLOWED. MAY CAUSE RESPIRATORY TRACT, EYE AND SKIN IRRITATION. POSSIBLE CANCER HAZARD - CONTAINS MATERIAL WHICH MAY CAUSE CANCER.

Hazardous Material Information System (U.S.A.) :

Health	3
Flammability	2
Physical hazards	1

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.) :



Reprinted with permission from NFPA 704-2001, Identification of the Hazards of Materials for Emergency Response Copyright ©1997, National Fire Protection Association, Quincy, MA 02269. This reprinted material is not the complete and official position of the National Fire Protection Association, on the referenced subject which is represented only by the standard in its entirety.

Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

Date of printing : 10/29/2012.

Date of issue : 10/29/2012.

16. Other information

Date of previous issue : 10/29/2012.

Version : 2

☐ Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

MATERIAL SAFETY DATA SHEET

May be used to comply with OSHA's
Hazard Communication Standard
29 CFR 1910.1200. Standard must be
consulted for specific requirements.

U.S. Department of Labor
Occupational Safety and Health
Administration (Non-Mandatory Form)
Form Approved
OMB No. 12180072

IDENTITY (As used on label and list) Purple Power Industrial Strength Cleaner/Degreaser		Note: Blank spaces are not permitted. If any item is not applicable or no information is available, the space must be marked to indicate that.		
Section I - Manufacturer				
Manufacturer's Name: Aiken Chemical Company		Emergency Telephone Number 1-800-922-1117; (864) 765-7359		
Address (Number, Street, City, State and Zip Code) P.O. Box 27147 Greenville, SC 29616		Telephone Number for Information (864)968-1250; 1-800-828-1860		
12 Shelter Drive, Greer, SC 29650		Date Prepared: August 30, 2011	Revision #: August 30, 2011	
		Signature of Preparer (Optional)		
Section II – Hazardous Ingredients / Identity Information				
Hazardous Components (Specific Chemical Identity: Common Name(s))	OSHA PEL	ACGIH TLV	OTHER LIMITS	%
	NFPA	HMIS		
TSCA Information: All ingredients of this product are listed on the TSCA inventory.				
Section III – Routes and Effects of Overexposure				
SKIN: Can cause moderate irritation. Prolonged or repeated contact can cause de-fating or dermatitis.				
EYES: Can cause severe irritation. Can cause redness or tearing.				
INGESTION: Harmful if swallowed. Can cause irritation to mouth, esophagus, and stomach.				
INHALATION: Spray mist is irritating to respiratory tract.				
Medical Conditions Generally Aggravated by Exposure: Pre-existing skin and respiratory problems.				
Section IV – Emergency and First Aid Procedures				
SKIN: Remove contaminated clothing. Thoroughly wash exposed area with soap and water for at least 15 minutes. Seek medical attention immediately.				
EYES: Remove contact lenses if present. Immediately flush eyes with large amounts of water for at least 15 minutes, lifting upper and lower eyelids periodically to insure complete flushing. Seek medical attention immediately.				
INGESTION: DO NOT induce vomiting. If conscious, dilute by giving 2-3 glasses of water. Seek medical attention immediately.				
INHALATION: Remove individual to fresh air. If breathing has stopped, give artificial respiration. Seek medical attention immediately.				
Section V – Fire-Fighting Measures				
EXTINGUISHING MEDIA: Water fog, alcohol foam, carbon dioxide or dry chemical.				
SPECIAL FIRE-FIGHTING MEDIA: Use water to keep fire-exposed containers cool until fire is out.				
UNUSUAL FIRE AND EXPLOSION HAZARDS: Never use a welding or cutting torch or other source of heat on or near chemical product containers.				
Section VI – Accidental Release Measures				
Steps to be Taken in Case Material is Released or Spilled: Stop spill at the source, dike area to prevent spreading. Remaining liquid may be taken up with sand, clay, floor absorbent, or other absorbent material and shoveled into salvage containers.				
Waste Disposal Method: Dispose of in accordance with all local, state and federal regulations.				
Other Precautions: Wear body-covering impervious protective clothing, chemical safety glasses with side shields and/or face shield, chemical resistant gloves and boots.				

Section VII – Handling and Storage			
Handling: General handling: avoid breathing vapor. Do not get in eyes, on skin or clothing. Do not swallow. Keep container closed. Use with adequate ventilation. Wash thoroughly after handling. Keep away from reactive metals and acids. Gels and generates heat when mixed with acids. See Section VIII – Exposure Controls and Personal Protection.			
Storage: Do not store in aluminum, copper, or galvanized containers. Separate from acids, reactive metals, and ammonium salts.			
Other Precautions: Containers, even those that have been emptied, can contain product and vapors. Avoid contact with residual product.			
Section VIII – Exposure Controls and Personal Protection			
Respiratory Protection (Specify Type) To avoid breathing spray or vapors or when required, wear NIOSH/MSA approved respirator. Also use respirator if in a confined space without local or mechanical exhaust system.			
Ventilation: Use adequate ventilation to avoid mists and vapors.	Local Exhaust Acceptable		Special: None
	Mechanical (General) To reduce exposure limits		Other: None
Protective Gloves Neoprene, Nitrile Rubber, Polyethylene		Eye Protection Chemical safety glasses with side shields and/or face shield	
Other Protective Clothing or Equipment To prevent skin contact, wear body-covering, impervious clothing, chemical resistant gloves and boots.			
Work Hygienic Practices Always use caution when working with chemicals. Wash hands before eating, smoking or drinking.			
Section IX – Physical / Chemical Characteristics			
Boiling Point:	>212° F	Specific Gravity:	1.020
Vapor Pressure (mm Hg.):	Not Determined	Melting Point:	NA
Vapor Density (AIR=1):	Not Determined	Evaporation Rate (Butyl Acetate=1):	<1.0
Solubility in Water:	Complete	pH:	11.2
Appearance and Odor:	Purple liquid with characteristic odor.	LEL: UEL:	Not Determined Not Determined
Flammable Limits:	Not Determined	Flash Point (Method Used):	>200° F (PMCC)
Section X – Reactivity Data			
Stability:	Unstable:		Conditions to Avoid: Mixing or blending with oxidizing or low pH solutions
	Stable:	X	
Incompatibility (Materials to Avoid): Avoid contact with reactive metals, strong mineral acids and organic acids.			
Hazardous Decomposition or Byproducts: Carbon dioxide, carbon monoxide, various hydrocarbons and can include aldehydes, ketones, organic acids and other organics.			
Hazardous Polymerization	May Occur		Conditions to Avoid: None
	Will Not Occur	X	
Section XI – Toxicological Information			
Acute health hazard – similar materials caused severe irritation to the eyes and moderate irritation to the skin.			
Section XII – Ecological Information			
Not Determined			
Section XIII – Transport Information, Including IMDG			
PROPER SHIPPING NAME: Not D.O.T. Regulated			
HAZARD CLASS: N/A			
ID NUMBER: N/A			
PACKING GROUP: N/A			
PLACARDING: N/A			
IATA: N/A			

Section XIV – Regulatory Information		
TSCA Status: All components are listed on the Toxic Substance Control Act Chemical Substances Inventory		
Section 311 Hazard Category - Acute		
Section 313 Toxic Release Inventory Chemical: Glycol ethers, 1% max		
California Safe Drinking Water Enforcement Act (Prop 65): This product contains no listed substances known to the State of California to cause cancer, birth defects or other reproductive harm, at levels which would require a warning under the statute.		
Pennsylvania (Worker and Community Right-to-Know Act): Pennsylvania Special Hazardous Substances List and/or Pennsylvania Environmental hazardous Substance List: This material contains the following components that appear on the PA list:		
Component	CAS#	Amount
Ethylene glycol monobutyl ether	111-76-2	≤1%
New Jersey Right-to-Know Hazardous Substance List: This material contains the following components that appear on the NJ list:		
Component	CAS#	Amount
Ethylene glycol monobutyl ether	111-76-2	≤1%
Massachusetts Substance List: This material contains the following components that appear on the MA list:		
Component	CAS#	Amount
Ethylene glycol monobutyl ether	111-76-2	≤1%



Material Name: OATEY PVC MEDIUM CLEAR or GRAY CEMENT - LO-VOC

***** Section 1 - Product and Company Identification *****

MSDS #1101E

Part Numbers: Clear -30350, 31017, 31018, 31019, 31020, 31021, 31550, 31551, 31552, 31553, 31946, 31947, 31948, 31949, 32222, 32223, 32224, 32225, 32255, 32256, 32257, 32258

Gray - 30883, 30884, 30885, 30886, 30887, 31930, 31931, 31932, 31933

Manufacturer Information

Oatey Co.
4700 West 160th Street
Cleveland, OH 44135

Phone: 216-267-7100

For Emergency First Aid call 1-877-740-5015. For chemical transportation emergencies ONLY, call Chemtrec at 1-800-424-9300. Outside the U.S. 1- 703-527-3887.

***** Section 2 - Hazards Identification *****

GHS Classification:

Flammable Liquids - Category 2
Acute Toxicity Oral - Category 4
Acute Toxicity Dermal - Category 4
Acute Toxicity Inhalation - Category 4
Eye Damage/Irritation - Category 2A
Carcinogenicity - Category 2
Specific Target Organ Toxicity Single Exposure - Category 3

GHS LABEL ELEMENTS

Symbol(s)



Signal Word

Danger

Hazard Statements

Highly flammable liquid and vapor.
Harmful if swallowed.
Harmful in contact with skin.
Harmful if inhaled.
Causes serious eye irritation.
Contains a chemical classified by the US EPA as a suspected possible carcinogen.
May cause respiratory irritation.
May cause drowsiness or dizziness.

Material Name: OATEY PVC MEDIUM CLEAR or GRAY CEMENT – LO-VOC

Precautionary Statements

Prevention

Keep away from heat/sparks/open flames and hot surfaces. - No smoking.
Keep container tightly closed.
Use explosion-proof electrical/ventilating/lighting/equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Wear protective gloves/eye protection/face protection.
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Avoid breathing fume/gas/mist/vapors.
Use only outdoors or in a well-ventilated area.

Response

If on skin (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse.
If swallowed: Call a poison center or doctor/physician if you feel unwell. Rinse mouth. Do not induce vomiting.
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a poison center or doctor/physician if you feel unwell.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center or doctor/physician.
If exposed or concerned Get medical advice/attention.
In case of fire: Use dry chemical, CO₂, or foam to extinguish fire.

Storage

Store in a well-ventilated place. Keep cool.
Store locked up.

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations.

*** * * Section 3 - Composition / Information on Ingredients * * ***

CAS #	Component	Percent
109-99-9	Tetrahydrofuran	30-50
67-64-1	Acetone	10-25
78-93-3	Methyl ethyl ketone	10-25
9002-86-2	PVC (Chloroethylene, polymer)	12-20
108-94-1	Cyclohexanone	10-20
112945-52-5	Silica, amorphous, fumed, crystalline-free	1-5

*** * * Section 4 - First Aid Measures * * ***

First Aid: Eyes

If material gets into eyes or if fumes cause irritation, immediately flush eyes with plenty of water until chemical is removed. If irritation persists, get medical attention immediately.

Material Name: OATEY PVC MEDIUM CLEAR or GRAY CEMENT – LO-VOC

First Aid: Skin

Remove contaminated clothing immediately. Wash all exposed areas with soap and water. Get medical attention if irritation develops. Remove dried cement with hand cleaner or baby oil.

First Aid: Ingestion

DO NOT INDUCE VOMITING. Rinse mouth with water. Never give anything by mouth to a person who is unconscious or drowsy. Get immediate medical attention by calling a Poison Control Center, or hospital emergency room. If medical advice cannot be obtained, then take the person and product to the nearest medical emergency treatment center or hospital.

First Aid: Inhalation

If symptoms of exposure develop, remove to fresh air. If breathing becomes difficult, administer oxygen. Administer artificial respiration if breathing has stopped. Seek immediate medical attention.

<p style="text-align: center;">* * * Section 5 - Fire Fighting Measures * * *</p>
--

General Fire Hazards

See Section 9 for Flammability Properties.

Highly flammable liquid and vapor. Keep away from heat and all sources of ignition including sparks, flames, lighted cigarettes and pilot lights. Containers may rupture or explode in the heat of a fire. Vapors are heavier than air and may travel to a remote ignition source and flash back. This product contains tetrahydrofuran that may form explosive organic peroxide when exposed to air or light or with age.

Hazardous Combustion Products

Combustion will produce toxic and irritating vapors including carbon monoxide, carbon dioxide and hydrogen chloride.

Extinguishing Media

Use dry chemical, CO₂, or foam to extinguish fire. Cool fire exposed container with water. Water may be ineffective as an extinguishing agent.

Unsuitable Extinguishing Media

None.

Fire Fighting Equipment/Instructions

Firefighters should wear positive pressure self-contained breathing apparatus and full protective clothing for fires in areas where chemicals are used or stored.

<p style="text-align: center;">* * * Section 6 - Accidental Release Measures * * *</p>

Recovery and Neutralization

Stop leak if it can be done without risk.

Materials and Methods for Clean-Up

Remove all sources of ignition and ventilate area. Soak up spill with an inert absorbent such as sand, earth or other noncombusting material. Put absorbent material in covered, labeled metal containers.

Emergency Measures

Isolate area. Keep unnecessary personnel away.

Personal Precautions and Protective Equipment

Personnel cleaning up the spill should wear appropriate personal protective equipment, including respirators if vapor concentrations are high.

Environmental Precautions

Prevent liquid from entering watercourses, sewers and natural waterways.

Prevention of Secondary Hazards

None

***** Section 7 - Handling and Storage *****

Handling Procedures

Avoid contact with eyes, skin and clothing. Avoid breathing vapors or mists. Use with adequate ventilation (equivalent to outdoors). Wash thoroughly after handling. Do not eat, drink or smoke in the work area. Keep product away from heat, sparks, flames and all other sources of ignition. No smoking in storage or use areas. Keep containers closed when not in use. Other: "Empty" containers retain product residue and can be hazardous. Follow all SDS precautions in handling empty containers. Do not cut or weld on or near empty or full containers.

Storage Procedures

Store in a cool, dry, well-ventilated area away from incompatible materials. Keep containers closed when not in use.

Incompatibilities

Oxidizing agents, alkalis, amines, ammonia, acids, chlorine compounds, chlorinated inorganics (potassium, calcium and sodium hypochlorite) and hydrogen peroxides. May attack plastic, resins and rubber.

***** Section 8 - Exposure Controls / Personal Protection *****

Component Exposure Limits

Tetrahydrofuran (109-99-9)

ACGIH: 50 ppm TWA
100 ppm STEL
Skin - potential significant contribution to overall exposure by the cutaneous route
OSHA: 200 ppm TWA; 590 mg/m3 TWA
NIOSH: 200 ppm TWA; 590 mg/m3 TWA
250 ppm STEL; 735 mg/m3 STEL

Acetone (67-64-1)

ACGIH: 500 ppm TWA
750 ppm STEL
OSHA: 1000 ppm TWA; 2400 mg/m3 TWA
NIOSH: 250 ppm TWA; 590 mg/m3 TWA

Methyl ethyl ketone (78-93-3)

ACGIH: 200 ppm TWA
300 ppm STEL
OSHA: 200 ppm TWA; 590 mg/m3 TWA
NIOSH: 200 ppm TWA; 590 mg/m3 TWA
300 ppm STEL; 885 mg/m3 STEL

PVC (Chloroethylene, polymer) (9002-86-2)

ACGIH: 1 mg/m3 TWA (respirable fraction)

Cyclohexanone (108-94-1)

ACGIH: 20 ppm TWA
50 ppm STEL
Skin - potential significant contribution to overall exposure by the cutaneous route
OSHA: 50 ppm TWA; 200 mg/m3 TWA
NIOSH: 25 ppm TWA; 100 mg/m3 TWA
Potential for dermal absorption

Material Name: OATEY PVC MEDIUM CLEAR or GRAY CEMENT – LO-VOC

Engineering Measures

Open doors & windows. Provide ventilation capable of maintaining emissions at the point of use below recommended exposure limits. If used in enclosed area, use exhaust fans. Exhaust fans should be explosion-proof or set up in a way that flammable concentrations of solvent vapors are not exposed to electrical fixtures or hot surfaces.

Personal Protective Equipment: Respiratory

For operations where the exposure limit may be exceeded, a NIOSH approved organic vapor respirator or supplied air respirator is recommended. Equipment selection depends on contaminant type and concentration, select in accordance with 29 CFR 1910.134 and good industrial hygiene practice. For firefighting, use self-contained breathing apparatus.

Personal Protective Equipment: Hands

Rubber gloves are suitable for normal use of the product. For long exposures chemical resistant gloves may be required such as 4H(tm) or Silver Shield(tm) to avoid prolonged skin contact.

Personal Protective Equipment: Eyes

Safety glasses with side shields or safety goggles.

Personal Protective Equipment: Skin and Body

No additional protective equipment needed.

* * * Section 9 - Physical & Chemical Properties * * *

Appearance:	Clear	Odor:	Ether-like
Physical State:	Liquid	pH:	NA
Vapor Pressure:	145 mmHg 20°C	Vapor Density:	2.5
Boiling Point:	151°F (66°C)	Melting Point:	NA
Solubility (H2O):	Negligible	Specific Gravity:	0.93 +/- 0.02 20°C
Evaporation Rate:	(BUAC = 1) = 5.5 - 8.0	VOC:	510 g/L per SCAQMD
Octanol/H2O Coeff.:	ND	Flash Point:	14-23°F (-10 to -5°C)
Flash Point Method:	CCCFP	Upper Flammability Limit (UFL):	11.8
Lower Flammability Limit (LFL):	1.8	Burning Rate:	ND
Auto Ignition:	ND		

* * * Section 10 - Chemical Stability & Reactivity Information * * *

Chemical Stability

This is a stable material.

Hazardous Reaction Potential

Will not occur.

Conditions to Avoid

Avoid heat, sparks, flames and other sources of ignition.

Incompatible Products

Oxidizing agents, alkalis, amines, ammonia, acids, chlorine compounds, chlorinated inorganics (potassium, calcium and sodium hypochlorite) and hydrogen peroxides. May attack plastic, resins and rubber.

Hazardous Decomposition Products

Combustion will produce toxic and irritating vapors including carbon monoxide, carbon dioxide and hydrogen chloride.

Material Name: OATEY PVC MEDIUM CLEAR or GRAY CEMENT – LO-VOC

*** * * Section 11 - Toxicological Information * * ***

Acute Toxicity

Component Analysis - LD50/LC50

Tetrahydrofuran (109-99-9)

Inhalation LC50 Rat 53.9 mg/L 4 h; Inhalation LC50 Rat 180 mg/L 1 h; Oral LD50 Rat 1650 mg/kg

Acetone (67-64-1)

Oral LD50 Rat 5800 mg/kg

Methyl ethyl ketone (78-93-3)

Inhalation LC50 Mouse 32 g/m³ 4 h; Oral LD50 Rat 2737 mg/kg; Dermal LD50 Rabbit 6480 mg/kg

Cyclohexanone (108-94-1)

Inhalation LC50 Rat 10.7 mg/L 4 h; Inhalation LC50 Rat 8000 ppm 4 h; Oral LD50 Rat 800 mg/kg; Dermal LD50 Rabbit 948 mg/kg

Silica, amorphous, fumed, crystalline-free (112945-52-5)

Oral LD50 Rat 3160 mg/kg

Potential Health Effects: Skin Corrosion Property/Stimulativeness

May cause irritation with redness, itching and pain. Methyl ethyl ketone and cyclohexanone may be absorbed through the skin causing effects similar to those listed under inhalation.

Potential Health Effects: Eye Critical Damage/ Stimulativeness

Vapors may cause irritation. Direct contact may cause irritation with redness, stinging and tearing of the eyes. May cause eye damage.

Potential Health Effects: Ingestion

Swallowing may cause abdominal pain, nausea, vomiting and diarrhea. Aspiration during swallowing or vomiting can cause chemical pneumonia and lung damage. May cause kidney and liver damage.

Potential Health Effects: Inhalation

Vapors or mists may cause mucous membrane and respiratory irritation, coughing, headache, dizziness, dullness, nausea, shortness of breath and vomiting. High concentrations may cause central nervous system depression, narcosis and unconsciousness. May cause kidney, liver and lung damage.

Respiratory Organs Sensitization/Skin Sensitization

This product is not reported to have any skin sensitization effects.

Generative Cell Mutagenicity

Cyclohexanone has been positive in bacterial and mammalian assays. Acetone, methyl ethyl ketone and tetrahydrofuran are generally thought not to be mutagenic.

Material Name: OATEY PVC MEDIUM CLEAR or GRAY CEMENT – LO-VOC

Carcinogenicity

A: General Product Information

In 2012 USEPA Integrated Risk Information System (IRIS) reviewed a two species inhalation lifetime study on THF conducted by NTP (1998). Male rats developed renal tumors and female mice developed liver tumors while neither the female rats nor the male mice showed similar results. Because the carcinogenic mechanisms could not be identified clearly in either species for either tumor, the EPA determined that the male rat and female mouse findings are relevant to the assessment of carcinogenic potential in humans. Therefore, the IRIS review concludes that these data in aggregate indicate that there is "suggestive evidence of carcinogenic potential" following exposure to THF by all routes of exposure.

B: Component Carcinogenicity

Tetrahydrofuran (109-99-9)

ACGIH: A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans

Acetone (67-64-1)

ACGIH: A4 - Not Classifiable as a Human Carcinogen

PVC (Chloroethylene, polymer) (9002-86-2)

ACGIH: A4 - Not Classifiable as a Human Carcinogen

IARC: Supplement 7 [1987]; Monograph 19 [1979] (Group 3 (not classifiable))

Cyclohexanone (108-94-1)

ACGIH: A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans

IARC: Monograph 71 [1999]; Monograph 47 [1989] (Group 3 (not classifiable))

Silica, amorphous, fumed, crystalline-free (112945-52-5)

IARC: Monograph 68 [1997] (listed under Amorphous silica) (Group 3 (not classifiable))

Reproductive Toxicity

Methyl ethyl ketone and cyclohexanone have been shown to cause embryofetal toxicity and birth defects in laboratory animals. Acetone and tetrahydrofuran has been found to cause adverse developmental effects only when exposure levels cause other toxic effects to the mother.

Specified Target Organ General Toxicity: Single Exposure

May cause respiratory irritation. Inhalation of high concentrations may cause central nervous system depression, narcosis and unconsciousness. May cause kidney, liver and lung damage.

Specified Target Organ General Toxicity: Repeated Exposure

This product is not reported to have any specific target organ toxicity repeat exposure effects.

Aspiration Respiratory Organs Hazard

Aspiration during swallowing or vomiting can cause chemical pneumonia and lung damage. May cause kidney and liver damage.

*** * * Section 12 - Ecological Information * * ***

Ecotoxicity

A: General Product Information

This product is not expected to be toxic to aquatic organisms.

Material Name: OATEY PVC MEDIUM CLEAR or GRAY CEMENT – LO-VOC

B: Component Analysis - Ecotoxicity - Aquatic Toxicity

Tetrahydrofuran (109-99-9)

Test & Species

Conditions

96 Hr LC50 Pimephales promelas	1970-2360 mg/L [flow-through]
96 Hr LC50 Pimephales promelas	2700-3600 mg/L [static]
24 Hr EC50 Daphnia magna	5930 mg/L

Acetone (67-64-1)

Test & Species

Conditions

96 Hr LC50 Oncorhynchus mykiss	4.74 - 6.33 mL/L
96 Hr LC50 Pimephales promelas	6210 - 8120 mg/L [static]
96 Hr LC50 Lepomis macrochirus	8300 mg/L
48 Hr EC50 Daphnia magna	10294 - 17704 mg/L [Static]
48 Hr EC50 Daphnia magna	12600 - 12700 mg/L

Methyl ethyl ketone (78-93-3)

Test & Species

Conditions

96 Hr LC50 Pimephales promelas	3130-3320 mg/L [flow-through]
48 Hr EC50 Daphnia magna	>520 mg/L
48 Hr EC50 Daphnia magna	5091 mg/L
48 Hr EC50 Daphnia magna	4025 - 6440 mg/L [Static]

Cyclohexanone (108-94-1)

Test & Species

Conditions

96 Hr LC50 Pimephales promelas	481-578 mg/L [flow-through]
96 Hr LC50 Pimephales promelas	8.9 mg/L
96 Hr EC50 Chlorella vulgaris	20 mg/L
24 Hr EC50 Daphnia magna	800 mg/L

Persistence/Degradability

No information available for the product.

Bioaccumulation

No information available for the product.

Mobility in Soil

No information available for the product.

*** * * Section 13 - Disposal Considerations * * ***

Waste Disposal Instructions

See Section 7 for Handling Procedures. See Section 8 for Personal Protective Equipment recommendations.

Disposal of Contaminated Containers or Packaging

Dispose of contents/container in accordance with local/regional/national/international regulations.

Material Name: OATEY PVC MEDIUM CLEAR or GRAY CEMENT – LO-VOC

* * * **Section 14 - Transportation Information** * * *

DOT Information

For Greater than 1 liter (0.3 gal):

Shipping Name: Adhesives

UN #: 1133 Hazard Class: 3 Packing Group: II

Required Label(s): Flammable Liquid

For Less than 1 liter (0.3 gal):

Shipping Name: Consumer Commodity, ORM-D

IMDG Information

For Greater than 1 liter (0.3 gal):

Shipping Name: Adhesives

UN #: 1133 Hazard Class: 3 Packing Group: II

Required Label(s): Flammable Liquid

For Less than 1 liter (0.3 gal):

Shipping Name: Adhesives

UN #: 1133 Hazard Class: 3 Packing Group: II

Required Label(s): None (Limited Quantities are expected from labeling)

* * * **Section 15 - Regulatory Information** * * *

Regulatory Information

US Federal Regulations

Component Analysis

This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65) and/or CERCLA (40 CFR 302.4).

Tetrahydrofuran (109-99-9)

CERCLA: 1000 lb final RQ; 454 kg final RQ

Acetone (67-64-1)

CERCLA: 5000 lb final RQ; 2270 kg final RQ

Methyl ethyl ketone (78-93-3)

CERCLA: 5000 lb final RQ; 2270 kg final RQ

Cyclohexanone (108-94-1)

CERCLA: 5000 lb final RQ; 2270 kg final RQ

State Regulations

Component Analysis - State

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	CA	MA	MN	NJ	PA	RI
Tetrahydrofuran	109-99-9	Yes	Yes	Yes	Yes	Yes	No
Acetone	67-64-1	Yes	Yes	Yes	Yes	Yes	No
Methyl ethyl ketone	78-93-3	Yes	Yes	Yes	Yes	Yes	No
PVC (Chloroethylene, polymer)	9002-86-2	No	No	No	Yes	No	No
Cyclohexanone	108-94-1	Yes	Yes	Yes	Yes	Yes	No

Material Name: OATEY PVC MEDIUM CLEAR or GRAY CEMENT – LO-VOC

Component Analysis - WHMIS IDL

The following components are identified under the Canadian Hazardous Products Act Ingredient Disclosure List:

Component	CAS #	Minimum Concentration
Tetrahydrofuran	109-99-9	1 %
Acetone	67-64-1	1 %
Methyl ethyl ketone	78-93-3	1 %
Cyclohexanone	108-94-1	0.1 %

Additional Regulatory Information

A: General Product Information

This product contains trace amounts of chemicals known to the State of California to cause cancer. Under normal use conditions, exposure to these chemicals at levels above the State of California "No Significant Risk Level" (NSRL) are unlikely. The use of proper personal protective equipment (PPE) and ventilation guidelines noted in Section 8 will minimize exposure to these chemicals.

B: Component Analysis - Inventory

Component	CAS #	TSCA	CAN	EEC
Tetrahydrofuran	109-99-9	Yes	DSL	EINECS
Acetone	67-64-1	Yes	DSL	EINECS
Methyl ethyl ketone	78-93-3	Yes	DSL	EINECS
PVC (Chloroethylene, polymer)	9002-86-2	Yes	DSL	ELINCS
Cyclohexanone	108-94-1	Yes	DSL	EINECS
Silica, amorphous, fumed, crystalline-free	112945-52-5	No	DSL	No

*** Section 16 - Other Information ***

Key/Legend

EPA = Environmental Protection Agency; TSCA = Toxic Substance Control Act; ACGIH = American Conference of Governmental Industrial Hygienists; IARC = International Agency for Research on Cancer; NIOSH = National Institute for Occupational Safety and Health; NTP = National Toxicology Program; OSHA = Occupational Safety and Health Administration., NJTSR = New Jersey Trade Secret Registry.

Literature References

None

Other Information

NFPA and HMIS:

NFPA Hazard Signal: Health: 2 Flammability: 3 Reactivity: 1 Special: None

HMIS Hazard Signal: Health: 2 Flammability: 3 Reactivity: 1 PPE: G

Revision History

Rev 1.1 - 5/19 added part numbers 32255, 32256, 32257, 32258 to Part Numbers in Section 1.

Disclaimer:

The information herein has been compiled from sources believed to be reliable, up-to-date, and is accurate to the best of our knowledge. However, we cannot give any guarantees regarding information from other sources, and expressly do not make warranties, nor assume any liability for its use.

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Page 1

USED REFRIGERANTS AND REFRIGERANT BLENDS
6116FR Revised 31-MAR-2009

Substance ID : 150000003415

CHEMICAL PRODUCT/COMPANY IDENTIFICATION

Tradenames and Synonyms

USED REFRIGERANT 11
USED REFRIGERANT 12
USED REFRIGERANT 13
USED REFRIGERANT 13B1
USED REFRIGERANT 14
USED REFRIGERANT 22
USED REFRIGERANT 23
USED REFRIGERANT 113
USED REFRIGERANT 114
USED REFRIGERANT 116
USED REFRIGERANT 123
USED REFRIGERANT 124
USED REFRIGERANT 125
USED REFRIGERANT 134a
USED REFRIGERANT 407C
USED REFRIGERANT 410A
USED REFRIGERANT 500
USED REFRIGERANT 502
USED REFRIGERANT 503
USED REFRIGERANT 508B
USED REFRIGERANT HP62
USED REFRIGERANT HP80
USED REFRIGERANT HP81
USED REFRIGERANT MP39
USED REFRIGERANT MP52
USED REFRIGERANT MP66
USED REFRIGERANT R-422D
USED REFRIGERANT R-417A
USED REFRIGERANT R-422A
USED REFRIGERANT R-423A
USED REFRIGERANT R-404A (HP62)
USED REFRIGERANT R-408A
USED REFRIGERANT R-409A
USED REFRIGERANT 407A
USED REFRIGERANT MO99 (R-438A*)

Company Identification

MANUFACTURER/DISTRIBUTOR
DuPont
1007 Market Street
Wilmington, DE 19898

PHONE NUMBERS

Printed on 03/12/2010

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Product Information : 1-800-441-7515 (outside the U.S.
 302-774-1000)
 Transport Emergency : CHEMTREC 1-800-424-9300(outside U.S.
 703-527-3887)
 Medical Emergency : 1-800-441-3637 (outside the U.S.
 302-774-1000)

 COMPOSITION/INFORMATION ON INGREDIENTS

Components

Material	CAS Number	%
REFRIGERANT COMPONENTS		
*METHANE, TRICHLOROFLUORO- (Refrigerant 11)	75-69-4	<100
*METHANE, DICHLORODIFLUORO- (Refrigerant 12)	75-71-8	<100
*METHANE, CHLOROTRIFLUORO- (Refrigerant 13)	75-72-9	<100
*METHANE, CHLORODIFLUORO- (Refrigerant 22)	75-45-6	<100
METHANE, TRIFLUORO- (HFC-23)	75-46-7	<100
DIFLUOROMETHANE (HFC-32)	75-10-5	<30
*1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE (Refrigerant 113)	76-13-1	<100
*ETHANE, 1,2-DICHLOROTETRAFLUORO- (Refrigerant 114)	76-14-2	<100
*ETHANE, CHLOROPENTAFLUORO- (Refrigerant 115)	76-15-3	<60
*ETHANE, 2,2-DICHLORO-1,1,1-TRIFLUORO- (Refrigerant 123)	306-83-2	<100
*ETHANE, 2-DICHLORO-1,1,1,2- TETRAFLUORO- (Refrigerant 124)	2837-89-0	<100
PENTAFLUOROETHANE (HFC-125)	354-33-6	<70
ETHANE, 1,1-DIFLUORO- (Refrigerant 152a)	75-37-6	<30
*METHANE, BROMOTRIFLUORO- (Refrigerant 13B1)	75-63-8	<100
ETHANE, 1,1,1,2-TETRAFLUORO- (HFC-134a)	811-97-2	<100
ETHANE, 1,1,1-TRIFLUORO- (HFC-143a)	420-46-2	<55
HFC-227ea	431-89-0	<50
PROPANE	74-98-6	<6
ISOBUTANE	75-28-5	<5
BUTANE	106-97-8	<5

CONTAMINANTS

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REFINED MINERAL OILS	64742-52-5	<30
REFINED MINERAL OILS	64742-44-5	<30
REFINED MINERAL OILS	64741-88-4	<30
ALKYL BENZENE	68648-86-2	<30
OIL MIST IF GENERATED		
POLYALKYLENE GLYCOL OIL	9038-95-3	<30
POLYOL ESTER PLUS PHOSPHATE ESTER OIL		<30
POLYALKYLENE GLYCOL OIL	9003-13-8	<30

* Disclosure as a toxic chemical is required under Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR part 372.

Components (Remarks)

The above components represent DuPont Refrigerant and Refrigerant Blends that are returned for reclamation. Any (and/or all) components may be contained in the material returned. The information is representative for any and all components.

The specification for used refrigerant returned for reclamation is a maximum of 30% TOTAL lubricating oil content. Most used refrigerant contains significantly less.

HAZARDS IDENTIFICATION

Potential Health Effects

Potential Health Effects

Inhalation of high concentrations of vapor is harmful and may cause heart irregularities, unconsciousness, or death. Intentional misuse or deliberate inhalation may cause death without warning. Vapor reduces oxygen available for breathing and is heavier than air. Causes skin and eye irritation.

HUMAN HEALTH EFFECTS:

Human health effects of overexposure by skin contact may include skin irritation with discomfort or rash. Prolonged skin contact may cause temporary tingling, numbness, coldness or drying of skin. Skin contact with some components may cause frostbite. Eye contact may cause eye irritation with discomfort, tearing, or blurring of vision. Eye contact with some components may cause "frostbite like" effects.

Inhalation may cause temporary lung irritation effects with cough, discomfort, difficulty breathing, or shortness of

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breath. Inhalation or ingestion may cause temporary nervous system depression with anesthetic effects such as dizziness, headache, confusion, incoordination, and loss of consciousness. Higher exposures may cause irregular heart beat with a strange sensation in the chest, "heart thumping"

apprehension, lightheadedness, feeling of fainting, dizziness, weakness, sometimes progressing to loss of consciousness and death. Suffocation, if air is displaced by vapors, can occur. Ingestion may cause nonspecific discomfort, such as nausea, headache, or weakness.

The major ingestion hazard is aspiration of the liquid into the lung which may result in "chemical pneumonia". Symptoms include coughing, gasping, choking, shortness of breath, bluish discoloration of the skin, rapid breathing and heart rate and fever. Pulmonary edema or bleeding, drowsiness, confusion, coma, and seizures may occur in more serious cases. Symptoms may develop immediately or as late as 24 hours after the exposure, depending on how much chemical entered the lungs.

REFRIGERANT 12:

Refrigerant 12 has been infrequently associated with skin sensitization in humans.

REFRIGERANT 152a:

Higher exposures (>20%) to Refrigerant 152a may lead to abnormal kidney function as detected by laboratory tests.

REFINED MINERAL OILS AND ALKYL BENZENE

Prolonged skin exposure to Refined Mineral Oils and Alkyl Benzene may defat skin and cause dermatitis. Ingestion may cause cramps and diarrhea.

Individuals with preexisting diseases of the central nervous system, cardiovascular system, lungs or kidneys may have increased susceptibility to the toxicity of excessive exposures.

Carcinogenicity Information

The following components are listed by IARC, NTP, OSHA or ACGIH as carcinogens.

Material	IARC	NTP	OSHA	ACGIH
REFINED MINERAL OILS	1	X		

FIRST AID MEASURES

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First Aid**INHALATION**

If high concentrations are inhaled, immediately remove to fresh air. Keep person calm. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

SKIN CONTACT

Flush area with lukewarm water. Do not use hot water. If frostbite has occurred, call a physician.

EYE CONTACT

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Call a physician.

INGESTION

If swallowed, do not induce vomiting. Immediately give 2 glasses of water. Never give anything by mouth to an unconscious person. Call a physician.

Notes to Physicians

THIS MATERIAL MAY MAKE THE HEART MORE SUSCEPTIBLE TO ARRHYTHMIAS. Catecholamines such as adrenaline, and other compounds having similar effects, should be reserved for emergencies and then used only with special caution.

FIRE FIGHTING MEASURES

Flammable Properties

Flash Point : >150 C (>302 F)

Pure Refrigerants will not burn. However, the lubricating oil contaminants will burn and they may be at a high enough concentration that the mixture will burn.

Fire and Explosion Hazards:

Drums may rupture under fire conditions. Decomposition may occur.

Extinguishing Media

As appropriate for combustibles in area.

Fire Fighting Instructions

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Use water spray or fog to cool container. Self-contained breathing apparatus (SCBA) is required if drums rupture and contents are spilled under fire conditions.

ACCIDENTAL RELEASE MEASURES

Safeguards (Personnel)

NOTE: Review FIRE FIGHTING MEASURES and HANDLING (PERSONNEL) sections before proceeding with clean-up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean-up.

Accidental Release Measures

Ventilate area. Do not flush into sewers. Dike spill. Collect on absorbent material and transfer to steel drums for recovery or disposal. Use self-contained breathing apparatus (SCBA) for large spills. Comply with Federal, State, and local regulations on reporting releases.

HANDLING AND STORAGE

Handling (Personnel)

Avoid breathing vapors or mist. Avoid contact with eyes, skin or clothing. Wash thoroughly after handling. Use with sufficient ventilation to keep employee exposure below recommended limits.

Storage

Clean, dry area. Do not heat above 125 deg F (52 deg C).

EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls

Normal ventilation for standard manufacturing procedures is generally adequate. Local exhaust should be used when large amounts are released. Mechanical ventilation should be used in low or enclosed places.

Personal Protective Equipment

PROTECTIVE CLOTHING:

Impervious gloves and chemical splash goggles should be used if contact is possible.

RESPIRATOR:

Where there is potential for airborne exposures in excess of

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applicable limits, wear NIOSH approved respiratory protection.

Exposure Guidelines

Applicable Exposure Limits

METHANE, TRICHLOROFLUORO-

PEL (OSHA) : 1,000 ppm, 5,600 mg/m³, 8 Hr. TWA
TLV (ACGIH) : Ceiling 1,000 ppm, 5,620 mg/m³, A4
AEL * (DuPont) : None Established

METHANE, DICHLORODIFLUORO-

PEL (OSHA) : 1,000 ppm, 4,950 mg/m³, 8 Hr. TWA
TLV (ACGIH) : 1,000 ppm, 4,950 mg/m³, 8 Hr. TWA, A4
AEL * (DuPont) : None Established

METHANE, CHLORODIFLUORO-

PEL (OSHA) : None Established
TLV (ACGIH) : 1,000 ppm, 3,540 mg/m³, 8 Hr. TWA, A4
AEL * (DuPont) : None Established

METHANE, TRIFLUORO-

PEL (OSHA) : None Established
TLV (ACGIH) : None Established
AEL * (DuPont) : 1000 ppm, 8 & 12 Hr. TWA

DIFLUOROMETHANE

AEL * (DuPont) : 1000 ppm, 8 & 12 Hr. TWA
WEEL (AIHA) : 1000 ppm, 8 Hr. TWA

1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE

PEL (OSHA) : 1,000 ppm, 7,600 mg/m³, 8 Hr. TWA
TLV (ACGIH) : 1,000 ppm, 7,670 mg/m³, 8 Hr. TWA, A4
STEL 1,250 ppm, 9,590 mg/m³, A4
AEL * (DuPont) : None Established

ETHANE, 1,2-DICHLOROTETRAFLUORO-

PEL (OSHA) : 1,000 ppm, 7,000 mg/m³, 8 Hr. TWA
TLV (ACGIH) : 1,000 ppm, 6,990 mg/m³, 8 Hr. TWA, A4
AEL * (DuPont) : None Established

ETHANE, CHLOROPENTAFLUORO-

PEL (OSHA) : None Established
TLV (ACGIH) : 1,000 ppm, 6,320 mg/m³, 8 Hr. TWA
AEL * (DuPont) : None Established

ETHANE, 2,2-DICHLORO-1,1,1-TRIFLUORO-

PEL (OSHA) : None Established
TLV (ACGIH) : None Established
AEL * (DuPont) : 50 ppm, 8 & 12 Hr. TWA
WEEL (AIHA) : 50 ppm, 8 Hr. TWA

ETHANE, 2-DICHLORO-1,1,1,2-

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PEL (OSHA) : None Established
TLV (ACGIH) : None Established
AEL * (DuPont) : 1000 ppm, 8 & 12 Hr. TWA
WEEL (AIHA) : 1000 ppm, 8 Hr. TWA

PENTAFLUOROETHANE

PEL (OSHA) : None Established
TLV (ACGIH) : None Established
AEL * (DuPont) : 1000 ppm, 8 & 12 Hr. TWA
WEEL (AIHA) : 1000 ppm, 4900 mg/m³, 8 Hr. TWA

ETHANE, 1,1-DIFLUORO-

PEL (OSHA) : None Established
TLV (ACGIH) : None Established
AEL * (DuPont) : 1000 ppm, 8 & 12 Hr. TWA
WEEL (AIHA) : 1000 ppm, 8 Hr. TWA

METHANE, BROMOTRIFLUORO-

PEL (OSHA) : 1,000 ppm, 6,100 mg/m³, 8 Hr. TWA
TLV (ACGIH) : 1,000 ppm, 6,090 mg/m³, 8 Hr. TWA
AEL * (DuPont) : None Established

ETHANE, 1,1,1,2-TETRAFLUORO-

PEL (OSHA) : None Established
TLV (ACGIH) : None Established
AEL * (DuPont) : 1000 ppm, 8 & 12 Hr. TWA
WEEL (AIHA) : 1000 ppm, 8 Hr. TWA

ETHANE, 1,1,1-TRIFLUORO-

PEL (OSHA) : None Established
TLV (ACGIH) : None Established
AEL * (DuPont) : 1000 ppm, 8 & 12 Hr. TWA
WEEL (AIHA) : 1000 ppm, 8 Hr. TWA

HFC-227ea

AEL * (DuPont) : 1000 ppm, 8 & 12 Hr. TWA

PROPANE

PEL (OSHA) : 1,000 ppm, 1,800 mg/m³, 8 Hr. TWA
AEL * (DuPont) : None Established

ISOBUTANE

TLV (ACGIH) : 1000 ppm, 8 Hr. TWA

BUTANE

PEL (OSHA) : None Established
AEL * (DuPont) : None Established

OIL MIST IF GENERATED

PEL (OSHA) : 5 mg/m³, 8 Hr. TWA
TLV (ACGIH) : 5 mg/m³, 8 Hr. TWA, STEL 10 mg/m³
Notice of Intended Changes (2008)
0.2 mg/m³, 8 Hr. TWA

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Poorly and mildly refined, A2
Highly refined, A4
AEL * (DuPont) : 5 mg/m³, 8 Hr. TWA

* AEL is DuPont's Acceptable Exposure Limit. Where governmentally imposed occupational exposure limits which are lower than the AEL are in effect, such limits shall take precedence.

PHYSICAL AND CHEMICAL PROPERTIES

Physical Data

Odor : Slight ethereal
Form : Liquid, compressed gas, liquefied gas
Color : Clear, colorless, slightly yellow

STABILITY AND REACTIVITY

Chemical Stability

Material is stable. However, avoid open flames and high temperatures.

Incompatibility with Other Materials

Refrigerants are incompatible with alkali or alkaline earth metals - powdered Al, Zn, Be, etc. The Refined Mineral Oils are incompatible with strong oxidizers.

Decomposition

Decomposition products are hazardous. This compound can be decomposed by high temperatures (open flames, glowing metal surfaces, etc.) forming hydrochloric and hydrofluoric acids, and possibly carbonyl halides. Refined Mineral Oils, if present, can produce carbon monoxide and carbon dioxide upon combustion.

Polymerization

Polymerization will not occur.

TOXICOLOGICAL INFORMATION

Animal Data

Animal Data

As a class of compounds, inhalation exposure to the individual refrigerants has caused the following toxic effects in animal testing:

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Nervous system effects; anesthetic effects such as tremors, dizziness, incoordination, and loss of consciousness; irregular heartbeat; and cardiac sensitization (a potentially fatal disturbance of heart rhythm associated with a heightened sensitivity to the action of epinephrine).

In animal testing, some refrigerants caused altered blood pressure; decreased body weight; altered clinical chemistry; altered respiratory function; respiratory irritation; increased liver weight; alterations in blood chemistry.

REFRIGERANT 11:

Inhalation 4-hour LC50: 26,200 ppm in rats
Oral ALD : 3,725 mg/kg in rats

In animals exposed to Refrigerant 11, various cardiovascular and circulatory abnormalities have been reported. Changes in the lungs, liver, brain and spleen were observed in a study of rats exposed by inhalation to 12 times the TLV.

REFRIGERANT 12:

Inhalation 30-minute LC50: 800,000 ppm in rats
Oral ALD : >1000 mg/kg in rats

ETHANE, 2-CHLORO-1,1,1,2-TETRAFLUORO- (HCFC-124):

4 hour Inhalation, ALC, rat: 230,000 - 300,000 ppm

REFRIGERANT 13:

Inhalation 2-hour LC50: >600,000 ppm in rats

REFRIGERANT 113:

Inhalation 4-hour LC50: 52,500 ppm in rats
Skin Absorption ALD : >11,000 mg/kg in rabbits
Oral LD50 : 43,000 mg/kg in rats

Refrigerant 113 produced weak allergic skin sensitization in a laboratory animal. High, single oral administration of the liquid, at or near lethal doses, produced lethargy within several minutes. In a reproductive toxicity study in rats with Refrigerant 113, no adverse effects on reproductive

performance were seen at concentrations of 500 ppm, and only minimal effects (slight decrease in corpora lutea) were observed at 12,500 ppm.

CFC-114:

Inhalation 30-minute LC50: 720,000 ppm in rats

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Oral ALD : >2250 mg/kg in rats

Repeated inhalation exposures to rats and mice at 200,000 ppm of Refrigerant 114 caused slight hematological effects and respiratory irritation.

REFRIGERANT 123:

Inhalation 4-hour LC50: 32,000 ppm in rats
Oral ALD : 9,000 mg/kg in rats
Skin Absorption LD50 : >2,000 mg/kg in rabbits

Repeated inhalation exposures to 300 ppm of HCFC-123 resulted in alterations in blood chemistry; Inhalation exposures above 300 ppm caused reduced lymphocyte counts, enzyme alterations, increased urinary fluoride concentration in rats; dogs demonstrated slight liver damage. HCFC-123 was not neurotoxic in animals repeatedly exposed by inhalation at concentrations up to 5,000 ppm, but did cause a slight decrease in arousal at this concentration. Inhalation of 300, 1000 or 5000 ppm HCFC-123 for two years caused an increase in benign testicular and benign pancreatic tumors in male rats; an increase in benign pancreatic tumors was observed in female rats exposed to 5000 ppm. In the same study, male and female rats exposed to 5000 ppm showed an increased incidence in benign liver tumors. Smaller increases in the incidence of these benign liver tumors were observed in females at 300 and 1000 ppm, while none were observed in female controls. The tumors were late-occurring and none were judged to be life-threatening. The biological significance of these tumors to man is considered to be limited. Additionally, evidence of retinal atrophy was observed in this two-year study in both treated and control animals, although the toxicological significance is undetermined. HCFC 123 does not produce genetic damage in bacterial cell cultures or in animals; however, in one study genetic damage was produced in mammalian cell cultures.

REFRIGERANT 22:

Inhalation 4-hour LC50: 220,000 ppm in rats

In chronic inhalation studies, HCFC-22, at a concentration of 50,000 ppm (v/v), produced a small, but statistically significant increase of late-occurring tumors involving salivary glands in male rats, but not female rats or male or

female mice. In the same studies, no increased incidence of tumors was seen in either species at concentrations of 10,000 ppm or 1000 ppm (v/v). HCFC-22 was mutagenic in some strains of bacteria in bacterial cell cultures, but not mammalian cell cultures or animals. It did not cause heritable genetic damage in mammals. A slight, but

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significant increase in developmental toxicity was observed at high concentrations (50,000 ppm) of HCFC-22, a concentration which also produced toxic effects in the adult animal. Based on these findings, and other negative developmental studies, HCFC-22 is not considered a unique hazard to the conceptus.

HFC-152a:

Inhalation 4-hour ALC: 383,000 ppm in rats
Oral ALD : >1,500 mg/kg in rats

Effects of repeated inhalation exposure to HFC-152a include increased urinary fluoride, reduced kidney weight, and reversible kidney changes.

REFRIGERANT 115:

Inhalation 4-hour LC50: >800,000 ppm in rats
Oral ALD : >1,200 mg/kg in rats

The effects of repeated ingestion of Refrigerant 115 include mild diarrhea, salivation and increased activity.

HFC-23:

Inhalation 1-hour LC50: >900,000 ppm (species unknown)

ETHANE, 1,1,1,2-TETRAFLUORO- (HFC-134a):

4 hour, ALC, rat: 567,000 ppm

Single inhalation exposure to near lethal doses caused pulmonary edema. Repeated exposure caused increased adrenals, liver, spleen weight; decreased uterine, prostate weight. Repeated dosing of higher concentrations caused tremors. In a two-year inhalation study, HFC-134a, at a concentration of 50,000 ppm, produced an increase in late-occurring benign testicular tumors, testicular hyperplasia and testicular weight. The no-effect-level for this study was 10,000 ppm. Animal data show slight fetotoxicity but only at exposure levels producing other toxic effects in the adult animal. Reproductive data on male mice show: No change in reproductive performance. Tests have shown that this material does not cause genetic damage in bacterial or mammalian cell cultures, or in animals. In animal testing, this material has not caused permanent genetic damage in reproductive cells of mammals

(has not produced heritable genetic damage).

REFRIGERANT 13B1:

Inhalation 1-hour LC50: >770,000 ppm in rats

Du Pont
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Lung irritation and degeneration of the liver and kidneys were seen in animals exposed repeatedly by inhalation to lethal or near lethal concentrations of Refrigerant 13B1.

The acute Oral LD50 in rats for Refined Oil (CAS 64742-52-5) is >15 g/kg.

FC-143a:

Inhalation 4 hour LC50: > 540,000 ppm in rats

Two, 4-week inhalation studies of FC-143a have been conducted. In the first study, pathological changes in the testes were observed at all exposure concentrations; no effects were observed in females. The testicular effect was considered related to the method used to expose the rats to HFC-143A. In the second study using the same exposure concentrations, no effects were noted in males at any concentration. Tests of FC-143a in bacterial cell cultures demonstrate mutagenic activity, but the compound did not induce oncogenic transformation of mammalian cells in culture. HFC-143A was not mutagenic in animals.

HFC-227ea:

Inhalation 4-hour LC50: > 788,000 ppm in rats

Repeated inhalation exposure to 105,000 ppm for 90 days did not produce exposure-related adverse effects in rats. The No Observable Adverse Effect Level (NOAEL) and the Lowest Observable Adverse Effect Level (LOAEL) for cardiac sensitization in epinephrine-challenged dogs were 90,000 ppm and 105,000 ppm, respectively. Repeated inhalation exposure to 105,000 ppm did not produce developmental toxicity in rats or rabbits. HFC-227ea did not cause genetic damage in bacterial or mammalian cell cultures.

HFC-125:

INHALATION:

4 hour, ALC, rat: > 709,000 ppm

HFC-32:

4 hour inhalation, ALC, rat: > 520,000 ppm

Animal data on HFC-32 show slight fetotoxicity but only at exposure levels producing other toxic effects in the adult animal.

Du Pont
Material Safety Data Sheet

DISPOSAL CONSIDERATIONS

Waste Disposal

Comply with Federal, State, and local regulations. Remove to a permitted waste disposal facility.

TRANSPORTATION INFORMATION-----
Shipping Information

DOT/IMO/IATA

Proper Shipping Name: REFRIGERANT GASES, N.O.S.
(FLUORINATED HYDROCARBONS)

Hazard Class : 2.2

UN No. : 1078

DOT/IMO/IATA Label : NONFLAMMABLE GAS

Shipping Containers : Cylinders
Tank Cars
Tank Trucks

THE FOLLOWING SHIPPING DESCRIPTION IS FOR USED R-11, USED R-113, AND USED R-123 ONLY:

NOT REGULATED AS A HAZARDOUS MATERIAL BY DOT, IMO, OR IATA.

Shipping Containers: Drums
Cylinders

REGULATORY INFORMATION-----
U.S. Federal Regulations

TSCA Inventory Status : Reported/Included.

TITLE III HAZARD CLASSIFICATIONS SECTIONS 311, 312

Acute : Yes
Chronic : Yes
Fire : No
Reactivity : No
Pressure : Yes

LISTS:

SARA Extremely Hazardous Substance	-No
CERCLA Hazardous Substance	-Yes*
Toxic Chemicals	-(Yes)**

*For Freon 11,12

**See component section

Du Pont
Material Safety Data Sheet

OTHER INFORMATION

NFPA, NPCA-HMIS

NPCA-HMIS Rating

Health : 1

Flammability : 1

Reactivity : 1

Personal Protection rating to be supplied by user depending on use conditions.

The data in this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process.

Responsibility for MSDS : MSDS Coordinator

> : DuPont Fluoroproducts

Address : Wilmington, DE 19898

Telephone : (800) 441-7515

Indicates updated section.

End of MSDS



MATERIAL SAFETY DATA SHEET

REVISION DATE: 08/08/2012

REVISION NUMBER:

9

DATE PRINTED: 08/08/2012

PREPARED BY:

EH&S DEPARTMENT

1. CHEMICAL PRODUCT

PRODUCT NAME: **SANI BLUE PLUS**

PRODUCT CODE: 117714

NFPA/HMIS HAZARD CODES(minimal=0; slight=1; moderate=2; serious=3; severe=4)

Health: 1/1

Fire: 0/0

Reactivity: 0/0

Special/Protective Equipment: None/B

NAME OF THE MANUFACTURER: Rochester Midland Corporation
155 Paragon Drive
Rochester, New York 14624
USA

Emergency Phone:
INFOTRAC: 1-800-535-5053
OUTSIDE US: 1-352-323-3500

2. HAZARDS IDENTIFICATION

EFFECTS FROM ACUTE EXPOSURE:

INGESTION: Large amounts may cause irritation, nausea, diarrhea. Vomiting.
SKIN CONTACT: Possible dryness; irritation with prolonged contact.
INHALATION: May irritate mouth, nose, and throat.
EYE CONTACT: May cause moderate eye irritation.
CHRONIC EFFECTS: None known.
EFFECTS/CARCINOGENICITY: None listed under OSHA, IARC, or NTP.
ROUTES OF ENTRY: Routes of entry for solids and liquids include eye and skin contact, ingestion and inhalation.

3. COMPOSITION/INFORMATION ON INGREDIENTS

PRODUCT COMPOSITION CAS#	%	ACGIH TLV	OSHA PELs
Alkyl dimethyl ethylbenzyl ammonium chlorides 68956-79-6	0.09	Not applicable	Not applicable
Alkyldimethyl benzyl ammonium chlorides 68391-01-5	0.09	Not applicable	Not applicable

4. FIRST AID MEASURES

INGESTION: Drink several glasses of water or milk. Contact physician if irritation persists. Never give anything by mouth to an unconscious person.
SKIN: Flush with water for at least 15 minutes while removing all contaminated clothing and shoes. Get medical attention if irritation persists.
INHALATION: Move person to fresh air.
EYES: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention if irritation persists.
NOTES TO PHYSICIAN: None.

5. FIRE AND EXPLOSION HAZARD DATA

5. FIRE AND EXPLOSION HAZARD DATA

FLASH POINT:	(F): None to boiling (C): None to boiling
METHOD:	None
FLAMMABLE LIMITS IN AIR	
LOWER (%):	No data
UPPER (%):	No data
SENSITIVITY TO MECHANICAL IMPACT(Y/N):	NO
SENSITIVITY TO STATIC DISCHARGE:	Sensitivity to static discharge is not expected.
SUITABLE EXTINGUISHING MEDIA:	As appropriate for surrounding fire-product is mostly water and will not burn.
FIRE FIGHTING PROCEDURES:	None.

6. ACCIDENTAL RELEASE MEASURES

SPILL PROCEDURES:

SMALL SPILLS:	Reclaim as much as possible.
LARGE SPILLS:	Dike to contain. Pick up with absorbant material. Put in suitable container for disposal.

PERSONAL PRECAUTIONS:	Not applicable
ENVIRONMENTAL PRECAUTIONS:	Not applicable
METHODS FOR CLEANING UP:	Not applicable

7. HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:	Store in a cool, dry area. Keep from freezing. Do not reuse container. Triple rinse container before disposal. Do not contaminate water, food, or feed. Read entire label before using.
OTHER PRECAUTIONS:	Keep out of reach of children.
SPECIFIC USE(S):	Not applicable.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

PROTECTIVE EQUIPMENT:



EXPOSURE CONTROLS:	None known.
RESPIRATORY PROTECTION:	NIOSH approved respirator if spray mist in air causes irritation.
PROTECTIVE GLOVES:	Chemical resistant gloves are recommended to minimize skin contact.
EYE PROTECTION:	Safety glasses are recommended to minimize eye contact.
OTHER PERSONAL PROTECTION EQUIPMENT:	None required. It is the responsibility of the end user of this product to determine level of PPE required that is consistent with safe use of this product.
VENTILATION:	None.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR:	Clear. Blue liquid. Fresh clean fragrance.
BOILING POINT (F):	Not determined (C) Not determined
VAPOR PRESSURE:	Not determined
VAPOR DENSITY (AIR=1):	Not determined
SOLUBILITY IN WATER:	Not determined
SPECIFIC GRAVITY:	0.997-1.001
VOC Content (%):	Not determined
EVAPORATION RATE:	Not determined
PH:	10.8 - 11.8

9. PHYSICAL AND CHEMICAL PROPERTIES**10. STABILITY AND REACTIVITY**

STABILITY DATA: STABLE
POLYMERIZATION: Will Not Occur.
HAZARDOUS DECOMPOSITION: Oxides of Carbon. Oxides of Nitrogen.
INCOMPATIBILITY (MATERIALS TO AVOID): Do not mix with: Acids. Neutralizes active ingredients.
CONDITIONS/HAZARDS TO AVOID: None.

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY: Not Established
EFFECTS OF CHRONIC EXPOSURE: Not established.
OTHER TOXIC EFFECTS: Not established.

12. ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION: No data at this time
CHEMICAL FATE INFORMATION: No data at this time.
MOBILITY: Not applicable.
PERSISTENCE/DEGRADABILITY: Not applicable
BIOACCUMULATIVE POTENTIAL: Not applicable
OTHER ADVERSE EFFECTS: Not applicable

13. DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHODS: Dispose in accordance with Federal, State and Local regulations.

14. TRANSPORT INFORMATION

Please refer to the Bill of Lading/Receiving documents for up to date shipping information.

15. REGULATORY INFORMATION

PRODUCT COMPOSITION CAS#	%	TSCA:	EINECS:	Canada DSL:	CA PROP 65:
Alkyl dimethyl ethylbenzyl ammonium chlorides 68956-79-6	0.09	Listed	Listed	Listed	Not Listed
Alkyldimethyl benzyl ammonium chlorides 68391-01-5	0.09	Listed	Listed	Listed	Not Listed

PRODUCT COMPOSITION CAS#	%	CERCLA:	SARA 302:	SARA 313:
Alkyl dimethyl ethylbenzyl ammonium chlorides 68956-79-6	0.09	Not Listed	Not Listed	Not Listed
Alkyldimethyl benzyl ammonium chlorides 68391-01-5	0.09	Not Listed	Not Listed	Not Listed

None of the components of this material are included in the Massachusetts Substance List nor are present at or above reportable levels.

None of the components of this material are included in the New Jersey Substance List nor are present at or above reportable levels.

None of the components of this material are included in the Pennsylvania Substance List nor are present at or above reportable levels.

16. OTHER INFORMATION

This information was compiled from current, reliable sources and is believed to be correct. As data, and/or regulations change, and conditions of use and handling are beyond our control, no warranty, express or implied, is made as to completeness or continuing accuracy of this information.

***** END OF MSDS *****

Material Safety Data Sheet

24 Hour Assistance:
1-847-367-7700
Rust-Oleum Corp.
www.rustoleum.com

Section 1 - Chemical Product / Company Information

Product Name: STRUST +SSPR 6PK GLOSS
SUNRISE RED

Revision Date: 10/12/2011

Identification Number: 7762830

Product Use/Class: Topcoat/Aerosol

Supplier: Rust-Oleum Corporation
11 Hawthorn Parkway
Vernon Hills, IL 60061
USA

Manufacturer: Rust-Oleum Corporation
11 Hawthorn Parkway
Vernon Hills, IL 60061
USA

Preparer: Regulatory Department

Section 2 - Composition / Information On Ingredients

Chemical Name	CAS Number	Weight % Less		ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL CEILING
		Than					
Acetone	67-64-1	30.0		500 ppm	750 ppm	1000 ppm	N.E.
Liquefied Petroleum Gas	68476-86-8	30.0		N.E.	N.E.	N.E.	N.E.
Xylene	1330-20-7	10.0		100 ppm	150 ppm	100 ppm	N.E.
n-Butyl Acetate	123-86-4	10.0		150 ppm	200 ppm	150 ppm	N.E.
Ethylbenzene	100-41-4	5.0		100 ppm	125 ppm	100 ppm	N.E.

Section 3 - Hazards Identification

Emergency Overview : Harmful if inhaled. May affect the brain or nervous system causing dizziness, headache or nausea. Contents Under Pressure. Vapors may cause flash fire or explosion. Harmful if swallowed. Extremely flammable liquid and vapor.

Effects Of Overexposure - Eye Contact: Causes eye irritation.

Effects Of Overexposure - Skin Contact: Prolonged or repeated contact may cause skin irritation. Substance may cause slight skin irritation.

Effects Of Overexposure - Inhalation: High vapor concentrations are irritating to the eyes, nose, throat and lungs. Avoid breathing vapors or mists. Harmful if inhaled. High gas, vapor, mist or dust concentrations may be harmful if inhaled.

Effects Of Overexposure - Ingestion: Aspiration hazard if swallowed; can enter lungs and cause damage. Substance may be harmful if swallowed.

Effects Of Overexposure - Chronic Hazards: IARC lists Ethylbenzene as a possible human carcinogen (group 2B). May cause central nervous system disorder (e.g., narcosis involving a loss of coordination, weakness, fatigue, mental confusion, and blurred vision) and/or damage. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Overexposure to

xylene in laboratory animals has been associated with liver abnormalities, kidney, lung, spleen, eye and blood damage as well as reproductive disorders. Effects in humans, due to chronic overexposure, have included liver, cardiac abnormalities and nervous system damage.

Primary Route(s) Of Entry: Skin Contact, Skin Absorption, Inhalation, Ingestion, Eye Contact

Section 4 - First Aid Measures

First Aid - Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes holding eyelids open. Get medical attention. Do NOT allow rubbing of eyes or keeping eyes closed.

First Aid - Skin Contact: Wash with soap and water. Get medical attention if irritation develops or persists.

First Aid - Inhalation: If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical assistance immediately.

First Aid - Ingestion: Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. Get immediate medical attention.

Section 5 - Fire Fighting Measures

Flash Point: -156 F (Setaflash)

Extinguishing Media: Film Forming Foam, Carbon Dioxide, Dry Chemical, Dry Sand, Water Fog

Unusual Fire And Explosion Hazards: Perforation of the pressurized container may cause bursting of the can. Isolate from heat, electrical equipment, sparks and open flame. Keep containers tightly closed. Vapors can travel to a source of ignition and flash back. Vapors may form explosive mixtures with air. Closed containers may explode when exposed to extreme heat. FLASH POINT IS LESS THAN 20 °. F. - EXTREMELY FLAMMABLE LIQUID AND VAPOR Water spray may be ineffective.

Special Firefighting Procedures: Evacuate area and fight fire from a safe distance.

Section 6 - Accidental Release Measures

Steps To Be Taken If Material Is Released Or Spilled: Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Remove all sources of ignition, ventilate area and remove with inert absorbent and non-sparking tools. Dispose of according to local, state (provincial) and federal regulations. Do not incinerate closed containers.

Section 7 - Handling And Storage

Handling: Wash thoroughly after handling. Wash hands before eating. Use only in a well-ventilated area. Avoid breathing vapor or mist. Follow all MSDS/label precautions even after container is emptied because it may retain product residues.

Storage: Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Do not store above 120 ° F. Store large quantities in buildings designed and protected for storage of NFPA Class I flammable liquids. Contents under pressure. Do not expose to heat or store above 120 ° F.

Section 8 - Exposure Controls / Personal Protection

Engineering Controls: Use explosion-proof ventilation equipment. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Prevent build-up of vapors by opening all doors and windows to achieve cross-ventilation.

Respiratory Protection: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. A NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.

Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or in any other circumstances where air purifying respirators may not provide adequate protection.

Skin Protection: Nitrile or Neoprene gloves may afford adequate skin protection. Use impervious gloves to prevent skin contact and absorption of this material through the skin.

Eye Protection: Use safety eyewear designed to protect against splash of liquids.

Other protective equipment: Refer to safety supervisor or industrial hygienist for further information regarding personal protective equipment and its application.

Hygienic Practices: Wash thoroughly with soap and water before eating, drinking or smoking.

Section 9 - Physical And Chemical Properties

Vapor Density:	Heavier than Air	Odor:	Solvent Like
Appearance:	Aerosolized Mist	Evaporation Rate:	Faster than Ether
Solubility in H ₂ O:	Slight	Freeze Point:	ND
Specific Gravity:	0.754	pH:	N.A.
Physical State:	Liquid		

(See section 16 for abbreviation legend)

Section 10 - Stability And Reactivity

Conditions To Avoid: Avoid temperatures above 120 ° F. Avoid all possible sources of ignition.

Incompatibility: Incompatible with strong oxidizing agents, strong acids and strong alkalies.

Hazardous Decomposition: When heated to decomposition, it emits acrid smoke and irritating fumes. By open flame, carbon monoxide and carbon dioxide.

Hazardous Polymerization: Will not occur under normal conditions.

Stability: This product is stable under normal storage conditions.

Section 11 - Toxicological Information

Chemical Name	LD50	LC50
Acetone	5800 mg/kg (Rat)	50100 mg/m ³ (Rat, 8Hr)
Liquefied Petroleum Gas	N.E.	N.E.
Xylene	4300 mg/kg (Rat, Oral)	5000 ppm (Rat, Inhalation, 4Hr)

n-Butyl Acetate
Ethylbenzene

13100 mg/kg (Rat, Oral) 2000 ppm (Rat, Inhalation, 4 Hr)
3500 mg/kg (Rat, Oral) N.E.

Section 12 - Ecological Information

Ecological Information: Product is a mixture of listed components.

Section 13 - Disposal Information

Disposal Information: Dispose of material in accordance to local, state and federal regulations and ordinances. Do not allow to enter storm drains or sewer systems.

Section 14 - Transportation Information

	Domestic (USDOT)	International (IMDG)	Air (IATA)
Proper Shipping Name:	Consumer Commodity	Aerosols	Aerosols
Hazard Class:	ORM-D	2.1	2.1
UN Number:	N.A.	UN1950	UN1950
Packing Group:	N.A.	N.A.	N.A.
Limited Quantity:	No	Yes	Yes

Section 15 - Regulatory Information

CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

IMMEDIATE HEALTH HAZARD, CHRONIC HEALTH HAZARD, FIRE HAZARD, PRESSURIZED GAS HAZARD

SARA Section 313:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

<u>Chemical Name</u>	<u>CAS Number</u>
Xylene	1330-20-7
Ethylbenzene	100-41-4

Toxic Substances Control Act:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of TSCA 12(B) if exported from the United States:

U.S. State Regulations: As follows -

New Jersey Right-to-Know:

The following materials are non-hazardous, but are among the top five components in this product.

Chemical Name

Modified Alkyd Resin

CAS Number

PROPRIETARY

Pennsylvania Right-to-Know:

The following non-hazardous ingredients are present in the product at greater than 3%.

Chemical Name

Modified Alkyd Resin

CAS Number

PROPRIETARY

International Regulations: As follows -**CANADIAN WHMIS:**

This MSDS has been prepared in compliance with Controlled Product Regulations except for the use of the 16 headings.

CANADIAN WHMIS CLASS: AB5 D2A D2B

Section 16 - Other Information

HMIS Ratings:

Health: 2

Flammability: 4

Physical Hazard: 0

Personal Protection: X

NFPA Ratings:

Health: 2

Flammability: 4

Instability: 0

VOLATILE ORGANIC COMPOUNDS, g/L: 502

REASON FOR REVISION: Regulatory Update

Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

Rust-Oleum Corporation believes, to the best of its knowledge, information and belief, the information contained herein to be accurate and reliable as of the date of this material safety data sheet. However, because the conditions of handling, use, and storage of these materials are beyond our control, we assume no responsibility or liability for personal injury or property damage incurred by the use of these materials. Rust-Oleum Corporation makes no warranty, expressed or implied, regarding the accuracy or reliability of the data or results obtained from their use. All materials may present unknown hazards and should be used with caution. The information and recommendations in this material safety data sheet are offered for the users consideration and examination. It is the responsibility of the user to determine the final suitability of this information and to comply with all applicable international, federal, state, and local laws and regulations.

Material Safety Data Sheet

24 Hour Assistance:

1-847-367-7700

Rust-Oleum Corp.

www.rustoleum.com



1. Identification

Product Name: IC +SSPR 6PK 1600 PRIMER BLACK **Revision Date:** 4/17/2014
Product Number: 257400
Product Use/Class: Topcoat/Aerosol
Supplier: Rust-Oleum Corporation
 11 Hawthorn Parkway
 Vernon Hills, IL 60061
 USA
Manufacturer: Rust-Oleum Corporation
 11 Hawthorn Parkway
 Vernon Hills, IL 60061
 USA
Prepared by: Regulatory Department

2. Hazard Identification

EMERGENCY OVERVIEW: Extremely flammable liquid and vapor. Vapors may cause flash fire or explosion. Harmful if inhaled. May affect the brain or nervous system causing dizziness, headache or nausea. Contents Under Pressure. May cause eye, skin, or respiratory tract irritation. KEEP OUT OF REACH OF CHILDREN. Harmful if inhaled. Harmful if swallowed. Causes eye irritation. Use ventilation necessary to keep exposures below recommended exposure limits, if any. Vapor Harmful. Causes Eye, Skin, Nose, and Throat Irritation.

EFFECTS OF OVEREXPOSURE - EYE CONTACT: Causes Serious Eye Irritation

EFFECTS OF OVEREXPOSURE - SKIN CONTACT: May cause skin irritation. Allergic reactions are possible.

EFFECTS OF OVEREXPOSURE - INHALATION: High gas, vapor, mist or dust concentrations may be harmful if inhaled. High vapor concentrations are irritating to the eyes, nose, throat and lungs. Harmful if inhaled. Avoid breathing fumes, spray, vapors, or mist. Prolonged or excessive inhalation may cause respiratory tract irritation.

EFFECTS OF OVEREXPOSURE - INGESTION: Harmful if swallowed.

EFFECTS OF OVEREXPOSURE - CHRONIC HAZARDS: Overexposure to xylene in laboratory animals has been associated with liver abnormalities, kidney, lung, spleen, eye and blood damage as well as reproductive disorders. Effects in humans, due to chronic overexposure, have included liver, cardiac abnormalities and nervous system damage. IARC lists Ethylbenzene as a possible human carcinogen (group 2B). Contains carbon black. Chronic inflammation, lung fibrosis, and lung tumors have been observed in some rats experimentally exposed for long periods of time to excessive concentrations of carbon black and several insoluble fine dust particles. Tumors have not been observed in other animal species (i.e., mouse and hamster) under similar circumstances and study conditions. Epidemiological studies of North American workers show no evidence of clinically significant adverse health effects due to occupational exposure to carbon black.

Carbon black is listed as a Group 2B-"Possibly carcinogenic to humans" by IARC and is proposed to be listed as A4- "not classified as a human carcinogen" by the American Conference of Governmental Industrial Hygienists. Significant exposure is not anticipated during brush application or drying. Risk of overexposure depends on duration and level of exposure to dust from repeated sanding of surfaces or spray mist and the actual concentration of carbon black in the formula. May cause central nervous system disorder (e.g., narcosis involving a loss of coordination, weakness, fatigue, mental confusion, and blurred vision) and/or damage. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. High concentrations may lead to central nervous system effects (drowsiness, dizziness, nausea, headaches, paralysis, and blurred vision) and/or damage.

PRIMARY ROUTE(S) OF ENTRY: Eye Contact, Ingestion, Inhalation, Skin Absorption, Skin Contact

3. Composition/Information On Ingredients

Chemical Name	CAS-No.	Weight % Less Than	ACGIH TLV- TWA	ACGIH TLV- STEL	OSHA PEL-TWA	OSHA PEL- CEILING
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Acetone	67-64-1	30.0	500 ppm	750 ppm	1000 ppm	N.E.
Liquefied Petroleum Gas	68476-86-8	30.0	N.E.	N.E.	N.E.	N.E.
Aliphatic Hydrocarbon	64742-89-8	15.0	100 ppm	N.E.	100 ppm	N.E.
Mineral Spirits	64742-88-7	10.0	100 ppm	N.E.	100 ppm	N.E.
Xylene	1330-20-7	5.0	100 ppm	150 ppm	100 ppm	N.E.
Limestone	1317-65-3	5.0	N.E.	N.E.	15 mg/m3 [Total Dust]	N.E.
Talc	14807-96-6	5.0	2 mg/m3	N.E.	0.1 mg/m3 [Respirable]	N.E.
Naphtha, Petroleum, Hydrotreated Light	64742-49-0	5.0	200 mg/m3	N.E.	N.E.	N.E.
Carbon Black	1333-86-4	5.0	3 mg/m3	N.E.	3.5 mg/m3	N.E.
Ethylbenzene	100-41-4	5.0	20 ppm	125 ppm	100 ppm	N.E.

4. First-aid Measures

FIRST AID - EYE CONTACT: Immediately flush eyes with plenty of water for at least 15 minutes holding eyelids open. Get medical attention. Do NOT allow rubbing of eyes or keeping eyes closed.

FIRST AID - SKIN CONTACT: Wash skin with soap and water. Remove contaminated clothing. Get medical attention if irritation develops or persists.

FIRST AID - INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get immediate medical attention. Do NOT use mouth-to-mouth resuscitation. If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical assistance immediately.

FIRST AID - INGESTION: Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. Get immediate medical attention. If swallowed, get medical attention.

5. Fire-fighting Measures

Flash Point, °F -156 (Setaflash)

Extinguishing Media: Alcohol Film Forming Foam, Carbon Dioxide, Dry Chemical, Dry Sand, Water Fog

UNUSUAL FIRE AND EXPLOSION HAZARDS: FLASH POINT IS LESS THAN 20 ° F. - EXTREMELY FLAMMABLE LIQUID AND VAPOR! Water spray may be ineffective. Closed containers may explode when exposed to extreme heat due to buildup of steam. Closed containers may explode when exposed to extreme heat. Vapors may form explosive mixtures with air. Vapors can travel to a source of ignition and flash back. Isolate from heat, electrical equipment, sparks and open flame. Perforation of the pressurized container may cause bursting of the can. No unusual fire or explosion hazards noted. Keep containers tightly closed.

SPECIAL FIREFIGHTING PROCEDURES: Full protective equipment including self-contained breathing apparatus should be used. Evacuate area and fight fire from a safe distance. Water may be used to cool closed containers to prevent pressure buildup and possible autoignition or explosion. Use water spray to keep fire-exposed containers cool. Containers may explode when heated.

6. Accidental Release Measures

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Remove all sources of ignition, ventilate area and remove with inert absorbent and non-sparking tools. Dispose of according to local, state (provincial) and federal regulations. Do not incinerate closed containers. Ventilate area, isolate spilled material, and remove with inert absorbent. Dispose of contaminated absorbent, container, and unused contents in accordance with local, state, and federal regulations.

7. Handling and Storage

HANDLING: Wash thoroughly after handling. Wash hands before eating. Remove contaminated clothing and launder before reuse. Use only with adequate ventilation. Follow all MSDS/label precautions even after container is emptied because it may retain product residues. Avoid breathing fumes, vapors, or mist. Avoid contact with eyes, skin and clothing.

STORAGE: Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Contents under pressure. Do not store above 120 ° F. Store large quantities in buildings designed and protected for storage of NFPA Class I flammable liquids. Product should be stored in tightly sealed containers and protected from heat, moisture, and foreign materials. Store in a dry, well ventilated place. Keep container tightly closed when not in use. Keep away from heat, sparks, flame and sources of ignition. Avoid excess heat.

8. Exposure Controls/Personal Protection

ENGINEERING CONTROLS: Use explosion-proof ventilation equipment. Provide general dilution of local exhaust ventilation in volume and pattern to keep TLV of hazardous ingredients below acceptable limits. Prevent build-up of vapors by opening all doors and windows to achieve cross-ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

RESPIRATORY PROTECTION: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. A NIOSH/MSHA approved air purifying respirator with organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.

SKIN PROTECTION: Use gloves to prevent prolonged skin contact. Nitrile or Neoprene gloves may afford adequate skin protection.

EYE PROTECTION: Use safety eyewear designed to protect against splash of liquids.

OTHER PROTECTIVE EQUIPMENT: Refer to safety supervisor or industrial hygienist for further guidance regarding types of personal protective equipment and their applications.

HYGIENIC PRACTICES: Wash thoroughly with soap and water before eating, drinking or smoking. Remove contaminated clothing immediately and launder before reuse.

9. Physical and Chemical Properties

Vapor Density	Heavier than Air	Odor:	Solvent Like
Appearance:	Aerosolized Mist	Evaporation Rate:	Faster than Ether
Solubility in Water:	Miscible	Freeze Point:	N.D.
Specific Gravity:	0.754	pH:	N.A.
Physical State:	Liquid		

(See section 16 for abbreviation legend)

10. Stability and Reactivity

CONDITIONS TO AVOID: Avoid temperatures above 120 ° F. Avoid contact with strong acid and strong bases. Avoid all possible sources of ignition.

INCOMPATIBILITY: Incompatible with strong oxidizing agents, strong acids and strong alkalis.

HAZARDOUS DECOMPOSITION: By open flame, carbon monoxide and carbon dioxide. When heated to decomposition, it emits acrid smoke and irritating fumes. Contains solvents which may form carbon monoxide, carbon dioxide, and formaldehyde.

HAZARDOUS POLYMERIZATION: Will not occur under normal conditions.

STABILITY: This product is stable under normal storage conditions.

11. Toxicological Information

<u>Chemical Name</u>	<u>LD50</u>	<u>LC50</u>
Acetone	5800 mg/kg (Rat)	50100 mg/m3 (Rat, 8Hr)
Liquefied Petroleum Gas	N.E.	N.E.
Aliphatic Hydrocarbon	>5000 mg/kg (Rat, Oral)	N.E.
Mineral Spirits	>5000 mg/kg (Rat, Oral)	>1400 ppm (Rat, Inhalation, 4Hr)
Xylene	4300 mg/kg (Rat, Oral)	5000 ppm (Rat, Inhalation, 4Hr)
Limestone	>5000 mg/kg (Rat, Oral)	N.E.
Talc	N.E.	TCLo: 11 mg/m3 (Inhalation)
Naphtha, Petroleum, Hydrotreated Light	N.E.	N.E.
Carbon Black	>8000 mg/kg (Rat, Oral)	N.E.
Ethylbenzene	3500 mg/kg (Rat, Oral)	N.E.

12. Ecological Information

ECOLOGICAL INFORMATION: Product is a mixture of listed components.

13. Disposal Information

DISPOSAL INFORMATION: Dispose of material in accordance to local, state and federal regulations and ordinances. Do not allow to enter waterways, wastewater, soil, storm drains or sewer systems.

14. Transport Information

	<u>Domestic (USDOT)</u>	<u>International (IMDG)</u>	<u>Air (IATA)</u>	<u>TDG (Canada)</u>
UN Number:	N.A.	1950	1950	N.A.
Proper Shipping Name:	Paint Products in Limited Quantities	Aerosols	Aerosols	Paint Products in Limited Quantities
Hazard Class:	N.A.	2.1	2.1	N.A.
Packing Group:	N.A.	N.A.	N.A.	N.A.
Limited Quantity:	Yes	Yes	Yes	Yes

15. Regulatory Information

U.S. Federal Regulations:

CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

Fire Hazard, Pressure Hazard, Acute Health Hazard, Chronic Health Hazard

Sara Section 313:

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

<u>Chemical Name</u>	<u>CAS-No.</u>
Xylene	1330-20-7
Ethylbenzene	100-41-4
Zinc Oxide	1314-13-2
Zinc Phosphate	7779-90-0

Toxic Substances Control Act:

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States:

No TSCA 12(b) components exist in this product.

International Regulations:

CANADIAN WHMIS:

This MSDS has been prepared in compliance with Controlled Product Regulations except for the use of the 16 headings.

Canadian WHMIS Class: AB5 D2A

16. Other Information**HMIS Ratings:**

Health: 2* **Flammability:** 4 **Physical Hazard:** 0 **Personal Protection:** X

NFPA Ratings:

Health: 2 **Flammability:** 4 **Instability:** 0

VOLATILE ORGANIC COMPOUNDS, g/L: 567

REASON FOR REVISION: Regulatory Update

Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

The manufacturer believes, to the best of its knowledge, information and belief, the information contained herein to be accurate and reliable as of the date of this safety data sheet. However, because the conditions of handling, use, and storage of these materials are beyond our control, we assume no responsibility or liability for personal injury or property damage incurred by the use of these materials. The manufacturer makes no warranty, expressed or implied, regarding the accuracy or reliability of the data or results obtained from their use. All materials may present unknown hazards and should be used with caution. The information and recommendations in this material safety data sheet are offered for the users' consideration and examination. It is the responsibility of the user to determine the final suitability of this information and to comply with all applicable international, federal, state, and local laws and regulations.



Spartan Chemical Company, Inc. Material Safety Data Sheet

SECTION I: PRODUCT INFORMATION

Product Name or Number (as it appears on label):
LITE'N FOAMY SUNFLOWER FRESH
Product Number: 3305

Product Division:
Janitorial

Spartan Chemical Company, Inc.
1110 Spartan Drive
Maumee OH 43537

Product/Technical Information: 1-(800)-537-8990
Medical Emergency: 1-(888)-314-6171 (24 hours)
Chemical Leak/Spill Emergency: CHEMTREC 1-(800) 424-9300 (24 hours)

Shipping Description: Non Hazardous Products

NFPA Ratings:	HMIS Ratings:
Health: 1- Slight Fire: 0 - Minimal Reactivity: 0 - Minimal	Health: 1- Slight Fire: 0 - Minimal Reactivity: 0 - Minimal Pers. Prot. Equip.: See Section VIII

SECTION II: HAZARDOUS INGREDIENTS

(Listed when present at 1% or greater, carcinogens at 0.1% or greater) All component chemicals are listed or exempted from listing on the "TSCA Inventory" of chemical substances maintained by the U.S. Environmental Protection Agency.

Chemical Name(s)	%Wt	CAS Registry No.	Table Z-1-A			NTP, IARC or OSHA Carcinogen
			TWA mg/m ³	STEL mg/m ³	CEILING mg/m ³	
Sodium lauryl sulfate	1-5	151-21-3	Not Established	Not Established	Not Established	No
Fragrance	0.3-0.5	Proprietary	Not Established	Not Established	Not Established	No

SECTION III: PHYSICAL DATA

Boiling Point: 210-215 °F	Vapor Pressure: Unknown
Vapor Density (AIR = 1): Unknown	Solubility in Water: Complete
pH: 5.5-6.5	Specific Gravity (H ₂ O=1): 1.005
Evaporation Rate (but.ace.=1): <1	Percent Solid by Weight: 1-5
Physical State: Liquid	
Appearance & Odor: Clear yellow liquid, sweet floral fragrance	

SECTION IV: FIRE & EXPLOSIVE HAZARD DATA

Flash Point: > 212°F	Method Used: ASTM-D56
Flammable Limits: Not Established	Flame Extension: N/A
Extinguishing Media: Product does not support combustion. Use extinguishing media appropriate for surrounding fire.	
Special Fire Fighting Procedures: Wear NIOSH approved self-contained breathing apparatus and protective clothing. Cool fire-exposed containers with water spray.	
Unusual Fire & Explosive Hazards: Combustion products are toxic.	

SECTION V: HEALTH HAZARD DATA

Threshold Limit Value: NA	Primary Routes of Entry: Eyes, Oral
Effects of Overexposure- May cause mild eye irritation. May be harmful if swallowed. Avoid contact with eyes. Do not swallow.	
Conditions to Avoid: Discontinue use if signs of skin irritation or rash appear.	
Conditions Aggravated by Use: Use of this product may aggravate preexisting skin; eye and respiratory disorders including asthma and dermatitis.	

Emergency & First Aid Procedures:

Eyes: Flush eyes with water for at least 15 minutes. Remove contact lenses. Get medical attention if irritation persists.
Skin: Flush with plenty of water. Get medical attention if irritation persists.
Ingestion: Do not induce vomiting. Drink one or two glasses of water to dilute product. Get medical attention. Do not give anything by mouth to an unconscious person.

SECTION VI: REACTIVITY DATA

Stability: Stable	Incompatible Materials: Strong oxidizing agents
Hazardous Decomposition Products: None known	Hazardous Polymerization: Will Not Occur

SECTION VII: SPILL OR LEAK PROCEDURES

Steps to be Taken in Case Material is Released or Spilled: Small spills of one gallon or less may be flushed with plenty of water to sanitary sewer system (If permitted by local sewer regulations). Dike and contain large spills with inert material and transfer liquid to containers for disposal. Keep spill out of storm sewers and waterways.
Waste Disposal Method: Dispose of in compliance with all federal, state and local laws and regulations.

SECTION VIII: SPECIAL PROTECTION INFORMATION

Respiratory Protection: None required
Ventilation: Provide good general ventilation.
Protective Gloves(Specify Type): None required
Eye Protection(Specify Type): None required
Other Protective Equipment: See 29 CFR 1910.132-138 for further guidance.

SECTION IX: SPECIAL PRECAUTIONS

Precautions; Handling & Storing: Keep from freezing.
Other Precautions: Keep out of reach of children.

© SCC 10/23/2010	Name: Ronald T. Cook	Title: Manager, Regulatory Affairs
LITE'N FOAMY SUNFLOWER FRESH	Effective Date: 10/23/2010	Supersedes: 11/01/2007
Ref: 29 CFR 1910.1200 (OSHA)	Changes: General Update	

This document has been prepared using data from sources considered technically reliable. It does not constitute a warranty, express or implied, as to the accuracy of the information contained herein. Actual conditions of use and handling are beyond sellers control. User is responsible to evaluate all available information when using product for any particular use and to comply with all Federal, State and Local laws and regulations.

Chemsico
Division of United Industries Corp.
P.O. Box 142642
St. Louis, MO 63114-0642

Material Safety Data Sheet

Complies with OSHA's Hazard Communication Standard, 29 CFR 1910.1200

Hazardous Material Identification System-(HMIS)

HEALTH - 1

REACTIVITY - 0

FLAMMABILITY - 2

PERSONAL -
Rubber gloves

I Trade Name: Spectracide Pruning Seal

Product Type: Aerosol Tree Wound Dressing

EPA Registration Number

N/A

Manufacturer

Chemsico
8494 Chapin Industrial Dr.
St. Louis, MO 63114

Emergency Telephone No.

For Chemical Emergency: 1-800-633-2873
For Information: 1-800-332-5553
Prepared by: H.L. Pauls
Date Prepared: October 24, 2004

II Hazardous Ingredients/Identity Information

Chemical	%	OSHA PEL	ACGIH TLV
Asphalt	16.0	NE	5 mg/m ³ (fumes)
CAS #64742-93-4			
Xylene	3.0	100 ppm	100 ppm
CAS #1330-20-7			
Mineral Spirits	11.0	500 ppm	100 ppm
CAS #8012-95-1			
Isobutane	4.0	NE	NE
CAS # 75-28-5			
Propane	6.0	1000 ppm	NE
CAS # 74-98-6			

III Physical and Chemical Characteristics

Appearance and Odor:	Coarse fan spray. Black wet film. Asphaltic odor.
Boiling Point:	NA
Melting Point:	NA
Vapor Pressure:	120 psig @ 54°C/130°F
Specific Gravity:	1.03 (H ₂ O=1)
Vapor Density:	greater than 1 (Air=1)
% Volatile (by vol.):	72%
Solubility in Water:	48%
Evaporation Rate:	less than 1 (Butyl Acetate=1)

IV Fire and Explosion Hazard Data

Flash Point: 145°F (TCC)
Flame Extension: 8" (Level 1 Aerosol)
Flammable Limits: N/A
Autoignition Temp: N/A
Fire Extinguishing Media: Water Fog, Carbon Dioxide
DryChemical
Decomposition Temp: N/A
Special Fire-Fighting Procedures: Keep containers cool. Use equipment or shielding required protecting personnel against bursting, rupturing or venting containers.
Unusual Fire and Explosion Hazards: At elevated temperatures (over 54°C/130°F), containers may vent, rupture or burst. Also see Section V.

V Reactivity Data

Stability: Stable
Polymerization: Will not occur
Conditions to Avoid: Temperatures over 130°F
Incompatible Materials: Strong oxidizers.
Hazardous Decomposition or Byproducts: N/A

VI Health Hazard Data

Ingestion (Swallowing): Harmful or fatal if swallowed. **First Aid:** Consult a physician.
Skin Contact: May cause skin irritation. **First Aid:** Wash contaminated skin with soap and water.
Eye Contact: May cause eye irritation. **First Aid:** Flush eyes with plenty of water.
Inhalation Toxicity: Avoid breathing vapors. **First Aid:** Remove to fresh air.
Special Notes: None
Health Conditions Aggravated by Exposure: None Known
Ingredients listed by NTP, OSHA or IARC as Carcinogens or potential carcinogens: None

VII Precautions for Safe Handling and Use

Steps to be Taken in Case Material is Released or Spilled:
Avoid breathing vapors. Remove ignition sources. Avoid skin contact with liquid.
Waste Disposal:
Do not puncture or incinerate containers. Give empty, leaking or full containers to a facility qualified to dispose of pressurized containers.
Handling & Storage Precautions:
Do not store where temperatures can exceed 54°C/130°F.

VIII Control Measures

Read and follow label directions. They are your best guide to using this product effectively, and give necessary safety precautions to protect your health.

IX Transportation Data

DOT: Consumer Commodity, Hazard Class ORM-D (Limited Quantity Exception)
IMDG: Aerosols (Maximum 1 Liter), Hazard Class 2, UN -1950, Packing Group III
IATA: Aerosols, Flammable (Each Not Exceeding 1 Liter Capacity), Hazard Class 2.1. UN-1950, Packing Group III

The information and statements herein are believed to be reliable but are not to be construed as warranty or representation for which we assume legal responsibility. Users should undertake sufficient verification and testing to determine the suitability for their own particular purpose of any information or products referred to herein. NO WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE IS MADE.



Spartan Chemical Company, Inc. Material Safety Data Sheet

SECTION I: PRODUCT INFORMATION

Product Name or Number (as it appears on label):

SPRAYBUFF

Product Number: 3040; 4440

Product Division:

Janitorial

Spartan Chemical Company, Inc.
1110 Spartan Drive
Maumee OH 43537

Product/Technical Information: 1-(800)-537-8990
Medical Emergency: 1-(888)-314-6171 (24 hours)
Chemical Leak/Spill Emergency: CHEMTREC 1-(800) 424-9300 (24 hours)

Shipping Description: Non-Hazardous Products

NFPA Ratings:	HMIS Ratings:
Health: 1- Slight Fire: 0 - Minimal Reactivity: 0 - Minimal	Health: 1- Slight Fire: 0 - Minimal Reactivity: 0 - Minimal Pers. Prot. Equip.: See Section VIII

SECTION II: HAZARDOUS INGREDIENTS

(Listed when present at 1% or greater, carcinogens at 0.1% or greater) All component chemicals are listed or exempted from listing on the "TSCA Inventory" of chemical substances maintained by the U.S. Environmental Protection Agency.

Chemical Name(s)	%Wt	CAS Registry No.	Table Z-1-A			NTP, IARC or OSHA Carcinogen
			TWA mg/m ³	STEL mg/m ³	CEILING mg/m ³	
Ethylene-acrylic acid copolymer	1-5	9010-77-9	Not Established	Not Established	Not Established	No

SECTION III: PHYSICAL DATA

Boiling Point: 212 °F	Vapor Pressure: Unknown
Vapor Density (AIR = 1): Unknown	Solubility in Water: Complete
pH: 9.5-10.5	Specific Gravity (H ₂ O=1): 1.003
Evaporation Rate (but.ace.=1): <1	Percent Solid by Weight: 3-4
Physical State: Liquid	
Appearance & Odor: Milky light blue liquid, faint odor	

SECTION IV: FIRE & EXPLOSIVE HAZARD DATA

Flash Point: > 212°F	Method Used: ASTM-D56
Flammable Limits: Not Established	Flame Extension: N/A
Extinguishing Media: Product does not support combustion. Use extinguishing media appropriate for surrounding fire.	
Special Fire Fighting Procedures: Wear NIOSH approved self-contained breathing apparatus and protective clothing. Cool fire-exposed containers with water spray.	
Unusual Fire & Explosive Hazards: Material can splatter above 212 F. Dried Product can burn. Combustion products are toxic.	

SECTION V: HEALTH HAZARD DATA

Threshold Limit Value: Not Established	Primary Routes of Entry: Inhalation, Skin Contact, Eyes and Oral.
Effects of Overexposure- May cause mild eye irritation with symptoms such as pain, redness, swelling and tearing.	
Conditions to Avoid: May cause mild skin irritation with symptoms such as redness, pain and swelling. May be harmful if swallowed with symptoms such as nausea, vomiting, pain and diarrhea. Inhalation of product mist may cause respiratory irritation. Avoid contact with eyes, skin or clothing. Avoid breathing product mist. Do not swallow. Use with adequate ventilation. Wash thoroughly after handling.	
Conditions Aggravated by Use: Use of this product may aggravate preexisting eye; skin and respiratory disorders such as asthma and dermatitis.	
Emergency & First Aid Procedures:	
Eyes: Flush eyes with plenty of water for at least 15 minutes. Remove contact lenses. Get medical attention.	
Skin: Remove contaminated clothing. Flush skin with water for at least 15 minutes. Get medical attention if irritation persists. Wash contaminated clothing before reuse.	
Ingestion: Do not induce vomiting. Drink one or two glasses of water to dilute product. Get medical attention. Do not give anything by mouth to an unconscious person.	
Inhalation: In case of respiratory irritation or dizziness; move person to fresh air. Get medical attention if irritation persists.	

SECTION VI: REACTIVITY DATA

Stability: Stable	Incompatible Materials: Strong oxidizing agents.
Hazardous Decomposition Products: Thermal decomposition may yield styrene and acrylic monomers.	Hazardous Polymerization: Will Not Occur.

SECTION VII: SPILL OR LEAK PROCEDURES

Steps to be Taken in Case Material is Released or Spilled: Small spills of one gallon or less may be flushed with plenty of water to sanitary sewer system (If permitted by local sewer regulations). Dike and contain large spills with inert material and transfer liquid to containers for recovery or disposal.
Waste Disposal Method: Assure conformance with federal, state and local regulations.

SECTION VIII: SPECIAL PROTECTION INFORMATION

Respiratory Protection: Not required when good ventilation is provided.
Ventilation: Provide good general ventilation. Local exhaust ventilation may be necessary for some operations.
Protective Gloves(Specify Type): Natural rubber or other impervious gloves are recommended for prolonged or repeated contact.
Eye Protection(Specify Type): Splash goggles or safety glasses are recommended to prevent eye contact.
Other Protective Equipment: For further guidance see 29 CFR 1910.132-138.

SECTION IX: SPECIAL PRECAUTIONS

Precautions; Handling & Storing: Keep from freezing.
Other Precautions: Keep out of reach of children.

© SCC 11/18/2011

SPRAYBUFF

Ref: 29 CFR 1910.1200 (OSHA)

Name: Ronald T. Cook

Effective Date: 11/18/2011

Changes: Formula revision

Title: Manager, Regulatory Affairs

Supercedes: 06/01/2010

This document has been prepared using data from sources considered technically reliable. It does not constitute a warranty, express or implied, as to the accuracy of the information contained herein. Actual conditions of use and handling are beyond sellers control. User is responsible to evaluate all available information when using product for any particular use and to comply with all Federal, State and Local laws and regulations.

MATERIAL SAFETY DATA SHEET

S00887000
04 00

DATE OF PREPARATION
Mar 10, 2014

SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER

S00887000

PRODUCT NAME

CD™887 Coil & Fin Cleaner Aerosol

MANUFACTURER'S NAME

Sprayon Products
Cleveland, OH 44115

Telephone Numbers and Websites

Product Information	(800) 247-3266 www.sprayon.com
Regulatory Information	(216) 566-2902
Medical Emergency	(216) 566-2917
Transportation Emergency*	(800) 424-9300
*for Chemical Emergency ONLY (spill, leak, fire, exposure, or accident)	

SECTION 2 — COMPOSITION/INFORMATION ON INGREDIENTS

% by Weight	CAS Number	Ingredient	Units	Vapor Pressure
2	74-98-6	Propane	ACGIH TLV OSHA PEL 1000 PPM 1000 PPM	760 mm
3	106-97-8	Butane	ACGIH TLV OSHA PEL 1000 PPM 800 PPM	760 mm
2	111-76-2	2-Butoxyethanol	ACGIH TLV OSHA PEL 20 PPM 25 PPM	0.88 mm
2	111-90-0	2-(2-Ethoxyethoxy)-ethanol	ACGIH TLV OSHA PEL Not Available Not Available	0.13 mm

SECTION 3 — HAZARDS IDENTIFICATION

ROUTES OF EXPOSURE

INHALATION of vapor or spray mist.

EYE or SKIN contact with the product, vapor or spray mist.

EFFECTS OF OVEREXPOSURE

EYES: Irritation.

SKIN: Prolonged or repeated exposure may cause irritation.

INHALATION: Irritation of the upper respiratory system.

May cause nervous system depression. Extreme overexposure may result in unconsciousness and possibly death.

Prolonged overexposure to hazardous ingredients in Section 2 may cause adverse chronic effects to the following organs or systems:

- the liver
- the urinary system
- the hematopoietic (blood-forming) system

SIGNS AND SYMPTOMS OF OVEREXPOSURE

Headache, dizziness, nausea, and loss of coordination are indications of excessive exposure to vapors or spray mists.

Redness and itching or burning sensation may indicate eye or excessive skin exposure.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

None generally recognized.

CANCER INFORMATION

For complete discussion of toxicology data refer to Section 11.

HMIS Codes

Health	2
Flammability	0
Reactivity	0

SECTION 4 — FIRST AID MEASURES

EYES: Flush eyes with large amounts of water for 15 minutes. Get medical attention.

SKIN: Wash affected area thoroughly with soap and water.
Remove contaminated clothing and laundry before re-use.

INHALATION: If affected, remove from exposure. Restore breathing. Keep warm and quiet.

INGESTION: Do not induce vomiting. Get medical attention immediately.

SECTION 5 — FIRE FIGHTING MEASURES

FLASH POINT

Propellant < 0 °F

LEL

1.1

UEL

23.5

EXTINGUISHING MEDIA

Carbon Dioxide, Dry Chemical, Alcohol Foam

UNUSUAL FIRE AND EXPLOSION HAZARDS

Closed containers may explode (due to the build-up of pressure) when exposed to extreme heat.

Application to hot surfaces requires special precautions.

During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIRE FIGHTING PROCEDURES

Full protective equipment including self-contained breathing apparatus should be used.

Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

SECTION 6 — ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Remove all sources of ignition. Ventilate the area.

Remove with inert absorbent.

SECTION 7 — HANDLING AND STORAGE

STORAGE CATEGORY

Not Available

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Keep away from heat, sparks, and open flame. Vapors will accumulate readily and may ignite explosively.

During use and until all vapors are gone: Keep area ventilated - Do not smoke - Extinguish all flames, pilot lights, and heaters - Turn off stoves, electric tools and appliances, and any other sources of ignition.

Consult NFPA Code. Use approved Bonding and Grounding procedures.

Contents under pressure. Do not puncture, incinerate, or expose to temperature above 120F. Heat from sunlight, radiators, stoves, hot water, and other heat sources could cause container to burst. Do not take internally. Keep out of the reach of children.

SECTION 8 — EXPOSURE CONTROLS/PERSONAL PROTECTION

PRECAUTIONS TO BE TAKEN IN USE

Use only with adequate ventilation.

Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.

Wash hands after using.

VENTILATION

Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

RESPIRATORY PROTECTION

If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2.

PROTECTIVE GLOVES

None required for normal application of aerosol products where minimal skin contact is expected. For long or repeated contact, wear chemical resistant gloves.

EYE PROTECTION

Wear safety spectacles with unperforated sideshields.

OTHER PRECAUTIONS

Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT WEIGHT	8.06 lb/gal	966 g/l
SPECIFIC GRAVITY	0.97	
BOILING POINT	<0 - 396 °F	<-18 - 202 °C
MELTING POINT	Not Available	
VOLATILE VOLUME	98%	
EVAPORATION RATE	Faster than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	Not Available	
pH	13.0	
VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)		
	Volatile Weight 9.23%	Less Water and Federally Exempt Solvents

SECTION 10 — STABILITY AND REACTIVITY

STABILITY — Stable

CONDITIONS TO AVOID

None known.

INCOMPATIBILITY

None known.

HAZARDOUS DECOMPOSITION PRODUCTS

By fire: Carbon Dioxide, Carbon Monoxide

HAZARDOUS POLYMERIZATION

Will not occur

SECTION 11 — TOXICOLOGICAL INFORMATION

CHRONIC HEALTH HAZARDS

No ingredient in this product is an IARC, NTP or OSHA listed carcinogen.

Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

TOXICOLOGY DATA

CAS No.	Ingredient Name			
74-98-6	Propane	LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available
106-97-8	Butane	LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available
111-76-2	2-Butoxyethanol	LC50 RAT	4HR	Not Available
		LD50 RAT		470 mg/kg
111-90-0	2-(2-Ethoxyethoxy)-ethanol	LC50 RAT	4HR	Not Available
		LD50 RAT		5500 mg/kg

SECTION 12 — ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

No data available.

SECTION 13 — DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD

Waste from this product may be hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.

Waste must be tested for ignitability and corrosivity to determine the applicable EPA hazardous waste numbers.

Do not incinerate. Depressurize container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

SECTION 14 — TRANSPORT INFORMATION

Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (ocean, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport.

US Ground (DOT)

May be classed as LTD. QTY. OR ORM-D
UN1950, AEROSOLS, 2.2, LIMITED QUANTITY, (ERG#126)

Canada (TDG)

May be classed as LTD. QTY. OR ORM-D
UN1950, AEROSOLS, CLASS 2.2, LIMITED QUANTITY, (ERG#126)

IMO

May be shipped as Limited Quantity
UN1950, AEROSOLS, CLASS 2.2, LIMITED QUANTITY, Ems F-D, S-U

IATA/ICAO

UN1950, AEROSOLS, NON-FLAMMABLE, 2.2, LIMITED QUANTITY

SECTION 15 — REGULATORY INFORMATION**SARA 313 (40 CFR 372.65C) SUPPLIER NOTIFICATION**

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element
	Glycol Ethers	4	

CALIFORNIA PROPOSITION 65

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

TSCA CERTIFICATION

All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

SECTION 16 — OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

MATERIAL SAFETY DATA SHEET

S00210
05 00

DATE OF PREPARATION
Oct 24, 2013

SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER

S00210

PRODUCT NAME

LU™210 Food Grade Silicone Lubricant Aerosol

MANUFACTURER'S NAME

Sprayon Products
Cleveland, OH 44115

Telephone Numbers and Websites

Product Information	(800) 247-3266 www.sprayon.com
Regulatory Information	(216) 566-2902
Medical Emergency	(216) 566-2917
Transportation Emergency*	(800) 424-9300
*for Chemical Emergency ONLY (spill, leak, fire, exposure, or accident)	

SECTION 2 — COMPOSITION/INFORMATION ON INGREDIENTS

% by Weight	CAS Number	Ingredient	Units	Vapor Pressure
15	74-98-6	Propane	ACGIH TLV OSHA PEL 1000 PPM 1000 PPM	760 mm
42	110-54-3	Hexane	ACGIH TLV OSHA PEL 50 PPM 50 PPM	127 mm
19	107-83-5	2-Methylpentane	ACGIH TLV OSHA PEL Not Available Not Available	211 mm
7	96-14-0	3-Methylpentane	ACGIH TLV OSHA PEL 500 PPM Not Available	211 mm
6	79-29-8	2,3-Dimethylbutane	ACGIH TLV OSHA PEL Not Available Not Available	230 mm
2	75-83-2	2,2-Dimethylbutane	ACGIH TLV OSHA PEL Not Available Not Available	317 mm
2	110-82-7	Cyclohexane	ACGIH TLV OSHA PEL 100 PPM 300 PPM	100 mm

SECTION 3 — HAZARDS IDENTIFICATION

ROUTES OF EXPOSURE

INHALATION of vapor or spray mist.
EYE or SKIN contact with the product, vapor or spray mist.

EFFECTS OF OVEREXPOSURE

EYES: Irritation.
SKIN: Prolonged or repeated exposure may cause irritation.
INHALATION: Irritation of the upper respiratory system.

May cause nervous system depression. Extreme overexposure may result in unconsciousness and possibly death.

SIGNS AND SYMPTOMS OF OVEREXPOSURE

Headache, dizziness, nausea, and loss of coordination are indications of excessive exposure to vapors or spray mists.
Redness and itching or burning sensation may indicate eye or excessive skin exposure.

HMIS Codes

Health	2*
Flammability	4
Reactivity	0

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

None generally recognized.

CANCER INFORMATION

For complete discussion of toxicology data refer to Section 11.

SECTION 4 — FIRST AID MEASURES

EYES: Flush eyes with large amounts of water for 15 minutes. Get medical attention.

SKIN: Wash affected area thoroughly with soap and water.
Remove contaminated clothing and laundry before re-use.

INHALATION: If affected, remove from exposure. Restore breathing. Keep warm and quiet.

INGESTION: Do not induce vomiting. Get medical attention immediately.

SECTION 5 — FIRE FIGHTING MEASURES**FLASH POINT**

Propellant < 0 °F

LEL

1.0

UEL

9.5

EXTINGUISHING MEDIA

Carbon Dioxide, Dry Chemical, Foam

UNUSUAL FIRE AND EXPLOSION HAZARDS

Containers may explode when exposed to extreme heat.

Application to hot surfaces requires special precautions.

During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIRE FIGHTING PROCEDURES

Full protective equipment including self-contained breathing apparatus should be used.

Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

SECTION 6 — ACCIDENTAL RELEASE MEASURES**STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED**

Remove all sources of ignition. Ventilate the area.

Remove with inert absorbent.

SECTION 7 — HANDLING AND STORAGE**STORAGE CATEGORY**

Not Available

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Keep away from heat, sparks, and open flame. Vapors will accumulate readily and may ignite explosively.

During use and until all vapors are gone: Keep area ventilated - Do not smoke - Extinguish all flames, pilot lights, and heaters - Turn off stoves, electric tools and appliances, and any other sources of ignition.

Consult NFPA Code. Use approved Bonding and Grounding procedures.

Contents under pressure. Do not puncture, incinerate, or expose to temperature above 120F. Heat from sunlight, radiators, stoves, hot water, and other heat sources could cause container to burst. Do not take internally. Keep out of the reach of children.

SECTION 8 — EXPOSURE CONTROLS/PERSONAL PROTECTION**PRECAUTIONS TO BE TAKEN IN USE**

Use only with adequate ventilation.

Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.

Wash hands after using.

VENTILATION

Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

RESPIRATORY PROTECTION

If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2.

PROTECTIVE GLOVES

None required for normal application of aerosol products where minimal skin contact is expected. For long or repeated contact, wear chemical resistant gloves.

EYE PROTECTION

Wear safety spectacles with unperforated sideshields.

OTHER PRECAUTIONS

Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT WEIGHT	5.42 lb/gal	649 g/l
SPECIFIC GRAVITY	0.65	
BOILING POINT	<0 - 179 °F	<-18 - 81 °C
MELTING POINT	Not Available	
VOLATILE VOLUME	96%	
EVAPORATION RATE	Faster than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	Not Available	
VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)		
	Volatile Weight 95.00%	Less Water and Federally Exempt Solvents

SECTION 10 — STABILITY AND REACTIVITY

STABILITY — Stable

CONDITIONS TO AVOID

None known.

INCOMPATIBILITY

None known.

HAZARDOUS DECOMPOSITION PRODUCTS

By fire: Carbon Dioxide, Carbon Monoxide

HAZARDOUS POLYMERIZATION

Will not occur

SECTION 11 — TOXICOLOGICAL INFORMATION

CHRONIC HEALTH HAZARDS

No ingredient in this product is an IARC, NTP or OSHA listed carcinogen.

Prolonged and repeated exposure to Hexane may cause damage to nerve tissue of the arms and legs (peripheral neuropathy), resulting in muscular weakness and loss of sensation. This effect may be increased by the presence of Methyl Ethyl Ketone.

Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

TOXICOLOGY DATA

CAS No.	Ingredient Name			
74-98-6	Propane	LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available
110-54-3	Hexane	LC50 RAT	4HR	Not Available
		LD50 RAT		28700 mg/kg
107-83-5	2-Methylpentane	LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available
96-14-0	3-Methylpentane	LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available
79-29-8	2,3-Dimethylbutane	LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available
75-83-2	2,2-Dimethylbutane	LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available
110-82-7	Cyclohexane	LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available

SECTION 12 — ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

No data available.

SECTION 13 — DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD

Waste from this product may be hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.

Waste must be tested for ignitability to determine the applicable EPA hazardous waste numbers.
Do not incinerate. Depressurize container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

SECTION 14 — TRANSPORT INFORMATION

Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (ocean, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport.

US Ground (DOT)

May be classed as LTD. QTY. OR ORM-D
UN1950, AEROSOLS, 2.1, LIMITED QUANTITY, (ERG#126)

Canada (TDG)

May be classed as LTD. QTY. OR ORM-D
UN1950, AEROSOLS, CLASS 2.1, LIMITED QUANTITY, (ERG#126)

IMO

May be shipped as Limited Quantity
UN1950, AEROSOLS, CLASS 2.1, LIMITED QUANTITY, EmS F-D, S-U

IATA/ICAO

UN1950, AEROSOLS, FLAMMABLE, 2.1, LIMITED QUANTITY

SECTION 15 — REGULATORY INFORMATION

SARA 313 (40 CFR 372.65C) SUPPLIER NOTIFICATION

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element
110-54-3	Hexane	42	
110-82-7	Cyclohexane	2	

CALIFORNIA PROPOSITION 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

TSCA CERTIFICATION

All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

SECTION 16 — OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.



MATERIAL SAFETY DATA SHEET

SPRAYPAK STAINLESS STEEL CLEANER

1. Product And Company Identification

Supplier

Chase Products Co.
19th and Gardner Road
Broadview, IL 60155 USA

Company Contact: Aludia B. Hernandez
Telephone Number: 708-865-1000
FAX Number: 708-865-0923
E-Mail: sales@chaseproducts.com
Web Site: www.chaseproducts.com

Manufacturer

Chase Products Co.
19th and Gardner Road
Broadview, IL 60155 USA

Company Contact: Aludia B. Hernandez
Telephone Number: 708-865-1000
FAX Number: 708-865-0923
E-Mail: sales@chaseproducts.com
Web Site: www.chaseproducts.com

Supplier Emergency Contacts & Phone Number

Chem-Tel: 1-800-255-3924

Manufacturer Emergency Contacts & Phone Number

Chem-Tel: 1-800-255-3924

Issue Date: 01/22/2007

Product Name: SPRAYPAK STAINLESS STEEL CLEANER

Chemical Name: 7-7700-1

CAS Number: Not Established

MSDS Number: 3970

Product Code: 433-4111-3

Product/Material Uses - Stainless Steel Cleaner

2. Composition/Information On Ingredients

Ingredient Name	CAS Number	Percent Of Total Weight
HEAVY NAPHTHENIC DISTILLATE	64742-52-5	
ISOBUTANE	75-28-5	
PROPANE	74-98-6	

Hazardous components, according to OSHA, are listed when present at 1.0% or greater. Carcinogens are listed when present at 0.1% or greater.

3. Hazards Identification

Primary Routes(s) Of Entry - Ingestion (possible, but considered unlikely), eye contact, inhalation.

Eye Hazards - May cause irritation after contact with the eyes.

Skin Hazards - Prolonged and repeated contact with skin may result on irritation.

Ingestion Hazards - This is an aerosol product, ingestion is unlikely to occur.

Inhalation Hazards - Deliberate inhalation of concentrate vapor or mist may cause headaches, dizziness and nausea.

Chronic/Carcinogenicity Effects - None of the ingredients, present in excess of 0.1%, are listed as carcinogenic by NTP, IARC or OSHA. Not known, chronic effects based on available data.

Teratogenicity (Birth Defects) - Not known

Reproductive Effects - Not known

Neurotoxicity - Not known

Mutagenicity (Genetic Effect) - Not known

Signs And Symptoms - Acute: Deliberate inhalation of concentrate vapor or mist may cause headaches, dizziness and nausea. Contact with the eyes may cause irritation. Prolonged and repeated contact with the skin may result on irritation.

MATERIAL SAFETY DATA SHEET

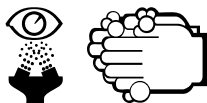
SPRAYPAK STAINLESS STEEL CLEANER

3. Hazards Identification - Continued

Conditions Aggravated By Exposure - Pre-existing skin and respiratory disorders.

Conditions Aggravated By Overexposure - Pre-existing skin and respiratory disorders.

First Aid (Pictograms)



4. First Aid Measures

Eye - Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

Skin - Wash skin with soap and water. If irritation develops, consult a physician.

Ingestion - Ingestion from an aerosol product is unlikely to occur. Contains petroleum distillates. Harmful if swallowed. If accidentally swallowed, do not induce vomiting, call physician immediately.

Inhalation - If overcome by vapor move victim to fresh air. If person is not breathing, call 911 or an ambulance, then provide artificial respiration, preferably mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advise.

5. Fire Fighting Measures

Flash Point: Not available °F Not available °C

Flash Point Method: Not available

Lower Explosive Limit: Not available

Upper Explosive Limit: Not available

Fire And Explosion Hazards - This product is an aerosol product for which **Flame Projection is 2 to 3 inches, without flashback.** Temperatures above 120 F may cause cans to burst.

Extinguishing Media - Use CO2 (Carbon Dioxide), dry chemical, or water fog.

Fire Fighting Instructions - Water spray may be used to cool cans in the vicinity of fire or excessive heat.

6. Accidental Release Measures

Provide adequate ventilation to area being treated. Soak up spills with chemically inert, absorbent material.

7. Handling And Storage

Handling And Storage Precautions - Store in a cool, dry place away from heat and open flame.

Handling Precautions - Do not deliberately inhale vapor or spray mist. Avoid getting spray into eyes. Keep out of reach of children.

Storage Precautions - Keep away from heat, sparks, flame, and other sources of ignition (i.e., pilot lights, electric motors and static electricity). **AEROSOL STORAGE LEVEL I (NFPA-30B)**

Work/Hygienic Practices - Wash hands thoroughly after using this product.

Protective Clothing (Pictograms)



8. Exposure Controls/Personal Protection

Engineering Controls - Use with adequate general and local exhaust ventilation.

Eye/Face Protection - Conventional eyeglasses to guard against splashing.

Skin Protection - Household type gloves.

MATERIAL SAFETY DATA SHEET

SPRAYPAK STAINLESS STEEL CLEANER

8. Exposure Controls/Personal Protection - Continued

Respiratory Protection - None required if used in a well-ventilated area.

Ingredient(s) - Exposure Limits

HEAVY NAPHTHENIC DISTILLATE

OSHA PEL 5mg/m3 as oil mist in air ; ACGIH TLV 5 mg/m3 as oil mist in air

PROPANE

ACGIH TLV-TWA 2500 ppm ; OSHA PEL-TWA 1,000 ppm

9. Physical And Chemical Properties

Appearance - White liquid.

Odor - Perfumed.

Chemical Type: Mixture

Physical State: Liquid

Melting Point: Not applicable °F Not applicable °C

Boiling Point: Water 212 °F Water 100 °C

Specific Gravity: 0.96 concentrate

Percent VOCs: 10.0

pH Factor: 10.1

Solubility: Soluble

Evaporation Rate: Faster than butyl acetate

10. Stability And Reactivity

Stability: Stable

Hazardous Polymerization: Will not occur

Conditions To Avoid (Stability) - Temperatures above 120 F

Incompatible Materials - Avoid heat, open flame and contact with strong oxidizers.

Hazardous Decomposition Products - Thermal decomposition may yield gases like carbon monoxide and carbon dioxide.

Conditions To Avoid (Polymerization) - Temperatures above 120 F

11. Toxicological Information

No Data Available...

12. Ecological Information

No Data Available...

13. Disposal Considerations

Do not puncture or incinerate container. **If empty:** Place in trash or offer for recycling if available. **If partly filled:** Call your local solid waste agency for disposal instructions.

14. Transport Information

Proper Shipping Name - ORM-D Consumer Commodity

Hazard Class

2.1

DOT Identification Number

UN1950

MATERIAL SAFETY DATA SHEET

SPRAYPAK STAINLESS STEEL CLEANER

14. Transport Information - Continued

DOT Shipping Label

Aerosol Consumer Commodity

15. Regulatory Information

U.S. Regulatory Information - All ingredients of this product are listed or are excluded from listing under the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

SARA Hazard Classes

Acute Health Hazard

SARA Section 313 Notification - This product does not contain any ingredients regulated under Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 or 40 CFR 372.

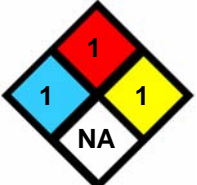
Ingredient(s) - State Regulations

ISOBUTANE

New Jersey - Workplace Hazard; New Jersey - Environmental Hazard; New Jersey - Special Hazard; Pennsylvania - Workplace Hazard; Massachusetts - Hazardous Substance; New York City - Hazardous Substance

PROPANE

New Jersey - Workplace Hazard; New Jersey - Environmental Hazard; New Jersey - Special Hazard; Pennsylvania - Workplace Hazard; Massachusetts - Hazardous Substance; New York City - Hazardous Substance

<u>NFPA</u>	<u>HMIS</u>								
	<table border="1"><tr><td>HEALTH</td><td style="text-align: center;">1</td></tr><tr><td>FLAMMABILITY</td><td style="text-align: center;">2</td></tr><tr><td>REACTIVITY</td><td style="text-align: center;">1</td></tr><tr><td>PERSONAL PROTECTION</td><td style="text-align: center;">A</td></tr></table>	HEALTH	1	FLAMMABILITY	2	REACTIVITY	1	PERSONAL PROTECTION	A
HEALTH	1								
FLAMMABILITY	2								
REACTIVITY	1								
PERSONAL PROTECTION	A								

16. Other Information

Revision/Preparer Information

MSDS Preparer: Laura E. Radevski

MSDS Preparer Phone Number: 708-865-1000

This MSDS Supersedes A Previous MSDS Dated: 09/20/2004

Disclaimer

Although reasonable care has been taken in the preparation of this document, we extend no warranties and make no representations as to the accuracy or completeness of the information contained therein, and assume no responsibility regarding the suitability of this information for the user's intended purposes or for the consequences of its use. Each individual should make a determination as to the suitability of the information for their particular purposes(s).

Chase Products Co.

Printed Using MSDS Generator™ 2000

MATERIAL SAFETY DATA SHEET

Share Corporation
P.O. Box 245013
Milwaukee, WI 53224



GENERAL INFORMATION NUMBER: (414) 355-4000
EMERGENCY TELEPHONE NUMBER: (800) 776-7192
CHEMTREC: (800) 424-9300

REVISION DATE: April 9, 2002
DATE OF ISSUE: May 2, 2002

I - Product Identification

Starting Fluid

PRODUCT CODE: 8550

CHEMICAL FORMULATION: Pressurized diethyl ether based engine starter.

NFPA HAZARD IDENTIFICATION SYSTEM: **HEALTH: 2** **FLAMMABILITY: 4** **REACTIVITY: 1**
HAZARD RATING: 4 - Extreme; 3 - High; 2 - Moderate; 1 - Slight; 0 - Insignificant

II - Hazardous Ingredients

Values reported as TWA unless noted.

<u>SUBSTANCE</u>	<u>APPROX %</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>	<u>EPA 40 CFR:</u>			<u>CAS #</u>
				<u>302</u>	<u>355</u>	<u>372</u>	
Diethyl Ether	40.0-50.0	400 ppm	400 ppm	Y	N	N	60-29-7
Heptane, related light hydrocarbons	40.0-50.0	400 ppm	400 ppm	N	N	N	142-82-5
Mineral Oil, severely hydrotreated	< 1.0	500 ppm	N/E	N	N	N	64742-53-6
Carbon Dioxide	4.00-7.00	10,000 ppm	5000 ppm	N	N	N	124-38-9

Key: **PEL:** Permissible Exposure Limit **TLV:** Threshold Limit Value **C:** Ceiling level **STEL:** Short Term Exposure Limit
N/A: Not Applicable **N/D:** Not Determined **N/E:** Not Established **Y:** Yes **N:** No
302: CERCLA List of Hazardous Substances and Reportable Quantities (40 CFR 302.4).
355: SARA TITLE III / List of Extremely Hazardous Substances for Emergency Planning and Notification (40 CFR 355).
372: SARA TITLE III / List of Toxic Chemicals subject to Release Reporting (Community Right to Know) (40 CFR 372).

III - Physical Data

BOILING POINT (°F): 94, for Diethyl ether **SPECIFIC GRAVITY (WATER = 1):** 0.70
VAPOR PRESSURE (mm Hg): N/D **VOC CONTENT (% by weight):** 85.0 – 95.0
VAPOR DENSITY (AIR = 1): 2.5 **EVAPORATION RATE (WATER = 1):** > 1.0
SOLUBILITY IN WATER: Slight **pH:** N/A
APPEARANCE AND ODOR: Pale yellow to clear liquid, strong ethereal odor.

IV - Fire and Explosion Hazard Data

FLASH POINT (°F): < -56 (TEST METHOD): T.C.C. **NFPA 30B Rating:** 3
FLAMMABLE LIMITS IN AIR (VOLUME %) **UPPER:** 48.0 **LOWER:** 1.8
EXTINGUISHING MEDIA: Foam, carbon dioxide, dry chemical.
SPECIAL FIRE FIGHTING PROCEDURES: Avoid possible accumulations of vapors at floor level, as vapor is heavier than air. Cool fire exposed containers with water fog. Firefighters should be equipped with full protective gear including self-contained breathing apparatus.
UNUSUAL FIRE AND EXPLOSION HAZARD: Contents under pressure! Exposure to temperatures above 120° F may cause bursting. Extremely flammable.

V - Reactivity Data

STABILITY: Unstable explosive peroxides may be formed and concentrate by evaporation to hazardous levels. This process is favored by prolonged storage with exposure to air and light. Product is generally stable in sealed metal containers.

INCOMPATIBILITY: Strong acids and oxidizers.

CONDITIONS TO AVOID: Excess heat, open flame sparks.

HAZARDOUS DECOMPOSITION PRODUCTS: Thermal decomposition may produce oxides of carbon.

HAZARDOUS POLYMERIZATION: Will not occur.

CONDITIONS TO AVOID: None

VI - Health Hazard Data

ROUTES OF ENTRY **INHALATION:** X **EYE CONTACT:** **SKIN CONTACT:** X **INGESTION:**
INGREDIENTS THAT ARE CONSIDERED BY OSHA, NTP, IARC TO BE SUSPECTED HUMAN CARCINOGENS: None

EFFECTS OF OVEREXPOSURE

IF IN EYES: Irritation.

IF ON SKIN: Irritation, defatting and dermatitis with prolonged or repeated exposure.

IF SWALLOWED: Gastrointestinal irritation, nausea, cramps, diarrhea. May be harmful or fatal if swallowed.

IF INHALED: : Dizziness, strong anesthesia, intoxication, loss of consciousness.

EMERGENCY AND FIRST AID PROCEDURES

IF IN EYES: Flush eyes and under eyelids with plenty of cool water for at least 15 minutes. If irritation persists, obtain medical attention.

IF ON SKIN: Remove contaminated clothing and wash with soap and water.

IF SWALLOWED: Contact physician or poison control center immediately. Do not induce vomiting. Proper treatment is dependent upon condition of patient and amount ingested.

IF INHALED: Remove person to fresh air. If breathing has stopped, administer artificial respiration. Obtain medical attention.

VII - Spill or Leak Protection

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: Ventilate area and remove all sources of ignition. CO₂ may be used as a precautionary blanket. Soak up material with inert absorbent material and place in a labeled closed container for disposal.

WASTE DISPOSAL METHOD: Consult local environmental authorities. Dispose of cans in non-incinerated trash only.

VIII - Special Protection Information

RESPIRATORY PROTECTION: Use with adequate ventilation. Do not breathe vapors or mists. If recommended Exposure Limits are exceeded, wear a NIOSH approved respirator, following manufacturer's recommendations.

VENTILATION

LOCAL: Recommended

MECHANICAL: Not required

PROTECTIVE GLOVES: Chemical resistant.

EYE PROTECTION: Safety glasses or goggles.

OTHER PROTECTIVE EQUIPMENT: None.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Store in a cool, dry place away from heat or open flame.

OTHER PRECAUTIONS: Keep out of reach of children. Do not puncture or incinerate container.

IX - Transportation Information (ground transportation only)

DOT PROPER SHIPPING NAME: Consumer Commodity

DOT CLASS: ORM-D

DOT ID NUMBER: None

DOT PACKING GROUP: None

The shipping information listed above applies only to non-bulk (< 119 gallons) containers of this product. This product may have more than one proper shipping name depending on packaging, product properties, & mode of shipment. If any alteration of packaging, product, or mode of transportation is further intended, different shipping names and labeling may apply.

REVISION DATE: April 9, 2002

Prepared by: PMR

DATE OF ISSUE: May 2, 2002

This information contained herein is based on data considered accurate. However, no warranty is expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof. Share Corporation assumes no responsibility for personal injury or property damage to the vendee, users or third parties caused by the material such vendees or users assume all risks associated with the use of this material.

MATERIAL SAFETY DATA SHEET

Complies with OSHA Hazard Communication Standard 29 CFR 1910.1200

Date of Prep: 2/27/03

SECTION 1

SUNNYSIDE CORPORATION
225 CARPENTER AVENUE
WHEELING, ILLINOIS 60090
EMERGENCY TELEPHONE

(847) 541-5700
(800) 424-9300

FOR INFORMATION:

(847) 541-5700

- SUNNYSIDE CORPORATION
- CHEM TREC

Product Class: Inorganic Acid
Trade Name: HYDROCHLORIC ACID
(Muriatic Acid)

Manufacturer's Code:
NPCA HMIS:

710
Health: 3
Fire: 0
Reactivity: 1

Product Appearance and Odor: Clear, colorless to pale yellow liquid, pungent, irritating odor.

SECTION 2 -- HAZARDOUS INGREDIENTS

OCCUPATIONAL EXPOSURE LIMITS

INGREDIENT	CAS #	PERCENT	ACGIH TLV (TWA)	ACGIH TLV (STEL)	OSHA PEL (TWA)	OSHA PEL (STEL)	VAPOR PRESSURE
Hydrogen Chloride	7647-01-0		5 PPM	5 PPM	5 PPM	5 PPM	Approximately 35 MM Hg @ 77° F.
				(Ceiling)		(Ceiling)	

SECTION 3 -- EMERGENCY AND FIRST AID PROCEDURES

Eye Contact:	Immediately flush the eyes with large quantity of water while holding the eyelids apart, for at least 15 to 20 minutes. Severe eye injury can occur, particularly if rinsing is delayed. Get medical attention immediately. Apply cool packs on eyes while transporting victim to medical facility.
Skin Contact:	Remove contaminated clothing and shoes immediately. Wash affected area with soap and large amounts of water for at least 15 to 20 minutes. In case of chemical burns, cover area with sterile, dry dressing. Keep affected area cool. Get medical attention immediately.
Inhalation:	Remove to fresh air. Administer oxygen as soon as possible (6 liters per minute) if breathing is difficult. If not breathing, give artificial respiration. Immediately contact a physician. Keep the victim warm and at rest.
Ingestion:	Do not induce vomiting. If conscious, give large amounts of water or milk. If vomiting persists, administer fluids repeatedly. Maintain airway and treat for shock. If vomiting occurs, keep head below hips to prevent aspiration. Get medical attention immediately.

SECTION 4 -- PHYSICAL DATA

The following data represent approximate or typical values. They do not constitute product specifications.

Boiling Range:	Approx. 183° (F) - I.B.P.	Vapor Density:	Heavier than air
Evaporation Rate:	Slower than ether	% Volatile By Volume:	100%
Weight Per Gallon:	9.66 lbs		
Solubility in Water:	100 Wt.% pH: <1.0		

SECTION 5 -- FIRE AND EXPLOSION DATA

Flammability Classification:	Non-flammable
Flash Point:	Not applicable
Lower Explosive Limit:	Not applicable
Extinguishing Media:	Use water spray, fog, foam, dry chemicals, carbon dioxide or other agents as appropriate for surrounding fire.
Unusual Fire and Explosion Hazards:	Reacts with active metals (Potassium, sodium, calcium, powdered aluminum, zinc, magnesium) to produce flammable hydrogen.
Special Fire Fighting Procedures:	Use self-contained breathing apparatus and full protective acid resistant clothing. Water spray should be used to cool fire exposed containers and to control vapors.

SECTION 6 -- HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE: 5 PPM - Ceiling Limit (ACGIH)
EFFECTS OF OVEREXPOSURE

Acute Inhalation: Inhalation of fumes at lower levels may cause irritation and burning of the throat, coughing and choking. At higher levels (above 50 PPM), inflammation of the nose, throat or larynx, bronchitis, pneumonia, and headache may occur. Severe cases may exhibit necrosis of the windpipe and bronchial epithelium, damage to pulmonary blood vessels and emphysema.

Chronic Inhalation: Repeated or prolonged overexposure may cause erosion and discoloration of exposed teeth, chronic bronchitis and gastritis.

Acute Eye Contact: Contact may cause severe irritation, conjunctivitis, corneal necrosis and burns.

Chronic Eye Contact: Conjunctivitis or effects similar to those for acute exposure may occur.

Acute Skin Contact: Contact may cause severe irritation, inflammation, ulceration, necrosis and chemical burns.

Chronic Skin Contact: Repeated or prolonged contact may cause chronic irritation and dermatitis. Photosensitization may also occur.

Acute Ingestion: Ingestion may cause burns of the mouth, throat, esophagus and stomach with pain, nausea, salivation, vomiting, diarrhea, chills, shock and intense thirst. Nephritis, fever and perforation of the intestinal tract, and circulatory collapse may occur.

Carcinogenicity: This product is not listed as a carcinogen by NTP, IARC or OSHA.

Medical Conditions Aggravated by Exposure: Individuals with pre-existing diseases of the lungs may have increased susceptibility to the toxicity of excessive exposures.

SECTION 7 -- REACTIVITY DATA

Stability: Stable
Conditions to Avoid: Avoid contact with metals and strong oxidizers.
Incompatibility (Materials to Avoid): Avoid base and corrosive materials.
Hazardous Decomposition Products: Flammable hydrogen gas can be produced by reaction with most metals and may form explosive mixtures with air. Chlorine gas will be released by mixing with strong oxidizers.
Hazardous Polymerization: Will not occur.

SECTION 8 -- SPILL OR LEAK PROCEDURES

Steps to be taken in case material is spilled or released: Evacuate area and deny entry by unauthorized personnel. Do not breathe vapors, stay upwind. For large spills, contain and pump into tanks, which have been constructed for Hydrochloric Acid service. Full acid resistant suits and self-contained breathing apparatus should be worn during emergency operations. Knock down vapors with water spray or water fog. Water used to knock down vapors may become corrosive and should be contained properly for later disposal. Neutralize spill with slaked lime, sodium bicarbonate or crushed limestone. Since neutralization generates heat (exothermic reaction), the reaction can be violent. The acid should be diluted and cooled before attempting to neutralize. Spills must be neutralized and federal, state and local regulations must be consulted before flushing to sewer. For small spills, take up with sand or other absorbent material and react with dry alkali (soda ash or lime). Place into containers for later disposal. Adhere to federal, state and local regulations on reporting releases.

Waste disposal method: Landfill or neutralize in accordance with federal, state and local environmental regulations.

SECTION 9 -- SAFE HANDLING AND USE INFORMATION

Respiratory Protection: Use NIOSH/MSHA approved acid-gas respirator for areas where airborne exposure is excessive. Do not exceed the working limits of the respirator.

Ventilation: Provide good general room ventilation to keep workroom concentration below current applicable OSHA safety and health requirements (Section 2). Use local exhaust ventilation at points of vapor emission.

Protective Gloves: Wear protective gloves, such as rubber or neoprene, to minimize skin contact.

Eye Protection: Chemical safety goggles and a full faceshield to prevent contact.

Other Protective Equipment: Eye wash facility should be in close proximity. Use of rubberized coveralls, rubber shoes, and emergency shower availability are recommended.

SECTION 10 -- SPECIAL PRECAUTIONS

Dept. of Labor Storage Category:	Non-flammable liquid.
Hygienic Practices:	Wash thoroughly after contact. Wash protective clothing prior to re-use.
Additional Precautions:	Do not get in eyes or on skin or clothing. Avoid breathing vapors. Keep containers closed. Protect containers from physical damage. Store in cool, well ventilated place, separate from all oxidizing materials. Keep lights, fire and sparks away from container openings.
Empty Container Warning:	"Empty" containers contain hazardous acid vapor or liquid; never add to, mix or store any other product in any container that contains or has contained hydrochloric acid. Mixing hydrochloric acid with some commonly available chemicals and some household products, such as bleach, can cause a violent reaction or the evolution of poisonous or explosive gases.

SECTION 11 -- ADDITIONAL INFORMATION

This product contains the following toxic chemical(s) which are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:

TOXIC CHEMICAL	CAS #	APPROXIMATE % BY WEIGHT
Hydrochloric Acid	7647-01-0	31.45%

SARA Title III Hazard Categories:	Immediate (Acute) Health Hazard
Common Names:	Hydrogen Chloride Solution, HCl, Aqueous Solution of Hydrochloric Acid, Muriatic Acid
California Proposition 65:	This product contains trace amounts of chemicals known to the State of California to cause cancer, and trace amounts of chemicals known to the State of California to cause birth defects or other reproductive harm.

TRANSPORTATION

U.S. D.O.T. Proper Shipping Name:	Hydrochloric Acid, Solution
U.S. D.O.T. Hazard Class & Packing Group:	8, PG II
U.S. D.O.T. I.D. Number:	UN 1789
U.S. D.O.T. Hazardous Substance:	Hydrochloric Acid RQ 5000 lbs.

Refer to 49 CFR for possible exceptions and exemptions.



Material Safety Data Sheet

Issue Date: February 25, 2010

Revised Date: August 25, 2014

Reason: Removed item no's.

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product name: Super Lube® Dri-Film Aerosol

Product use: Lubricant

Company address:

Synco Chemical Corporation
24 DaVinci Dr., P.O. Box 405
Bohemia, NY 11716

Contact Information:

Telephone: 631-567-5300
Emergency telephone: 800-424-9300
Internet: www.super-lube.com
E-Mail: info@super-lube.com

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Physical state: Aerosol

Color: Translucent

Odor: Aliphatic

WHMIS hazard class: A, B.5

HMIS RATING: Health: 1
Fire: 4
Physical: 0



DANGER:

EXTREMELY FLAMMABLE AEROSOL

KEEP AWAY FROM HEAT/SPARKS/OPEN FLAMES/HOT SURFACES. – NO SMOKING.
DO NOT SPRAY ON AN OPEN FLAME OR OTHER IGNITION SOURCE.
PRESSURIZED CONTAINER: DO NOT PIERCE OR BURN EVEN AFTER USE.
PROTECT FROM SUNLIGHT. DO NOT EXPOSE TO TEMPERATURES EXCEEDING
50°C/122°F

Relevant routes of exposure:

Skin, Inhalation, Eyes

Potential Health Effects

Inhalation:

Vapors and mists will irritate the respiratory tracts and nasal passages. Overexposure may cause nervous system depression. Extreme overexposure may result in unconsciousness and possibly death.

Skin contact:

Irritating to skin.

Eye contact:

Contact with eyes may cause irritation.

Ingestion:






Not expected under normal conditions of use.

Existing conditions aggravated by exposure:

None generally recognized.

See Section 11 for additional toxicological information.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Hazardous Components</u>	<u>%</u>	<u>ACGIH TLV</u>	<u>OSHA PEL</u>	<u>OTHER</u>
Hexane 110-54-3	27-32	50 ppm TLV	176 mg/m ³ TWA	None
 Xn,  F,  N; R11-38-48/20-62-65-67-51/53				
Propane 74-98-6	27-32	1000 ppm TWA	1800mg/ m ³	None
 F+; R12				
Butane 106-97-8	27-32	1000 ppm TWA	2400mg/ m ³	None
 F+; R12				

Additional information: For the wording of the listed risk phrases refer to section 16.

Other components

Polytetrafluoroethylene 9002-84-0	3-5	Not established	Not established	None
Carbon Dioxide 124-38-9	1-3	5000 ppm TWA	9100mg/ m ³	None
Proprietary Additives	1-2	Not established	Not established	None

4. FIRST AID MEASURES

Inhalation:	Remove to fresh air. Restore breathing.
Skin contact:	After contact with skin, wash immediately with plenty of water. Immediately flush skin with plenty of water (using soap, if available). Get medical attention if symptoms develop and persist.
Eye contact:	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.
Ingestion:	Do not induce vomiting. Get medical attention immediately.
Notes to physician:	Treatment:

5. FIRE-FIGHTING MEASURES

Flash point: (Concentrate) -10°C (Propellant) -156°F

Autoignition temperature: Not available

Flammable/Explosive limits-lower %: 1.1 (vol %)

Flammable/Explosive limits-upper %: 9.5 (vol %)

Extinguishing media: Carbon dioxide (CO₂). Dry chemical. Foam.

Special fire fighting procedures: Water spray may be ineffective. Water should be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

Unusual fire or explosion hazards: Closed containers may rupture (due to build up of pressure) when exposed to temperatures exceeding 120°F (48.9°C).

Hazardous combustion products: Oxides of carbon.

Sensitivity to mechanical impact: Not available

Sensitivity to static discharge: Not available

6. ACCIDENTAL RELEASE MEASURES

Environmental precautions: No information available

Clean-up methods: Remove all ignition sources. Ventilate area. Soak up with inert absorbent.

7. HANDLING AND STORAGE

Handling: Use only with adequate ventilation. Avoid contact with eyes, skin and clothing. Do not breathe mist or vapors.

Storage: Do not puncture, incinerate, or expose to temperatures above 48.9° C (120° F). Heat from sunlight, radiators, stoves, hot water, and other heat sources could cause containers to burst.

Incompatible products: None reasonably foreseeable.

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering controls:	Local exhaust ventilation is recommended when general ventilation is not sufficient to control airborne contamination below occupational exposure limits.
Respiratory protection:	If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH.
Skin protection:	Chemical resistant, impermeable gloves.
Eye/face protection:	Safety glasses with side-shields.

See Section 3 for exposure limits.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Aerosol
Color:	Translucent
Odor:	Aliphatic
Odor Threshold:	Not available
Vapor pressure:	5.0 – 5.5 BAR @ 20° C
pH:	Not applicable
Boiling point/range:	Not available
Melting point/range:	Not available
Specific gravity:	Not available
Vapor density:	Heavier than air
Evaporation rate:	Faster than ether
Solubility in water:	Not soluble
Partition coefficient (n-octano/water):	Not available
VOC content:	99.2%

10. STABILITY AND REACTIVITY

Stability:	Stable
Hazardous polymerization:	Will not occur.
Hazardous decomposition products:	None under normal use.
Incompatibility:	None known.
Conditions to avoid:	Heat, flames and sparks.

11. TOXICOLOGICAL INFORMATION

Product toxicity data: Not available

Toxicologically synergistic products: Not available

Refer to the following for irritancy of Product, Sensitization to Product, Carcinogenicity, Reproductive Toxicity, Teratogenicity, and Mutagenicity.

Ingredient Toxicity Data & Carcinogen Status

Hazardous components	LD50s & LC50s	Other LD50s and LC50s	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen	ACGIH-Carcinogen
Hexane 110-54-3	Inhalation LC50 (Rat) = 620 g/m ³	Oral Rat, LD50,25gm/kg	No	No	No	No
Propane 74-98-6	Inhalation LC50 (Rat) = 800000 ppm/15 min.		No	No	No	No
Butane 109-97-8	Inhalation LC50 (Rat) = 658 g/m ³ /4hrs		No	No	No	No
Other components						
Polytetrafluoroethylene 9002-84-0	Not determined	None	No	No	No	No
Carbon Dioxide 124-38-9	Inhalation LC50 Human = 100000 ppm/min.	None	No	No	No	No
Proprietary Additives	Not determined	None	No	No	No	No

Literature Referenced Target Organ & Other Health Effects

Hazardous components	Health Effects/Target Organs
Hexane 110-54-3	Central nervous system, respiratory system, eyes, skin, peripheral nervous system, testes.
Propane 74-98-6	Central nervous system
Butane 109-97-8	Central nervous system
Other components	
Polytetrafluoroethylene 9002-84-0	Irritant
Carbon Dioxide 124-38-9	Harmful by inhalation
Proprietary Additives	Not determined

12. ECOLOGICAL INFORMATION

Ecological information: Not available

13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Dispose of in accordance with federal and local regulations.

14. TRANSPORT INFORMATION

Transportation of Dangerous Goods – Ground:

Proper shipping name:	Limited Quantity
Hazardous class or division:	None
Identification number:	None
Packing group:	None

International Air Transportation (ICAO/IATA):

Proper shipping name:	Aerosols, Flammable
Hazardous class or division:	2.1
Identification number:	UN 1950
Packing group:	Y203
Exceptions:	(Not more than 500 ml) May qualify as Consumer Commodity ID8000

Water Transportation (IMO/IMDG):

Proper shipping name:	Aerosols, LTD. QTY.
Hazardous class or division:	2
Identification number:	UN 1950
Packing group:	None
Marine pollutant:	None

15. REGULATORY INFORMATION

Labeling according to EU guidelines: The product has been classified and marked in accordance with EU Directives/Ordinance on Hazardous Materials.

Code letter and hazard designation of product:

F+ Extremely flammable.

N Dangerous for the environment.

Xn Harmful.

Risk phrases:

12 Extremely flammable.

51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation.

38 Irritating to skin.
62 Possible risk of impaired fertility.
67 Vapors may cause drowsiness and dizziness.

Safety phrases:

3/7 Keep container tightly closed in a cool place.
16 Keep away from sources of ignition-No smoking.
23 Do not breathe fumes/aerosol.
51 Use only in well ventilated areas.

Special labeling of certain preparations:

Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C.
Do not pierce or burn even after use.
Keep out of reach of children.

National regulations:

Water hazard class:

Water hazard class 1 (Self-assessment): slightly hazardous for water.

Canada Regulatory Information

CEPA DSL/NDSL Status: All components are listed on or are exempt from listing on the Domestic Substances List.

United States Regulatory Information

TSCA 8 (b) Inventory Status: All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.

SECTION 16: OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Product Regulations.

Relevant R-phrases:

12 Extremely flammable
38 Irritating to skin.
51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
65 Harmful: may cause lung damage if swallowed.
67 Vapors may cause drowsiness and dizziness.

Data prepared by Environment protection department.

1. PRODUCT NAME

TEC[®] Invision[®] Ready To Use Sanded Adhesive and Grout

2. MANUFACTURER

H.B. Fuller Construction Products Inc.
1105 South Frontenac Street
Aurora, IL 60504-6451 U.S.A.
800.772.8665 Customer Support
800.942.9876 Fax
www.tecinvision.com

3. DESCRIPTION

TEC[®] Invision[®] ready to use sanded adhesive and grout is formulated to set and grout ceramic tile on walls and floors. Best for small tile jobs or repairs.

Key Benefits and Features

- For grouting joints 1/8 in. to 3/16 in.
- For bonding ceramic tile up to 8 in. x 8 in.
- Product is mold and mildew resistant

Packaging

1 quart plastic pail
Available color: White (36012)

Coverage

Coverage will vary with type of substrate. Typical wall installation: 4-6 sq. ft.; Floors: 3-5 sq. ft.

Suitable Substrates

Use only on structurally sound interior surfaces such as cured portland cement plaster, gypsum wallboard (*walls only*), exterior grade plywood (*floors only, over two 5/8 in. layers, joists 16 in. on center*), Cementitious backer units, fiber cement underlayment, coated glass mat backer board, well cured, moisture tested concrete not subject to dampness or moisture vapor emissions. **Installations where concrete is damp or the concrete is subject to moisture vapor emissions can fail.**

Storage

Store in a cool, dry location - **Indoors only**. Protect from freezing. Adhesive is freeze thaw stable to -10°F. Avoid prolonged or repeated freeze thaw cycles. Should adhesive freeze, allow to thaw at room temperature and stir well before using.

Shelf Life

Maximum of 1 year from date of manufacture in unopened package. Bucket good for 6 months after opening. (Re-seal and store in cool, dry location, use within shelf life. Covering with plastic wrap directly on top of product prior to sealing container will help to preserve freshness.)

Limitations

- Not for use in conjunction with PVC heating mats or coils, or over polyethylene membranes.
- Not for use over anti-fracture & waterproofing membranes, sheets or mats.
- Not for bonding tile greater than 8 in. x 8 in.
- Not ideal for grouting countertops.

- Not for grouting over existing epoxy grout.
- Not for use in showers, in steam rooms, in steam showers, swimming pools, or any place that will receive standing water.
- Not for use for leveling or in excess of trowel recommendations.
- Not for exterior use.
- Not for use where temperature will exceed 120°F.
- Not for use over lauan, MDF, particleboard, or Masonite[®].
(See **Suitable Substrates**.)
Masonite is a registered trademark of Masonite Corporation.
- Not for use with green marble, or to install resin backed marble or resin backed aggregate marble. Not for setting any marble over plywood floors or plywood countertops.
- Not for use with lug back floor tile.
- Not for setting ceramic accessories such as towel bars, soap dishes, and grab bars.
- Not to be used underneath most backer boards.
(Check manufacturer instructions.)

NOTE: Sealer for grout not required. If desired, may use one light coat of a water-based sealer.

Cautions

FIRST AID MEASURES: In all cases, seek medical attention if symptoms develop or persist. EYES: Flush with water for 20 minutes. SKIN: Wash with soap and water. IF VAPORS INHALED: Remove to fresh air. IF SWALLOWED: Do not induce vomiting. WARNING! This product contains chemicals known to the State of California to cause cancer, birth defects or reproductive harm. KEEP OUT OF REACH OF CHILDREN. For Medical Emergency Information, call 1-888-853-1758.

This Product Data Sheet has been prepared in good faith on the basis of information available at the time of publication. It is intended to provide users with information about and guidelines for the proper use and application of the covered TEC[®] Invision[®] brand product(s) under normal environmental and working conditions. Because each project is different, H.B. Fuller Construction Products Inc. cannot be responsible for the consequences of variations in such conditions, or for unforeseen conditions.

4. TECHNICAL DATA

Applicable Standard

Meets ANSI A136.1, type I specification.

TEC [®] Invision [®] Ready To Use Sanded Adhesive and Grout		
Description	ANSI Requirement	Typical Results
Shear Strength		
Conditioned Dry	> 50 psi (.34 MPa)	Passes
28 Day, Room Temperature	> 50 psi (.34 MPa)	Passes
Type I Water Immersion	> 50 psi (.34 MPa)	Passes
After Accelerated Heat Aging	> 75% dry shear strength retention	Passes
Heat Resistance	Maintains at least 10 lb. (4.5 kg) static load in shear at 120°F (49°C) for 24 hours	Passes
Impact Test	All tiles remained bonded after impact	Passes
Stain Test	< 70% penetration	Passes
Stability in Storage	4 weeks minimum	Passes
Resistance to Mold Growth	No mold growth	Passes

TEC® Invision® Ready To Use Sanded Adhesive and Grout

Physical Properties

Description	
Base	Acrylic copolymer latex
Physical State	Paste
Color	White
Odor	Nil
Open Time [at 72°F (22°C)]	48 to 72 hours depending on humidity and temperature
Initial Cure	24 hours
Final Cure	7 days
Wt./U.S. Gallon	11.4 lbs. ± .2 lbs.
VOC/Liter of Material	24 grams (calculated); 31 grams less water
Foot Traffic Rating (ASTM C627)	Residential to light commercial
Storage	Store in cool, dry location. Do not store open containers. Freeze/thaw stable.
Shelf Life	Maximum 1 year from date of manufacture in properly stored, unopened package.

5. INSTALLATION INSTRUCTIONS

Surface Preparation

For use as an adhesive: All surfaces must be clean, dry, free of dirt, dust, grease, oil, loose paint, wallpaper, and residues of old adhesive, or any foreign matter which might impair adhesion where TEC Invision adhesive and grout is spread. Painted enameled walls and floors must be thoroughly scored or sanded to insure a bond to the original base wall or floor. Do not sand any floors or adhesives that are known or suspected to contain asbestos. **Installations where concrete is damp or the concrete is subject to moisture vapor emissions can fail.**

For use as a grout: Area must be clean, dry, free of dirt and dust. Grout joint should be free of sealers.

Application

For use as an adhesive:

1. Spread adhesive with flat side of trowel. Then comb with notched side.
2. If adhesive starts to skin over, re-trowel.
3. Press tile into adhesive. Periodically remove and check a tile to ensure complete coverage.
4. Wipe excess off tile with damp sponge - do not let dry on surface of tile.
5. Before grouting, tiles must be firmly set. If this product was used as adhesive, set time is at least 24 hours for tiles 4 in. x 4 in. or smaller. Larger tile may take 48 hours or more.

For use as a grout:

1. Press grout into joints using short side of float at 45° angle.
2. Holding at 90° angle, draw diagonally across tile to remove excess grout. Shrinkage may occur during drying, so leave joints full.
3. Clean excess off tile using damp sponge in circular motion; do not let dry on surface of tile.
4. If haze remains on surface, clean next day with damp sponge.
5. Shrinkage may occur while curing or drying. A second application may be applied if necessary after 24 hours.

For use over existing grout:

To install, existing premixed or cementitious grout must be clean, sealer free, and 1/8 inch lower than tile surface. If not: Remove existing grout with a grout saw to at least 1/8 inch below the surface of the tile.

Make sure the joint is free of all dust and debris, then apply grout per instructions above.

Clean-up

Clean tools with water before material dries. Wash hands with soap and water.

6. WARRANTY

For details about our limited warranties, see your sales associate or www.tecinvision.com.

7. TECHNICAL SERVICES

Technical assistance

Information is available by calling the Technical Service Helpline.

Toll Free: 1-866-773-7047

Fax: 1-847-776-4452

Technical and safety literature

To acquire technical and safety literature, please visit our website at www.tecinvision.com.

MATERIAL SAFETY DATA SHEET

REVISION DATE: 05-14-2008

SUPERSEDES: 12-26-2007

SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

COMPANY INFORMATION

H.B. Fuller Construction Products Inc.
(formerly Specialty Construction Brands, Inc.
An H.B. Fuller Company)
1105 S. Frontenac Street
Aurora, IL 60504
Phone: 1-800-323-7407

Medical Emergency Phone Number (24 Hours): 1-888-853-1758
Transport Emergency Phone Number (CHEMTREC): 1-800-424-9300

PRODUCT INFORMATION

PRODUCT IDENTIFIER: 826172PM
PRODUCT NUMBER: INVISION UNIVERSAL ADHESIVE
PRODUCT DESCRIPTION: White type I mastic

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

Unlisted ingredients are not 'hazardous' per the Occupational Safety and Health Administration Hazard Communication Standard (29 CFR 1910.1200) and/or are not found on the Canadian Workplace Hazardous Materials Information System ingredient disclosure list. See Section 8 for exposure limit guidelines.

Chemical Name	CAS #	PERCENT	OSHA PEL
Glass oxide, bubbles	65997-17-3	10 - 30	TWA 6 MG/M3
Calcium carbonate	471-34-1	10 - 30	TWA (Total dust) 15 MG/M3 TWA (Respirable dust) 5 MG/M3
Aluminum hydroxide	21645-51-2	10 - 30	TWA (as Al) Soluble 2 MG/M3
Zinc oxide	1314-13-2	5 - 10	TWA Fume 5 MG/M3 TWA (Total dust) 10 MG/M3 TWA (Respirable dust) 5 MG/M3 STEL Fume 10 MG/M3
Stoddard solvent	8052-41-3	1 - 5	TWA 100 ppm
Crystalline silica	14808-60-7	0.1 - 1	TWA (Respirable dust) 0.1 MG/M3

SECTION 3: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Cancer hazard.

HMIS RATING: HEALTH -- 0 FLAMMABILITY -- 0 REACTIVITY -- 0

MATERIAL SAFETY DATA SHEET

See SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for personal protective equipment recommendations.

POTENTIAL HEALTH EFFECTS BY ROUTE OF ENTRY

EYE: Can cause minor irritation, tearing and reddening.

SKIN: Can cause minor skin irritation, defatting, and dermatitis.

INHALATION: Can cause minor respiratory irritation. Inhalation of dusts produced during cutting, grinding or sanding of this product may cause irritation of the respiratory tract.

Inhalation of high concentrations may result in central nervous system (CNS) effects such as dizziness, weakness, fatigue, nausea, headache, and lack of coordination. Overexposure to crystalline silica may cause silicosis.

This product contains one or more materials that may be hazardous when present as an airborne dust. During normal handling of the product, the material is encapsulated within the product and will not present an exposure risk. Once the product has reached its final state and is abraded or disturbed, dusting and exposure may occur.

INGESTION: Ingestion is not an anticipated route of exposure. Mildly irritating to mouth, throat, and stomach. Can cause abdominal discomfort.

LONG-TERM (CHRONIC) HEALTH EFFECTS

TARGET ORGAN(S): Lungs Kidneys Central nervous system

REGULATED CARCINOGEN STATUS:

Unless noted below, this product does not contain regulated levels of NTP, IARC, ACGIH, or OSHA listed carcinogens.

Crystalline silica

EXISTING HEALTH CONDITIONS AFFECTED BY EXPOSURE: Lung disease; Kidney disease

SECTION 4: FIRST AID MEASURES

IF IN EYES: Use an eye wash to remove a chemical from your eye regardless of the level of hazard. Flush the affected eye for at least twenty minutes. Tilt the head to prevent chemical from transferring to the uncontaminated eye. Seek medical advice after flushing.

IF ON SKIN: Wash with soap and water. Get medical attention if irritation develops or persists.

IF VAPORS INHALED: Remove to fresh air. Call a physician if symptoms persist.

IF SWALLOWED: Minimal risk of harm if swallowed. Do not induce vomiting. Seek medical attention immediately. Do not give anything by mouth to an unconscious person.

SECTION 5: FIRE FIGHTING MEASURES

FLASH POINT:	Non flammable
AUTOIGNITION TEMPERATURE:	Not established
LOWER EXPLOSIVE LIMIT (% in air):	Not established
UPPER EXPLOSIVE LIMIT (% in air):	Not established
EXTINGUISHING MEDIA:	Use water spray, foam, dry chemical or carbon dioxide.
UNUSUAL FIRE AND EXPLOSION HAZARDS:	There is a possibility of pressure buildup in closed containers when heated. Water spray may be used to cool the containers.
SPECIAL FIRE FIGHTING INSTRUCTIONS:	Persons exposed to products of combustion should wear self-contained breathing apparatus and full protective equipment.
HAZARDOUS COMBUSTION PRODUCTS:	Carbon dioxide, Carbon monoxide Metal fumes

SECTION 6: ACCIDENTAL RELEASE MEASURES

SPECIAL PROTECTION: No adverse health effects expected from the clean-up of spilled material. Follow personal protective equipment recommendations found in Section 8 of this MSDS.

MATERIAL SAFETY DATA SHEET

CLEAN-UP: Dike if necessary, contain spill with inert absorbent and transfer to containers for disposal. Keep spilled product out of sewers, watersheds, or water systems.

Transport Emergency Phone Number (CHEMTREC): 1-800-424-9300

SECTION 7: HANDLING AND STORAGE

Handling: No special handling instructions due to toxicity.
Storage: Store in a cool, dry place.

Consult the Technical Data Sheet for specific storage instructions.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

EYE PROTECTION: Wear safety glasses when handling this product.
SKIN PROTECTION: Avoid skin contact by wearing chemically resistant gloves.
GLOVES: Not normally required. Use nitrile gloves if conditions warrant.
RESPIRATORY PROTECTION: Respiratory protection may be required to avoid overexposure when handling this product. Use a respirator if general room ventilation is not available or sufficient to eliminate symptoms. Respirators should be selected by and used following requirements found in OSHA's respirator standard (29 CFR 1910.134).
VENTILATION: Use local exhaust ventilation or other engineering controls to minimize exposures.

EXPOSURE LIMITS:

Chemical Name	ACGIH EXPOSURE LIMITS	AIHA WEEL
Glass oxide, bubbles	TWA 10 MG/M3	Not established
Calcium carbonate	TWA 10 MG/M3	Not established
Aluminum hydroxide	TWA (as Al) Soluble 2 MG/M3	Not established
Zinc oxide	TWA (Respirable dust) 2 MG/M3 STEL (Respirable dust) 10 MG/M3	Not established
Stoddard solvent	TWA 100 ppm	Not established
Crystalline silica	TWA (Respirable dust) 0.025 MG/M3	Not established

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: Semi-solid
COLOR: White

MATERIAL SAFETY DATA SHEET

ODOR:	Slight Indistinct
ODOR THRESHOLD:	Not established
WEIGHT PER GALLON (lbs.):	8.00
SPECIFIC GRAVITY:	0.96
SOLIDS (% by weight):	69.1
pH:	8.9
BOILING POINT (deg. C):	Not established
FREEZING/MELTING POINT (deg. C):	Not established
VAPOR PRESSURE (mm Hg):	Not established
VAPOR DENSITY:	Not established
EVAPORATION RATE:	Not established
OCTANOL/WATER COEFFICIENT:	Not established

SECTION 10: STABILITY AND REACTIVITY

STABILITY:	Stable under normal conditions.
CHEMICAL INCOMPATIBILITY:	Strong oxidizing agents
HAZARDOUS POLYMERIZATION:	Will not occur.
HAZARDOUS DECOMPOSITION PRODUCTS:	Carbon monoxide, carbon dioxide Metal fumes

SECTION 11: TOXICOLOGICAL INFORMATION

CHEMICAL NAME	LD50/LC50
Glass oxide, bubbles	Not established
Calcium carbonate	Oral LD50 Rat = 6450 mg/kg
Aluminum hydroxide	Not established
Zinc oxide	Oral LD50 Mouse > 950 mg/kg Inhalation LC50 Mouse = 2500 mg/cu m (no duration specified)
Stoddard solvent	Not established
Crystalline silica	Not established

TOXICOLOGY SUMMARY: No additional health information available.

SECTION 12: ECOLOGICAL INFORMATION

OVERVIEW: No ecological information available

SECTION 13: DISPOSAL CONSIDERATIONS

To the best of our knowledge, this product does not meet the definition of hazardous waste under the U.S. EPA Hazardous Waste Regulations 40 CFR 261. Solidify and dispose of in an approved landfill. Consult state, local or provincial authorities for more restrictive requirements.

SECTION 14: TRANSPORTATION INFORMATION

Consult Bill of Lading for transportation information.

MATERIAL SAFETY DATA SHEET

DOT: NOT REGULATED
IATA: NOT REGULATED

SECTION 15: REGULATORY INFORMATION

INVENTORY STATUS

U.S. EPA TSCA: This product is in compliance with the Toxic Substances Control Act's Inventory requirements.

CANADIAN CEPA DSL: The components of this product are included on the DSL or are exempt from DSL requirements.

EUROPEAN EINECS: All substances contained in this product meet the requirements of the REACH regulation implemented in the European Union.

If you need more information about the inventory status of this product call 651-236-5858.

This product may contain chemical substances that are regulated for export by various government agencies (such as the Environmental Protection Agency, the Bureau of Industry and Security, or the Drug Enforcement Administration, among others). Before exporting this product from the USA or Canada, we recommend you contact us at 651-236-5858 (USA) or 450-655-1306 x227 (Canada) to request an export review.

FEDERAL REPORTING

EPA SARA Title III Section 313

Unless listed below, this product does not contain toxic chemical(s) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) and 40 CFR part 372. EPA has advised that when a percentage range is listed the midpoint may be used to fulfill reporting obligations.

Chemical Name	CAS#	%
Zinc compounds	1314-13-2	5 - 10

WHMIS STATUS: Unless listed below, this product is not controlled under the Canadian Workplace Hazardous Materials Information System.

D2B D2A

STATE REPORTING

Proposition 65, The Safe Drinking Water and Toxic Enforcement Act of 1986:

Unless listed below, this product does not contain known levels of any chemical known to the State of California to cause cancer or reproductive harm.

Chemical Name/List	CAS	Percent
Quartz (Carcinogen)	14808-60-7	0.1 - 1
Formaldehyde (Carcinogen)	50-00-0	0.001 - 0.01
Benzene (Carcinogen)	71-43-2	0.001 - 0.01
Acrylamide (Carcinogen)	79-06-1	< 10 ppm
Cadmium (Carcinogen)	7440-43-9	< 10 ppm
Ethyl acrylate (Carcinogen)	140-88-5	< 10 ppm
1,4-Dioxane (Carcinogen)	123-91-1	< 10 ppm
Lead (Carcinogen)	7439-92-1	< 10 ppm
Lead compounds (Carcinogen)		< 10 ppm
Arsenic compounds (inorganic) (Carcinogen)		< 10 ppm
Acrylonitrile (Carcinogen)	107-13-1	< 10 ppm
Benzene (Developmental toxin)	71-43-2	0.001 - 0.01
Cadmium (Developmental toxin)	7440-43-9	< 10 ppm
Lead (Developmental toxin)	7439-92-1	< 10 ppm
Lead (Female reproductive toxin)	7439-92-1	< 10 ppm
Benzene (Male reproductive toxin)	71-43-2	0.001 - 0.01
Cadmium (Male reproductive toxin)	7440-43-9	< 10 ppm
Lead (Male reproductive toxin)	7439-92-1	< 10 ppm

MATERIAL SAFETY DATA SHEET

SECTION 16: ADDITIONAL INFORMATION

This Material Safety Data Sheet is prepared to comply with the United States Occupational Safety and Health Administration (OSHA) Hazard Communication Standard (29 CFR 1910.1200) and the Canadian Workplace Hazardous Materials Information System (WHMIS).

Prepared by: The Global Regulatory Department
Phone: 651-236-5842

The information and recommendations set forth herein are believed to be accurate. Because some of the information is derived from information provided to Specialty Construction Brands, Inc. from its suppliers, and because Specialty Construction Brands, Inc. has no control over the conditions of handling and use, Specialty Construction Brands, Inc. makes no warranty, expressed or implied, regarding the accuracy of the data or the results to be obtained from the use thereof. The information is supplied solely for your information and consideration, and Specialty Construction Brands, Inc. assumes no responsibility for use or reliance thereon. It is the responsibility of the user of Specialty Construction Brands, Inc. products to comply with all applicable federal, state and local laws and regulations.

MATERIAL SAFETY DATA SHEET**NFPA RATING:** Health = 2

Flammability = 0

Reactivity = 0

HMIS RATING: Health = 2

Flammability = 0

Reactivity = 0

SECTION I -- IDENTITY AND MANUFACTURER'S INFORMATION

(559N53A)

Manufacturer's Name: HILLYARD INDUSTRIES**Product Name:** TILE AND GROUT CLEANER/RENOVATOR**Address:** 302 North Fourth Street**Date Prepared:** January 6, 2012 (version 2)

St. Joseph, MO 64501

Prepared by: Regulatory Affairs Department**Emergency Telephone No.:** (800) 424-9300 (Only in the event of chemical emergency involving a spill, leak, fire, exposure or accident involving chemicals.)**Other information calls:** (816) 233-1321 (Ext. 8285)<http://www.hillyard.com>**SECTION II -- INGREDIENTS/IDENTITY INFORMATION****Components****(Specific Chemical Identity:**

Common Name(s)	CAS#	OSHA PEL	ACGIH TLV	OTHER LIMITS RECOMMENDED	%
Phosphoric acid* ⁽¹⁾	7664-38-2	1 mg/M ³	1 mg/M ³	3 mg/M ³	6-12%
Butyl cellosolve (2-Butoxyethanol)* ⁽²⁾	111-76-2	50 ppm	20 ppm	N/A	3-8%
Water	7732-18-5	none	None	N/A	---
Dodecyl Benzene Sulfonic Acid	1886-81-3	N/E	N/E	N/A	---

*This product contains the following chemicals subject to the reporting requirements of SARA Title III, Sec. 313, and 40 CFR Part 372: Phosphoric acid and 2-Butoxyethanol.

⁽¹⁾ Regulated by OSHA, CT, DE, FL, ID, IL, LA, MA, MN, NJ, NY, PA, RI, WA, WI.⁽²⁾ Regulated by OSHA, FL, ID, IL, LA, MA, MN, NJ, PA, RI, WA, WI.

VOC less water = 305 g/l.

N/A= Not Applicable N/E= Not Established

SECTION III -- PHYSICAL / CHEMICAL CHARACTERISTICS*Boiling Point:** 210°F**Specific Gravity (H₂O = 1):** 25°C = 01.04 ***Density=** 8.66 lbs/gl.**Vapor Pressure (mm Hg.):** 17.2***Percent Volatile by Weight (%):** 86.5 – 87.5%**Vapor Density (AIR = 1):** 0.9**Evaporation Rate (ethyl ether = 1):** slower than 1**Solubility in Water:** complete**Appearance and Odor:** Clear, blue liquid, Mint odor***pH (concentrate)** = 0 – 1.5; when diluted 1:35 with water pH -1.48**SECTION IV -- FIRE AND EXPLOSION HAZARD DATA****Flash point:** None to Boiling (T.C.C.) **Flammable Limits:** LEL = 1.1% UEL = N.A.**Extinguishing Media:** Foam, dry chemical, carbon dioxide, water spray.**Special Fire Fighting Procedures:** Hot phosphoric acid is corrosive. Self contained breathing apparatus and protective clothing should be worn in fighting fires involving chemicals.**Unusual Fire and Explosion Hazards:** May generate hydrogen gas in contact with some metals.**SECTION V -- PHYSICAL HAZARDS****Stability:** Stable **Conditions to Avoid:** None known to manufacturer.**Incompatibility (Materials to Avoid):** Corrodes some metals and alloys; cyanides and strong alkalies (ammonia), bleach or hypochlorites.**Hazardous Decomposition Products or Byproducts:** Hydrogen gas from contact with some metals.**Hazardous Polymerization:** Will not Occur **Conditions to Avoid:** N.A.**SECTION VI -- HEALTH HAZARD DATA****Routes of entry:** Inhalation? by mist Skin? yes Ingestion? yes**HEALTH HAZARDS (1. Acute and 2. Chronic)**

1. According to Primary Skin Irritation Test (FHSA), product concentrate is corrosive on prolonged exposure; Eye Irritation Test (FHSA) = eye irritant. When tested as specified this product was not considered to be a UN/DOT corrosive at 4 hours. Prolonged skin contact may cause skin burns. Spray mist may irritate nose and throat. Harmful or fatal if swallowed.

2. Chronic local effects may consist of multiple areas of superficial destruction of skin or dermatitis.

Chemical listed as Carcinogen or Potential Carcinogen:**National Toxicology Program** = No **I.A.R.C. Monographs** = No **OSHA** = No

This product has no carcinogens listed by IARC, NTP, NIOSH, or ACGIH as of this date, greater than or equal to 0.1%.

SECTION VI -- HEALTH HAZARD DATA cont.

Signs and Symptoms of Exposure: Contact: eye irritation and/or burns of skin, and on mouth and lips after ingestion, with sour taste of acid, severe gastrointestinal irritation, nausea, vomiting, bloody diarrhea. Butyl cellosolve is readily absorbed through the skin in toxic amounts. Inhalation of high concentrations of vapors may result in respiratory and eye irritation, narcosis, headache, nausea, dizziness, hematuria and damage to liver and kidneys.

Medical Conditions Generally Aggravated by Exposure: Repeated over exposure to butyl cellosolve may result in damage to the blood, hemolysis, hemoglobinuria.

Emergency and First Aid Procedures: **Eyes:** immediately flush eyes with plenty of water for 15 minutes. For eyes, CALL A PHYSICIAN immediately. **Skin:** Flush skin with plenty of water for 15 minutes. If skin irritation persists, get medical attention. Remove and wash all contaminated clothing before reuse. **Ingestion:** If swallowed, immediately give large of water and call a physician, hospital emergency room or poison control center. If excess inhaled, remove to fresh air.

SECTION VII -- PRECAUTIONS FOR SAFE HANDLING AND USE

Steps To Be Taken In Case Material Is Released Or Spilled: Absorb with floor dry or similar inert material. Sweep or scrape up and put in appropriate container. Rinse spill area thoroughly with water. Avoid contamination of storm drains, sewers, or other unauthorized treatment drainage systems and natural waterways.

Waste Disposal Method: Disposal is regulated under the Resource Conservation and Recovery Act (40 CFR 261.22) as a corrosive waste. Regulated quantities should be neutralized by a permitted facility in accordance with applicable local, state, and federal regulations.

Precautions To Be Taken In Handling And Storing: Product residue may remain on or in empty containers. All precautions for handling the product must be used in handling the empty container or residue. Container disposal: Triple rinse (or equivalent) then offer clean, dry container for recycling or reconditioning. Waste from normal use may be sewer to a public-owned treatment works in compliance with applicable federal, state, and local requirements.

Other Precautions: Avoid breathing fine fog spray mist. Use with adequate ventilation. Open windows and doors, use exhaust fans or other means to insure fresh air entry during application and drying. Refer to OSHA STANDARD 29 CFR 1910.94 for technical guidelines on keeping air contamination below applicable exposure limits. Avoid contact with skin, eyes and clothing. Do not take internally.

SECTION VIII -- CONTROL MEASURES

Respiratory Protection (Specify Type): Not usually necessary. If spraying in a fine fog mist increase ventilation.

Ventilation: At least 3 air exchanges per hour suggest in good public restrooms.

Local Exhaust = Recommended **Mechanical (General)** = Recommended **Special** = N.A. **Other** = N.A.

Protective Gloves: Impervious gloves (Rubber or PVC) **Eye Protection:** Chemical safety goggles.

Other Protective Clothing or Equipment: Not usually necessary

Work / Hygienic Practices: Wash thoroughly after handling. Upon contact remove contaminated clothing; wash before reuse.

SECTION IX - TRANSPORTATION INFORMATION**DOT SHIPPING DESCRIPTION ON BILL OF LADING:**

Applicable regulations: 49 CFR = no; IMCO = no; IATA = no .

Proper shipping name: Cleaning compound

UN No.: not applicable **Limited Qty.:** not applicable **Hazard Class:** not applicable

Labels required: none **DOT Exception:** not applicable

EPA Hazardous waste number / code: not listed

Hazardous waste characteristics: Ignitability = not applicable; Corrosivity = yes; Reactivity = not applicable

DISCLAIMER OF WARRANTIES

NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR OF ANY NATURE ARE MADE WITH RESPECT TO THE PRODUCT(S) OR INFORMATION CONTAINED IN THIS MATERIAL SAFETY DATA SHEET.

The information and recommendations contained in this Material Safety Data Sheet are supplied pursuant to 29 CFR 1910.1200 of the Occupational Safety and Health Standards Hazard Communication Rule. All information contained herein is presented in good faith and is believed to be appropriate and accurate.

THE BUYER OR USER ASSUMES ALL RISKS ASSOCIATED WITH THE USE, MISUSE OR DISPOSAL OF THIS PRODUCT. THE BUYER OR USER IS RESPONSIBLE TO COMPLY WITH ALL FEDERAL, STATE OR LOCAL REGULATIONS CONCERNING THE USE, MISUSE OR DISPOSAL OF THESE PRODUCTS.

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and
GHS

Printing date 02.05.2014

Revision: 25.04.2014

1 Identification of the substance/mixture and of the company/undertaking

- **1.1 Product identifier**
- **Trade name:** Touch N Foam Home Seal Foam
- **Article number:** EHS 9827
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the mixture** Sealant
- **1.3 Details of the supplier of the Safety Data Sheet**
- **Manufacturer/Supplier:**
Convenience Products, division of Clayton Corp.
866 Horan Drive
Fenton, MO 63026-2416
Phone: 636-349-5855
- **1.4 Emergency telephone number:**
ChemTel Inc.
(800)255-3924, +1 (813)248-0585



2 Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**
The following Hazard Statements are applicable only to the EU regulations and not the US GHS regulation: H222-H229.
The following Hazard Statements are applicable only to the general GHS regulations and not the specific CLP regulation: H222.



H222: Extremely flammable aerosol.



flame

Flam. Aerosol 1 H222-H229 Extremely flammable aerosol. Pressurised container: May burst if heated.



health hazard

Resp. Sens. 1	H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
STOT RE 2	H373	May cause damage to organs through prolonged or repeated exposure.



Acute Tox. 4	H332	Harmful if inhaled.
Skin Irrit. 2	H315	Causes skin irritation.
Eye Irrit. 2	H319	Causes serious eye irritation.
Skin Sens. 1	H317	May cause an allergic skin reaction.

(Contd. on page 2)

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STOT SE 3 H335 May cause respiratory irritation.


· **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**

 Xn; Harmful


R20: Harmful by inhalation.

 Xn; Sensitising

R42/43: May cause sensitisation by inhalation and skin contact.

 Xi; Irritant

R36/37/38: Irritating to eyes, respiratory system and skin.

 F+; Extremely flammable

R12: Extremely flammable.

· **Information concerning particular hazards for human and environment:**

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

Warning! Pressurized container.

· **Classification system:**

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

The classification is in accordance with the latest editions of international substances lists, and is supplemented by information from technical literature and by information provided by the company.

· **2.2 Label elements**

· **Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the CLP regulation.

· **Hazard pictograms**



GHS02 GHS07 GHS08

· **Signal word** Danger

· **Hazard-determining components of labelling:**

diphenylmethanediisocyanate, isomeres and homologues

4,4'-methylenediphenyl diisocyanate

alkenes, C12-24, chloro

· **Hazard statements**

The following Hazard Statements are applicable only to the EU regulations and not the US GHS regulation: H222-H229.

The following Hazard Statements are applicable only to the general GHS regulations and not the specific CLP regulation: H222.

H222: Extremely flammable aerosol.

H222-H229 Extremely flammable aerosol. Pressurised container: May burst if heated.

H332 Harmful if inhaled.

H315 Causes skin irritation.

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- H319 Causes serious eye irritation.
 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
 H317 May cause an allergic skin reaction.
 H335 May cause respiratory irritation.
 H373 May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

- P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
 P251 Pressurized container: Do not pierce or burn, even after use.
 P211 Do not spray on an open flame or other ignition source.
 P280 Wear protective gloves / eye protection.
 P260 Do not breathe mist/vapours/spray.
 P314 Get medical advice/attention if you feel unwell.
 P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER/doctor.
 P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

Additional information:

Contains isocyanates. May produce an allergic reaction.
 Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use.
 Do not spray on a naked flame or any incandescent material. Keep away from sources of ignition - No smoking.
 Buildup of explosive mixtures possible without sufficient ventilation.

Hazard description:
WHMIS-symbols:

- A - Compressed gas
 B5 - Flammable aerosol
 D2A - Very toxic material causing other toxic effects


NFPA ratings (scale 0 - 4)

HMIS-ratings (scale 0 - 4)


* - Indicates a long term health hazard from repeated or prolonged exposures.

HMIS Long Term Health Hazard Substances

9016-87-9	diphenylmethanediisocyanate, isomeres and homologues
101-68-8	4,4'-methylenediphenyl diisocyanate

2.3 Other hazards
Results of PBT and vPvB assessment

PBT: Not applicable.

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· **vPvB:** Not applicable.

3 Composition/information on ingredients

3.2 Mixtures

· **Description:** Mixture of substances listed below with nonhazardous additions.

· **Dangerous components:**

CAS: 9016-87-9	diphenylmethanediisocyanate, isomers and homologues  Xn R20;  Xn R42/43;  Xi R36/37/38 Carc. Cat. 3 -----  Resp. Sens. 1, H334; STOT RE 2, H373  Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335	20-40%
CAS: 68527-02-6 EINECS: 271-247-1	alkenes, C12-24, chloro  Xi R36/37/38 -----  Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335	20-40%
CAS: 101-68-8 EINECS: 202-966-0 Index number: 615-005-00-9	4,4'-methylenediphenyl diisocyanate  Xn R20;  Xn R42/43;  Xi R36/37/38 Carc. Cat. 3 -----  Resp. Sens. 1, H334; STOT RE 2, H373  Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335	10-20%
CAS: 13674-84-5	tris(2-chlorisopropyl)-phosphate R52/53 ----- Aquatic Chronic 3, H412	5-10%
CAS: 72-28-5	Isobutane  F+ R12 -----  Flam. Gas 1, H220	1-5%
CAS: 74-98-6 EINECS: 200-827-9 Index number: 601-003-00-5	propane  F+ R12 -----  Flam. Gas 1, H220  Press. Gas, H280	1-5%
CAS: 8001-22-7 EINECS: 232-274-4	Soybean Oil substance with a Community workplace exposure limit	1-5%
CAS: 115-10-6 EINECS: 204-065-8 Index number: 603-019-00-8	dimethyl ether  F+ R12 -----  Flam. Gas 1, H220  Press. Gas, H280	1-5%
CAS: 6425-39-4	Morpholine 4,4-(oxydi-2)  Xi R36 -----  Eye Irrit. 2, H319	1-5%

· **Additional information:** For the wording of the listed risk phrases refer to section 16.

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4 First aid measures

· 4.1 Description of first aid measures

· General information:

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

Take affected persons out into the fresh air.

· After inhalation:

Supply fresh air; consult doctor in case of complaints.

Provide oxygen treatment if affected person has difficulty breathing.

In case of unconsciousness place patient stably in side position for transportation.

· After skin contact:

Immediately wash with water and soap and rinse thoroughly.

Do not pull solidified product off the skin.

If skin irritation continues, consult a doctor.

· After eye contact:

Immediately remove contact lenses if possible.

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

· After swallowing:

Rinse out mouth and then drink plenty of water.

Do not induce vomiting; call for medical help immediately.

· 4.2 Most important symptoms and effects, both acute and delayed

Asthma attacks

Headache

Breathing difficulty

Allergic reactions

Coughing

Nausea

Gastric or intestinal disorders when ingested.

Irritant to skin and mucous membranes.

Irritant to eyes.

Dizziness

Disorientation

· Hazards

Danger of impaired breathing.

Danger of disturbed cardiac rhythm.

Danger of pneumonia.

Danger of pulmonary oedema.

Danger of convulsion.

· 4.3 Indication of any immediate medical attention and special treatment needed

Severe allergic skin reaction, bronchial spasms and anaphylactic shock are possible.

Treat skin and mucous membrane with antihistamine and corticoid preparations.

In cases of irritation to the lungs, initial treatment with corticoid steroid inhalants.

Monitor circulation.

If necessary oxygen respiration treatment.

Medical supervision for at least 48 hours.

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Trade name: Touch N Foam Home Seal Foam

Contains isocyanates. May produce an allergic reaction.

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5 Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
Water in flooding quantities.
- **For safety reasons unsuitable extinguishing agents:** None.
- **5.2 Special hazards arising from the substance or mixture**
Danger of receptacles bursting because of high vapour pressure when heated.
During heating or in case of fire poisonous gases are produced.
- **5.3 Advice for firefighters**
- **Protective equipment:**
Wear self-contained respiratory protective device.
Do not inhale explosion gases or combustion gases.
Wear fully protective suit.
- **Additional information**
Leaking gas fire: Do not extinguish, unless leak can be stopped safely.
Eliminate all ignition sources if safe to do so.
Cool endangered receptacles with water spray.

6 Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Use respiratory protective device against the effects of fumes/dust/aerosol.
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation
Keep away from ignition sources.
Protect from heat.
Isolate area and prevent access.
Keep people at a distance and stay on the windward side.
- **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**
Allow to solidify. Pick up mechanically.
Send for recovery or disposal in suitable receptacles.
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

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GHS

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Revision: 25.04.2014

Trade name: Touch N Foam Home Seal Foam

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7 Handling and storage

7.1 Precautions for safe handling

Keep away from heat and direct sunlight.
Use only in well ventilated areas.

7.2 Information about fire - and explosion protection:

Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
Keep respiratory protective device available.
Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50 °C, i.e. electric lights. Do not pierce or burn, even after use.
Do not spray onto a naked flame or any incandescent material.
Emergency cooling must be available in case of nearby fire.

7.3 Conditions for safe storage, including any incompatibilities

Storage:

Requirements to be met by storerooms and receptacles:

Store in a cool location.
Observe official regulations on storing packagings with pressurized containers.
Provide ventilation for receptacles.
Avoid storage near extreme heat, ignition sources or open flame.

Information about storage in one common storage facility:

Store away from foodstuffs.
Store away from oxidizing agents.

Further information about storage conditions:

Protect from heat and direct sunlight.
Store in a cool place. Heat will increase pressure and may lead to the receptacle bursting.

7.3 Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

Additional information about design of technical facilities: No further data; see item 7.

8.1 Control parameters

Ingredients with limit values that require monitoring at the workplace:

101-68-8 4,4'-methylenediphenyl diisocyanate

PEL (USA)	Ceiling limit: 0,2 mg/m ³ , 0,02 ppm
REL (USA)	Long-term value: 0,05 mg/m ³ , 0,005 ppm Ceiling limit: 0,2* mg/m ³ , 0,02* ppm *10-min
TLV (USA)	Long-term value: 0,051 mg/m ³ , 0,005 ppm
EL (Canada)	Short-term value: C 0,01 ppm Long-term value: 0,005 ppm Skin; S
EV (Canada)	Long-term value: 0,005 ppm

(Contd. on page 8)

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72-28-5 Isobutane

REL (USA)	Long-term value: 1900 mg/m ³ , 800 ppm
TLV (USA)	Short-term value: 2370 mg/m ³ , 1000 ppm
EL (Canada)	Short-term value: 750 ppm Long-term value: 600 ppm
EV (Canada)	Long-term value: 800 ppm

74-98-6 propane

PEL (USA)	Long-term value: 1800 mg/m ³ , 1000 ppm
REL (USA)	Long-term value: 1800 mg/m ³ , 1000 ppm
TLV (USA)	refer to Appendix F: minimal oxygen content
EL (Canada)	Long-term value: 1000 ppm
EV (Canada)	Long-term value: 1,000 ppm

8001-22-7 Soybean Oil

PEL (USA)	Short-term value: 15* 5** mg/m ³ *Total dust **Respirable fraction
OEL (Canada)	Short-term value: 10* 3** mg/m ³ *Mist **Respirable Mist

115-10-6 dimethyl ether

IOELV (EU)	Long-term value: 1920 mg/m ³ , 1000 ppm
WEEL (USA)	Long-term value: 1000 ppm
EL (Canada)	Long-term value: 1000 ppm

- **DNELs** No further relevant information available.
- **PNECs** No further relevant information available.
- **Additional information:** The lists valid during the making were used as basis.

· **8.2 Exposure controls**· **Personal protective equipment:**· **General protective and hygienic measures:**

The usual precautionary measures are to be adhered to when handling chemicals.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Do not inhale gases / fumes / aerosols.

Avoid contact with the eyes and skin.

Clean skin thoroughly immediately after handling the product.

· **Respiratory protection:**

Combined Organic Vapor and Particulate Respirator is recommended for use during all processing activities.

· **Protection of hands:**

Protective gloves

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The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

- **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **Eye protection:**



Safety glasses

- **Body protection:** Protective work clothing

- **Limitation and supervision of exposure into the environment**

No further relevant information available.

- **Risk management measures**

See Section 7 for additional information.

No further relevant information available.

9 Physical and chemical properties

- **9.1 Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

Form: Aerosol

Colour: Amber coloured

- **Odour:** Light

Petroleum-like

- **Odour threshold:** Not determined.

- **pH-value:** Not determined.

- **Change in condition**

Melting point/Melting range: Not Determined.

Boiling point/Boiling range: -44 °F / -42 °C (propellant)

- **Flash point:** -155 °F / -104 °C (propellant)

- **Flammability (solid, gaseous):** Not applicable.

- **Auto/Self-ignition temperature:** Not determined.

- **Decomposition temperature:** Not determined.

- **Self-igniting:** Product is not self-igniting.

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- **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
- **Explosion limits:**
 - Lower:** Not determined.
 - Upper:** Not determined.
- **Vapour pressure:** Not determined.
- **Density at 20 °C:** 1,01 g/cm³
- **Relative density** Not determined.
- **Vapour density** Not determined.
- **Evaporation rate** Not applicable.
- **Solubility in / Miscibility with water:** Not miscible or difficult to mix.
- **Partition coefficient (n-octanol/water):** Not determined.
- **Viscosity:**
 - Dynamic:** Not determined.
 - Kinematic:** Not determined.
- **Solvent content:**
 - VOC (US EPA Method 24)** 172,4 g/l
- **9.2 Other information** No further relevant information available.

10 Stability and reactivity

- **10.1 Reactivity**
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
- **10.3 Possibility of hazardous reactions**
Develops readily flammable gases/fumes.
Flammable.
Reacts with oxidizing agents.
Can form explosive mixtures in air if heated above flash point and/or when sprayed or atomised.
Danger of receptacles bursting because of high vapour pressure when heated.
Contact with acids releases toxic gases.
Toxic fumes may be released if heated above the decomposition point.
- **10.4 Conditions to avoid**
Keep ignition sources away - Do not smoke.
Store away from oxidizing agents.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:**
Carbon monoxide and carbon dioxide
Nitrogen oxides (NO_x)
Hydrogen cyanide (prussic acid)
Phosphorus oxides (e.g. P₂O₅)

(Contd. on page 11)

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Chlorine

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11 Toxicological information

11.1 Information on toxicological effects

Acute toxicity:

LD/LC50 values relevant for classification:

101-68-8 4,4'-methylenediphenyl diisocyanate

Oral LD50 2200 mg/kg (mouse)

Primary irritant effect:

on the skin: Irritant to skin and mucous membranes.

on the eye: Irritating effect.

Sensitization:

Sensitization possible through inhalation.

Sensitization possible through skin contact.

Subacute to chronic toxicity:

Inhalation of concentrated vapours as well as oral intake will lead to anaesthesia-like conditions and headache, dizziness, etc.

Additional toxicological information:

The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

Harmful

Irritant

Danger through skin adsorption.

The product is not subject to classification according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version.

Toxic and/or corrosive effects may be delayed up to 24 hours.

Acute effects (acute toxicity, irritation and corrosivity): Vapours have narcotic effect.

Repeated dose toxicity:

May cause damage to organs through prolonged or repeated exposure.

Repeated exposures may result in skin and/or respiratory sensitivity.

12 Ecological information

12.1 Toxicity

Aquatic toxicity: No further relevant information available.

12.2 Persistence and degradability No further relevant information available.

12.3 Bioaccumulative potential No further relevant information available.

12.4 Mobility in soil No further relevant information available.

Additional ecological information:

General notes:

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

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- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

13 Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
Can be disposed of with household garbage after solidification following consultation with the waste disposal facility operator and the pertinent authorities and adhering to the necessary technical regulations.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- **14.1 UN-Number**
- **DOT, ADR, IMDG, IATA** UN1950
- **14.2 UN proper shipping name**



Limited Quantity for packages less than 30 kg (66 lb) and inner packagings less than 1 L (0.3 gal).

- **DOT** Aerosols, flammable
- **ADR** 1950 AEROSOLS, flammable
- **IMDG, IATA** AEROSOLS, flammable
- **14.3 Transport hazard class(es)**

- **DOT**



- **Class** 2.1
- **Label** 2.1

- **ADR**



- **Class** 2 5F Gases.

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· Label

2.1

· IMDG, IATA



· Class

2.1

· Label

2.1

· 14.4 Packing group

· DOT, ADR, IMDG, IATA

Not Regulated

· 14.5 Environmental hazards:

· Marine pollutant:

No

· 14.6 Special precautions for user

Warning: Gases.

· Danger code (Kemler):

-

· EMS Number:

F-D,S-U

· 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable.

· Transport/Additional information:

· ADR

· Limited quantities (LQ)

1L

· Transport category

2

· Tunnel restriction code

D

· UN "Model Regulation":

UN1950, AEROSOLS, flammable, 2.1

15 Regulatory information

· 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

· United States (USA)

· SARA

· Section 355 (extremely hazardous substances):

None of the ingredients is listed.

· Section 313 (Specific toxic chemical listings):

9016-87-9 diphenylmethanediisocyanate, isomeres and homologues

101-68-8 4,4'-methylenediphenyl diisocyanate

· TSCA (Toxic Substances Control Act):

All ingredients are listed.

· Proposition 65 (California):

· Chemicals known to cause cancer:

None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed.

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· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

· **Carcinogenic Categories**

· **EPA (Environmental Protection Agency)**

9016-87-9 diphenylmethanediisocyanate, isomeres and homologues

CBD

101-68-8 4,4'-methylenediphenyl diisocyanate

D, CBD

· **IARC (International Agency for Research on Cancer)**

9016-87-9 diphenylmethanediisocyanate, isomeres and homologues

3

101-68-8 4,4'-methylenediphenyl diisocyanate

3

· **TLV (Threshold Limit Value established by ACGIH)**

None of the ingredients is listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

· **Canada**

· **Canadian Domestic Substances List (DSL)**

All ingredients are listed.

· **Canadian Ingredient Disclosure list (limit 0.1%)**

101-68-8 4,4'-methylenediphenyl diisocyanate

· **Canadian Ingredient Disclosure list (limit 1%)**

None of the ingredients is listed.

· **Other regulations, limitations and prohibitive regulations**

· **Substances of very high concern (SVHC) according to REACH, Article 57**

None of the ingredients is listed.

· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Relevant phrases**

- H220 Extremely flammable gas.
- H280 Contains gas under pressure; may explode if heated.
- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H319 Causes serious eye irritation.
- H332 Harmful if inhaled.
- H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- H335 May cause respiratory irritation.
- H373 May cause damage to organs through prolonged or repeated exposure.

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Trade name: Touch N Foam Home Seal Foam
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H412	Harmful to aquatic life with long lasting effects.
R12	Extremely flammable.
R20	Harmful by inhalation.
R36	Irritating to eyes.
R36/37/38	Irritating to eyes, respiratory system and skin.
R42/43	May cause sensitisation by inhalation and skin contact.
R52/53	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

• **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
 IMDG: International Maritime Code for Dangerous Goods
 DOT: US Department of Transportation
 IATA: International Air Transport Association
 GHS: Globally Harmonized System of Classification and Labelling of Chemicals
 ACGIH: American Conference of Governmental Industrial Hygienists
 EINECS: European Inventory of Existing Commercial Chemical Substances
 ELINCS: European List of Notified Chemical Substances
 CAS: Chemical Abstracts Service (division of the American Chemical Society)
 NFPA: National Fire Protection Association (USA)
 HMIS: Hazardous Materials Identification System (USA)
 WHMIS: Workplace Hazardous Materials Information System (Canada)
 DNEL: Derived No-Effect Level (REACH)
 PNEC: Predicted No-Effect Concentration (REACH)
 LC50: Lethal concentration, 50 percent
 LD50: Lethal dose, 50 percent
 Flam. Gas 1: Flammable gases, Hazard Category 1
 Flam. Aerosol 1: Flammable aerosols, Hazard Category 1
 Press. Gas: Gases under pressure: Compressed gas
 Acute Tox. 4: Acute toxicity, Hazard Category 4
 Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
 Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2
 Resp. Sens. 1: Sensitisation - Respirat., Hazard Category 1
 Skin Sens. 1: Sensitisation - Skin, Hazard Category 1
 STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3
 STOT RE 2: Specific target organ toxicity - Repeated exposure, Hazard Category 2
 Aquatic Chronic 3: Hazardous to the aquatic environment - Chronic Hazard, Category 3

• **Sources**




SDS Prepared by:
 ChemTel Inc.
 1305 North Florida Avenue
 Tampa, Florida USA 33602-2902
 Toll Free North America 1-888-255-3924 Intl. +01 813-248-0573
 Website: www.chemtelinc.com

SAFETY DATA SHEET

Section 1: Product and Company Identification

Product Name: Acrylic Tub and Tile Caulk, All Colors
Product Code: 59006
Product Use: Acrylic latex caulking compound.
Manufacturer: LA-CO Industries, Inc.
1201 Pratt Boulevard
Elk Grove Village, IL.
60007-5746
Phone Number: (847) 956-7600
Fax: (847) 956-9885
24-hour Emergency: CHEMTREC: (800) 424-9300

Section 2: Hazards Identification

Protective Clothing	NFPA Rating (USA)	WHMIS (Canada)	Transportation
		 Not controlled	Not Regulated

Emergency Overview:

Exposure to hazardous substances is not expected when handling this product for its intended use. Extreme heating (>300°C) or during a fire may generate dense smoke, irritating and toxic fumes.

Appearance, Color and Odor: White or colored paste with mild acrylic odor.

USA: This material is not considered hazardous by the OSHA hazard Communication Standard (29 CFR 1910.1200).

Canada: This is not a controlled product under WHMIS.

Potential Health Effects

ACUTE (short term): see Section 8 for exposure controls

Relevant Route(s) of Exposure:

Skin contact. Inhalation.

- Inhalation:** No health effects expected with normal use of the product. In poorly ventilated workplaces, exposure to vapors of this product may cause headache, nausea and irritation of the nose, throat and lungs.
- Ingestion:** Not an expected route of occupational exposure. Product contains small amounts of ethylene glycol which can be harmful if swallowed.
- Skin:** No evidence of adverse effects from available information.
- Eye:** Direct eye contact may cause temporary irritation.

CHRONIC (long term): see Section 11 for additional toxicological data

Prolonged or repeated skin contact may cause irritation.

Medical Conditions Aggravated by Exposure:

Preexisting skin disorders may be aggravated by repeated exposure to the product.

Interactions With Other Chemicals:

Not available

Potential Environmental Effects:

Not available

SAFETY DATA SHEET

Section 3: Composition / Information on Ingredients

Hazardous Ingredients:

<u>Chemical Name</u>	<u>CAS No.</u>	<u>Wt. %</u>
Hydrotreated middle petroleum distillates	64742-46-7	1 - 2
Ethylene Glycol	107-21-1	0.1 - 1

Section 4: First Aid Measures

- Inhalation:** If symptoms are experienced remove source of contamination or move victim to fresh air and obtain medical advice.
- Eye Contact:** Quickly and gently, blot or brush away excess chemical. Immediately flush the contaminated eye(s) with lukewarm, gently flowing water for 15 minutes, while holding the eyelid(s) open. If irritation persists, obtain medical advice.
- Skin Contact:** Quickly and gently, blot or brush away excess paste. Wash gently and thoroughly with lukewarm, gently flowing water and non-abrasive soap for 5 minutes. If irritation develops, obtain medical advice.
- Ingestion:** If swallowed, contact a poison control centre or obtain medical advice immediately.

Section 5: Fire Fighting Measures

- Flammable Properties:** Non-flammable. Aqueous emulsion; product may burn if involved in a fire but does not ignite readily.
- Suitable extinguishing Media:** Use appropriate extinguishing agents for the surrounding fire.
- Unsuitable extinguishing Media:** Not applicable
- Explosion Data:**
- Sensitivity to Mechanical Impact:** Not applicable
- Sensitivity to Static Discharge:** Not applicable
- Specific Hazards arising from the Chemical:** During a fire, products of combustion may include oxides of carbon and irritating and noxious fumes.
- Protective Equipment and precautions for firefighters:** Self-contained breathing apparatus and protective clothing should be worn. Remove all unprotected personnel.
- NFPA**
- | | |
|----------------------|---|
| Health: | 0 |
| Flammability: | 0 |
| Instability: | 0 |

Section 6: Accidental Release Measures

- Personal Precautions:** Spilled product may pose a slipping hazard.
- Environmental Precautions:** Prevent the product from entering sewers or waterways.
- Methods for Containment:** Not applicable
- Methods for Clean-up:** Pick up spilled product and collect for re-use or proper disposal. Dispose of any contaminated, unusable product as described in Section 13 of this SDS.

SAFETY DATA SHEET

Section 7: Handling and Storage

Handling: Keep out of reach of children. Avoid contact with eyes and skin. Ensure adequate ventilation. Do not breathe vapors or fumes. Wash exposed skin thoroughly after handling.

Storage: Store in a cool, dry area. Protect from freezing and extreme heat. Keep containers closed when not in use.

Section 8: Exposure Controls/Personal Protection

Exposure Guidelines

Measurable airborne concentrations of the component substances are not expected when product is used as directed on the label for its intended purpose.

<u>Ingredient</u>	<u>ACGIH TLV</u> <u>(8-hr. TWA)</u> <u>(mg/m³)</u>	<u>U.S. OSHA PEL</u> <u>(8-hr. TWA)</u> <u>(mg/m³)</u>	<u>Ontario TWAEV</u> <u>(mg/m³)</u>
Ethylene glycol	100 Ceiling	50 ppm Ceiling 125 mg/m ³ Ceiling	100 Ceiling (aerosols)

Exposure Controls

Engineering Controls: Good general ventilation. If product is overheated or used in an enclosed space, provide adequate ventilation to keep fume concentrations below any applicable exposure limits. Consult local authorities for acceptable exposure limits.

Personal Protection:

Eye/Face Protection: Safety glasses with side shields are recommended.

Skin Protection: Wear appropriate gloves when needed to prevent skin contact.

Respiratory Protection: Not required for normal use.
A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements, European Standard EN529 or Canadian Standards Association (CSA) Standard Z94.4-2002 must be followed whenever workplace conditions warrant a respirator's use.

General Hygiene Measures: Do not ingest. Avoid contact with skin and eyes. Keep out of reach of children. Wash hands after handling.

Section 9: Physical and Chemical Properties

Physical State:	Paste	Flash Point & method:	Not applicable
Appearance, Color and Odor:	White or colored paste; mild acrylic odor.	Autoignition Temperature:	Not applicable
Odor Threshold:	Not available	Flammability Limits in Air:	Not applicable
pH:	Not available	Vapor Pressure:	Not applicable
Relative density: (water = 1)	1.6	Vapor Density: (Air = 1)	Not applicable
Partition coefficient: (n-octanol/water)	Not available	Evaporation Rate: (n-Butyl Acetate = 1)	>1 (slower than n-Butyl Acetate)
Solubility:	Miscible in water.	Boiling Point/Range:	Not available
Viscosity:	Not available	Freezing Point:	Similar to water.
VOC:	28.1 g/L		

SAFETY DATA SHEET

Section 10: Stability and Reactivity

Chemical Stability:	Stable at normal room temperature.
Conditions to Avoid:	Avoid freezing, extreme heat and open flames.
Incompatible Materials:	None known.
Hazardous Decomposition Products:	None known.
Possibility of Hazardous Reactions:	Hazardous polymerization will not occur.

Section 11: Toxicological Information

<u>Acute Toxicity Data</u>	Acute toxicity data is not available for this mixture. Acute toxicity of the primary components is low. Ethylene glycol, present at less than 1%, is harmful if swallowed. There are numerous reports of kidney injury, nervous system injury and deaths in people who accidentally or intentionally ingested ethylene glycol. The minimum lethal oral dose range in humans, reported as 1110-1665 mg/kg. Occupational exposure by ingestion is not expected when the product is used as directed on the label for its intended purpose.
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Section 11: Toxicological Information (continued)

Chronic Toxicity Data

Carcinogenicity:	This product does not contain any substance that is considered a human carcinogen by IARC (International Agency for Research on Cancer), ACGIH (American Conference of Governmental Industrial Hygienists, OSHA or NTP (National Toxicology Program).
Irritation:	Not available
Corrosivity:	Not applicable
Sensitization:	Not applicable
Neurological Effects:	Not available
Genetic Effects:	Not available
Reproductive Effects:	Not available
Developmental Effects:	Exposure to Ethylene glycol by ingestion of can cause embryotoxic, fetotoxic and teratogenic effects based on evidence in rats and mice. High doses needed to produce effects. Ingestion is not a relevant route of occupational exposure for this product.
Target Organ Effects:	Not available

Section 12: Ecological Information

Ecotoxicity:	Not available
Persistence/Degradability:	Not available
Bioaccumulation/Accumulation:	Not available
Mobility:	Not available

SAFETY DATA SHEET

Section 13: Disposal Considerations

Waste Disposal Method: Dispose of in accordance with local, state/provincial and federal laws and regulations.
Do NOT discard into any sewers, on the ground or into any body of water. Store material for disposal as indicated in Section 7 Handling and Storage.
The conditions of use, storage and disposal of this product are beyond our control and may be beyond our knowledge. For this and other reasons, the supplier does not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of this product.

Section 14: Transport Information:

U.S. Hazardous Materials Regulation (DOT 49CFR):	Not regulated
Canadian Transportation of Dangerous Goods (TDG):	Not regulated
ADR/RID:	Not regulated
IMDG:	Not regulated
Marine Pollutants:	Not applicable
ICAO/IATA:	Not regulated

Section 15: Regulatory Information

USA

TSCA Status: Component substances are listed on the TSCA inventory.

SARA Title III

Sec. 302/304: None
Sec. 311/312: Not applicable
Sec. 313: Ethylene glycol
CERCLA RQ: Not applicable

Canada

This product has been classified in accordance with the hazard criteria of the *Controlled Products Regulations* and the MSDS contains all the information required by the *Controlled Products Regulations*.

WHMIS Classification: Not controlled

DSL: Component substances are listed on Canada's Domestic Substances List (DSL).

Section 16: Other Information

Preparation Information:

Revision Date: September 12, 2011

Manufacturer Disclaimer: The information contained herein is based on data available to us and is accurate and reliable to the best of our knowledge and belief. However, LA-CO Industries, Inc. makes no representations as to its completeness or accuracy. Information is supplied on condition that persons receiving such information will make their own determination as to its suitability for their purposes prior to use. In no event will LA-CO Industries, Inc. be responsible for damages of any nature whatsoever resulting from the use of or reliance upon the information contained herein.

Prepared by: LEHDER Environmental Services Limited (519) 336-4101
www.lehder.com

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MATERIAL SAFETY DATA SHEET

320 37th Avenue, St. Charles, Illinois 60174
www.unitedlabsinc.com . www.unitedlabsinc.ca

To Reorder Call:
800-323-2594

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME
UNITED 455 LIQUI-ZYME

USE/DESCRIPTION	Odor Eliminator
------------------------	-----------------

FOR MEDICAL AND TRANSPORTATION EMERGENCIES
24 Hour INFOTRAC (US and CANADA): **800-535-5053**

REVISION DATE
November 06, 2012

HMIS III HEALTH (0 = Maximum Safety)

0

Always follow Label Directions and Cautions.

* Chronic
4 Severe
3 Serious
2 Moderate
1 Slight
0 Minimal

See Hazards Identification Section of this MSDS for more detailed information.

PHYSICAL HAZARD (0 = Maximum Safety)

0

Susceptible to Release of Energy.

- 4 May detonate-vacate area if materials are exposed to fire.
- 3 Strong shock of heat may detonate-use monitors from behind explosion resistant barriers.

2 Violent chemical change possible-use hose stream from distance
1 Unstable if heated-use precaution.
0 Normally stable.

FLAMMABILITY (0 = Maximum Safety)

0

Susceptibility of Material to Burning.

4 Extremely flammable	1 Must be preheated
3 Ignites at normal temperature.	to burn.
2 Ignites when moderately heated.	0 Will not burn.

PERSONAL PROTECTION: B



2. COMPOSITION/INFORMATION ON INGREDIENTS

In accordance with Federal Regulation 29 CFR 1910.1200, all materials in this product are considered non-hazardous.

3. HAZARDS IDENTIFICATION

Eyes: May cause irritation.

Skin: Prolonged or repeated contact may cause irritation.

Inhalation: Mists of this product may irritate nasal passages.

Ingestion: Large quantities (more than a few ounces) may cause upset stomach, diarrhea, nausea, and vomiting.

4. FIRST AID MEASURES

Eyes: Immediately flush with plenty of water for at least 15 minutes. Seek medical attention.

Skin: Wash with soap and plenty of water. If symptoms develop, seek medical attention.

Inhalation: Remove patient to fresh air. If symptoms develop, seek medical attention. If not breathing, give artificial respiration.

Ingestion: DO NOT induce vomiting. Get medical attention immediately.

5. FIRE FIGHTING MEASURES

Flash Point (TCC): None

Explosive Limits: Lower (LEL): ND Upper (UEL): ND

Flame Projection (Aerosol): NA

Hazardous Products of Combustion: When strongly heated, as in a fire, this product may produce nitrous oxides and ammoniacal vapors.

Fire and Explosion Hazards: None known.

Extinguishing Media: Dry chemical, Dry foam, Carbon dioxide, Water.

Fire Fighting Instructions: Wear self-contained breathing apparatus w/full protective clothing.

6. ACCIDENTAL RELEASE MEASURES

Small Spills: This product is biodegradable. Flush to sewage drain. This product may cause slippery conditions; rinse thoroughly.

Large Spills: This product is biodegradable. Flush to sewage drain. This product may cause slippery conditions; rinse thoroughly.

7. HANDLING AND STORAGE

Keep this product in a properly labeled, tightly closed container. Do not allow this product to freeze.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Eyes: Safety glasses are recommended.

Skin: Chemical resistant gloves are recommended for prolonged exposure.

Respiratory: Normally not required.

Engineering Controls: Mechanical ventilation recommended when handling in enclosed/tight spaces.

9. PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point: 212°F/100°C **Specific Gravity:** 0.990 (H₂O=1) **Vapor Pressure:** 17.5 mmHg **Melting Point:** ND
Vapor Density: ND **Evaporation Rate:** 1 (Water=1) **Solubility in Water:** Soluble **pH:** 7-8
Appearance and Odor: LIQUI-ZYME: Light green liquid with strong Cimarron (cinnamon-like) scent; LIQUI-ZYME SUNSHINE: Dark orange liquid with fresh Sunshine (botanical) scent, LIQUI-ZYME NEWBERRY: Slight green to colorless liquid with Newberry scent.

10. STABILITY AND REACTIVITY

Hazardous Polymerization: Will not occur.

Hazardous Decomposition: When strongly heated, as in a fire, this product may produce nitrous oxides and ammoniacal vapors.

Chemical Stability: Stable

Incompatibility: Oxidizers such as bleach.

11. TOXICOLOGICAL INFORMATION

Carcinogenicity (NTP/IARC/OSHA): None

California Proposition 65: Does this product contain chemical(s) known to the State of California to cause cancer and/or to cause birth defects or other reproductive harm? None

12. ECOLOGICAL INFORMATION

ND

13. DISPOSAL CONSIDERATIONS

This product is biodegradable. Consult your local, state, provincial and federal regulations for proper disposal guidelines. Disposal regulations may be different for each state and/or locality.

14. TRANSPORT INFORMATION

DOT: For Ground shipping within the US: Nonhazardous - Cleaning, scouring or washing compounds, or soaps.

TDG: Ocean shipping: Nonhazardous - Cleaning, scouring or washing compounds, or soaps.

UN: Available upon request

15. REGULATORY INFORMATION

VOC (Volatile Organic Compounds): None

TSCA (Toxic Substances Control Act): Listed

SARA Title III Section 302 EHS: None

SARA Title III Section 311/312: ND

SARA Title III Section 313 Toxic Chemicals: None

WHMIS Classification:

This product has been classified in accordance with the hazard criteria of the CPR (Controlled Products Regulations/WHMIS) and the MSDS contains all the information required by the CPR.

16. OTHER INFORMATION

Read and follow all label directions and precautions before using this product. These products are intended for industrial and institutional use only. NOT FOR HOUSEHOLD USE OR RESALE. KEEP OUT OF REACH OF CHILDREN.

UNITED 455 LIQUI-ZYME

PREPARED BY: Sandy Kopacz

UNITED**MATERIAL SAFETY DATA SHEET**

LABORATORIES

320 37th Avenue • St. Charles, Illinois 60174 • To Reorder, Call 800-323-2594

PRODUCT IDENTIFICATION
UNITED 593
CITRAIN

USE / DESCRIPTION
Floor Drain Treatment

REVISION DATE
March 19, 2002

**FOR MEDICAL AND
TRANSPORTATION EMERGENCIES:**
INFOTRAC: 800-535-5053

HEALTH (0 = Maximum Safety)

Always follow Label Directions and Cautions.

4 Extreme. 3 High. 2 Moderate. 1 Slight. 0 Minimal.

See Health Hazard Data Section of this M.S.D.S.
for more detailed information.

2**REACTIVITY (0 = Maximum Safety)**

Susceptible to Release of Energy.

- 4 May detonate-vacate area if Materials are exposed to fire.
3 Strong shock of heat may detonate-use monitors from behind explosion resistant barriers.
2 Violent chemical change possible-use hose stream from distance
1 Unstable if heated-use precaution.
0 Normally stable.

0**FLAMMABILITY (0 = Maximum Safety)**

Susceptibility of Material to Burning.

- 4 Extremely flammable. 1 Must be preheated to burn.
3 Ignites at normal temperature. 0 Will not burn.
2 Ignites when moderately heated.

2**PERSONAL
PROTECTION**

HAZARDOUS COMPONENTS
IDENTITY, EXPOSURE LIMITS AND S.A.R.A. TITLE III INFORMATION

HAZARDOUS COMPONENTS	CAS NUMBER	ACGIH TWA	ACGIH STEL	OSHA PEL	OTHER RECOMMENDED LIMITS	S.A.R.A. TITLE III QUANTITIES
d-1,8(9)-p-menthadiene	5989-27-5	Not established	Not established	Not established	None	None

PHYSICAL / CHEMICAL CHARACTERISTICS

BOILING POINT
347°F

SPECIFIC GRAVITY (H₂O = 1)
0.840

VAPOR PRESSURE (mm Hg.)
(At 77° F) Approximately 1.0

MELTING POINT
Not determined

VAPOR DENSITY (Air = 1)
4.7

EVAPORATION RATE
(Butyl Acetate = 1) Less than 1.0

SOLUBILITY IN WATER
Insoluble

VOLATILE ORGANIC COMPOUNDS (V.O.C.)
(Pounds Per Gallon Of Product) 7.0

APPEARANCE AND ODOR
Clear, orange-colored liquid with citrus odor.

pH:
Not applicable

FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method Used)
115 - 125°F. (Tag Closed Cup)

FLAMMABLE LIMITS
At 300°F

LEL
0.7%

UEL
6.1%

EXTINGUISHING MEDIA

Dry chemical, foam, or carbon dioxide. Do not use water except as a mist or foam, as it may spread the burning liquid.

SPECIAL FIRE FIGHTING PROCEDURES

Evacuate area of unprotected personnel. Firefighters should wear protective equipment and NIOSH-approved self-contained breathing apparatus.

Cool fire-exposed containers with water spray.

UNUSUAL FIRE AND EXPLOSION HAZARDS

Rags soaked with this product may spontaneously ignite; to avoid this danger, used rags should be soaked with water and/or stored in a container full of soapy water. In a fire, closed containers of this product may burst or rupture due to pressure build-up, greatly increasing the fire hazard.

REACTIVITY DATA

STABILITY:	STABLE <input checked="" type="checkbox"/> UNSTABLE <input type="checkbox"/>	CONDITIONS TO AVOID None known
INCOMPATIBILITY (Materials To Avoid) Avoid contact with strong acids and oxidizing agents.		
HAZARDOUS DECOMPOSITION OR BY PRODUCTS When ignited, as in a fire, this product produces carbon monoxide and carbon dioxide.		
HAZARDOUS POLYMERIZATION:	WILL NOT OCCUR <input checked="" type="checkbox"/> MAY OCCUR <input type="checkbox"/>	CONDITIONS TO AVOID None known

HEALTH HAZARD DATA

HEALTH HAZARDS

EYES: May cause irritation. SKIN: Prolonged or repeated exposure can remove natural skin oils and may produce irritation. Some individuals may develop a rash or allergic reaction after prolonged skin contact. INHALATION: Breathing fumes may irritate nose, throat, lungs and may cause nausea. IF SWALLOWED: Swallowing large amounts, more than a few ounces, may cause nausea, upset stomach and vomiting.

CARCINOGENICITY:	NTP? No	IARC MONOGRAPHS? No	OSHA REGULATED? No
This product contains a chemical known to the state of California to cause cancer or reproductive toxicity? No			

SIGNS AND SYMPTOMS OF OVEREXPOSURE

EYES: Irritation. SKIN: Irritation, rash or allergic reaction. INHALATION: Irritation of the nose, throat and lungs and nausea.

IF SWALLOWED: Nausea, upset stomach and vomiting.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY OVEREXPOSURE

Dermatitis

TARGET ORGANS:

Eyes and skin

EMERGENCY AND FIRST AID PROCEDURE

EYES: Flush with plenty of cool water for at least 15 minutes and call a physician or poison center.

SKIN: Wash with soap and water; if irritation persists, call a physician or poison center.

IF INHALED: Remove to fresh air. Apply CPR if needed. Call a physician or poison center immediately.

IF SWALLOWED: DO NOT induce vomiting. Call a physician or poison center immediately.

PRECAUTIONS FOR SAFE HANDLING AND USE

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Eliminate all sources of ignition. Ventilate area. Absorb on inert, non-combustible material and place in suitable container for disposal.

WASTE DISPOSAL METHOD

Consult your local, state, and federal officials for proper disposal guidelines.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

Keep this product in properly labeled, tightly closed containers. Store in a cool, well-ventilated area, away from sources of ignition. Keep out of reach of children.

CONTROL MEASURES

FOR USE WHERE SIGNIFICANT EYE, SKIN OR INHALATION EXPOSURE IS LIKELY

RESPIRATORY PROTECTION (Specify Type)

IF TLV is exceeded, use NIOSH-approved respirator for organic vapors.

VENTILATION:	MECHANICAL (General) Provide adequate ventilation	LOCAL EXHAUST Provide adequate ventilation
--------------	--	---

PROTECTIVE GLOVES

Nitrile rubber, butyl rubber or PVA

EYE PROTECTION

Safety goggles

OTHER PROTECTIVE CLOTHING OR EQUIPMENT

Shirts with long sleeves are recommended.

WORK HYGENIC PRACTICES

Remove contaminated clothing immediately; wash thoroughly with soap before reusing. Wash hands and face with soap and water after using this product.



MATERIAL SAFETY DATA SHEET

320 37th Avenue, St. Charles, Illinois 60174
www.unitedlabsinc.com . www.unitedlabsinc.ca

To Reorder Call:
800-323-2594

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME
UNITED 126

USE/DESCRIPTION	Vandalism Mark Remover
------------------------	------------------------

FOR MEDICAL AND TRANSPORTATION EMERGENCIES
24 Hour INFOTRAC (US and CANADA): **800-535-5053**

REVISION DATE
September 21, 2012

HMIS III HEALTH (0 = Maximum Safety)

Always follow Label Directions and Cautions.

* Chronic
4 Severe
3 Serious
2 Moderate
1 Slight
0 Minimal

**See Hazards Identification Section of this MSDS
for more detailed information.**

PHYSICAL HAZARD (0 = Maximum Safety)

Susceptible to Release of Energy.

4 May detonate-vacate area if materials are exposed to fire.	2 Violent chemical change possible-use hose stream from distance
3 Strong shock of heat may detonate-use monitors from behind explosion resistant barriers.	1 Unstable if heated-use precaution.
	0 Normally stable.

FLAMMABILITY (0 = Maximum Safety)

Susceptibility of Material to Burning.

4 Extremely flammable.	1 Must be preheated
3 Ignites at normal temperature.	to burn.
2 Ignites when moderately heated.	0 Will not burn.

PERSONAL PROTECTION: B



2. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Ingredients	CAS#	%Range	ACGIH (TLV-TWA)	OSHA (PEL-TWA)	LD50 (Species/Route)	LC50 (Species)
Ethanol	64-17-5	15-40	1000 ppm	1000 ppm	7060 mg/kg (Rat/Oral)	20,000 ppm 10 hr (Rat)
Toluene	108-88-3	15-25	50 ppm	100 ppm	636 mg/kg (Rat/Oral)	49 gm/m3 2 hr (Rat)
Ethylene Glycol Monobutyl Ether	111-76-2	5-10	25 ppm	50 ppm	470 mg/kg (Rat/Oral)	450 ppm/ 4 hr (Rat)
Diethylene Glycol Monoethyl Ether	111-90-0	10-20	NE	NE	7500 mg/kg (Rat/Oral)	5240 mg/m3 4 hr (Rat)
n-Butyl Acetate	123-86-4	2-5	150 ppm	150 ppm	10,768 mg/kg (Rat/oral)	390 ppm/ 4 hr (Rat)
n-Methyl-2-Pyrrolidone	872-50-4	2-5	100 ppm	100 ppm	3914 mg/kg (Rat/oral)	NE
Propane	74-98-6	10-30	1000 ppm	1000 ppm	NE	NE
Isobutane	75-28-5	5-10	800 ppm	NE	NE	NE

3. HAZARDS IDENTIFICATION

Eyes: May cause irritation, redness, and corneal injury.

Skin: May cause drying or flaking, irritation, burning sensation.

Inhalation: Over exposure may cause nausea, dizziness, headache and upper respiratory discomfort.

Ingestion: May cause gastrointestinal disturbances, nausea, vomiting, and diarrhea.

4. FIRST AID MEASURES

Eyes: Flush with water for at least 15 minutes and call a physician immediately.

Skin: Wash with soap and water. If irritation persists call a physician.

Inhalation: Remove to fresh air. Apply artificial respiration if needed and call a physician.

Ingestion: DO NOT induce vomiting in order to avoid aspiration into lungs. Rinse mouth out with water. Call a physician or poison center immediately.

Note to Physician: If lavage is performed, suggest endotracheal and/or esophageal control. Do not administer sympathomimetic drugs unless absolutely necessary.

5. FIRE FIGHTING MEASURES

Flash Point (TCC): NE

Explosive Limits: Lower (LEL): NE Upper (UEL): NE

Flame Projection (Aerosol): Extremely Flammable spray per 16 CFR 1500.3 and 1500.45. > 18 inches

Hazardous Products of Combustion: When strongly heated, as in a fire, this product may produce carbon monoxide.

Fire and Explosion Hazards: Aerosol container (pressurized) may burst if heated over 120°F/48°C.

Extinguishing Media: Carbon Dioxide, Standard Foam, Dry Chemical, and Halon.

Fire Fighting Instructions: Wear self-contained breathing apparatus w/full protective clothing in chemical fires. Cool fire exposed containers to prevent rupturing.

6. ACCIDENTAL RELEASE MEASURES

Small Spills: Absorb liquid on vermiculite, floor absorbent or other absorbent material.

Large Spills: Evacuate area. Remove sources of ignition and ventilate area. Contain liquid. Soak up with an inert absorbent and place in designated disposal container. Prevent run-off to sewer.

7. HANDLING AND STORAGE

Do not expose to temperatures exceeding 120°F. Store in a cool well-ventilated area, away from sources of ignition. Keep out of reach of children. Wash hands before eating or smoking after using aerosol. NFPA Code 30B Rating: Level 2 Aerosol.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Eyes: Safety glasses or chemical splash goggles are recommended.

Skin: Chemical resistant gloves are recommended.

Respiratory: Not normally required. If vapor concentration exceeds TLV, use a NIOSH or MSHA approved respirator.

Engineering Controls: Provide adequate ventilation to keep vapor concentration below TLV and prevent accumulation of excessive vapors.

9. PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point: ND

Specific Gravity: 0.88 Concentrate
0.818 with propellant (estimate)

Vapor Pressure: 51 psig

Melting Point: ND

Vapor Density: > 1 (air=1)

Evaporation Rate: > 1

Solubility in Water: Emulsifiable

pH: N/A

Appearance and Odor: Aerosol; water white gel with sweet ethereal odor.

10. STABILITY AND REACTIVITY

Hazardous Polymerization: Will not occur.

Hazardous Decomposition: When strongly heated, as in a fire, this product may produce carbon monoxide.

Chemical Stability: Stable

Incompatibility: Avoid contact with strong oxidizing agent.

11. TOXICOLOGICAL INFORMATION

Carcinogenicity (NTP/IARC/OSHA): None

California Proposition 65: Does this product contain chemical(s) known to the State of California to cause cancer and/or to cause birth defects or other reproductive harm? Yes (Toluene CAS # 108-88-3)

12. ECOLOGICAL INFORMATION

ND

13. DISPOSAL CONSIDERATIONS

Consult your local, state, provincial and federal regulations for proper disposal guidelines. Do not puncture or incinerate containers. Disposal regulations may be different for each state and/or locality.

14. TRANSPORT INFORMATION

DOT: Available upon request

TDG: Available upon request

UN: Available upon request

15. REGULATORY INFORMATION

VOC (Volatile Organic Compounds): 74.9% (723 grams per liter)

TSCA (Toxic Substances Control Act): Listed

SARA Title III Section 302 EHS: ND

SARA Title III Section 311/312: ND

SARA Title III Section 313 Toxic Chemicals: Toluene CAS#108-88-3, Diethylene Glycol Monoethyl Ether CAS# 111-90-0, Ethylene glycol Monobutyl Ether CAS#111-76-2, n-Butyl-Acetate CAS#123-86-4, n-Methyl-2-Pyrrolidone CAS#872-50-4

WHMIS Classification:

This product has been classified in accordance with the hazard criteria of the CPR (Controlled Products Regulations/ WHMIS) and the MSDS contains all the information required by the CPR.

16. OTHER INFORMATION

Read and follow all label directions and precautions before using this product. These products are intended for industrial and institutional use only. NOT FOR HOUSEHOLD USE OR RESALE. KEEP OUT OF REACH OF CHILDREN.

UNITED 126 VANDALISM MARK REMOVER

PREPARED BY: Sandy Kopacz



Total: 10

To: MARILYN Fax: 7023831479
Company: CLARKCOUNTY Time: 1:58:22 PM EST

From: Haro, Brenda (Centerpointe, CA) Return Fax:
Date: 5/4/2006 Phone: (800)423-3961
Subject: MSDS FOR VANGUARD GRAFFITI REMOVER

ITEM#: 10022308 40J4596 40M3219 40T8789 60Z2586 60Z9475 DATE: 05/04/06

M2004067 MATERIAL SAFETY DATA SHEET PAGE 1 OF 4

MANUFACTURED FOR: PRODUCT NAME: ALLSTAR VANGUARD (U17532)

Unisource Worldwide UNISOURCE ITEM #: 2660XX

6600 Governors Lake Parkw DATE ISSUED: 03/16/99

Norcross, GA 30071 SUPERSEDES:

24 HR. EMERGENCY NO. (888)660-6737

1910.1200 AND OSHA FORM 174

NFPA RATING: HEALTH - 2; FLAMMABILITY - 3; REACTIVITY - 0; SPECIAL - 0

HMIS RAGING: HEALTH - 2; FLAMMABILITY - 3; REACTIVITY - 0;

PERSONAL PROTECTION - B

DOT HAZARD CLASSIFICATION: ORM-D

IDENTITY (TRADE NAME AS USED ON LABEL): ALLSTAR VANGUARD (U17532)

MSDS NUMBER: 179 REVISION - 15

DATE PREPARED: 03/16/99

PREPARED BY: DL/CH

INFORMATION CALLS: (770)422-2071

NOTICE: JUDGMENT BASED ON INDIRECT TEST DATA

SECTION 1 - MATERIAL IDENTIFICATION AND INFORMATION

COMPONENTS-CHEMICAL NAMES AND COMMON NAMES

(HAZARDOUS COMPONENTS 1% OR GREATER; CARCINOGENS 0.1% OR GREATER)

CAS NUMBER SARA OSHA PEL ACGIH CARCINOGEN

III LIST (PPM) TLV(PPM) REF. SOURCE**

ETHYL ALCOHOL	64-17-5	NO	1000	1000	D
TOLUENE	108-88-3	YES	200	100	D
ACETONE	67-64-1	NO	1000	750	D

ISOPROPYL ALCOHOL 67-63-0 NO 500 400 D

ETHYLENE GLYCOL N-BUTYL

ETHER 111-76-2 YES 50 25 D

ISOBUTANE/PROPANE BLEND 75-28-5 NO 800 800 D

ISOBUTANE/PROPANE BLEND 74-98-6 NO 1000 1000 D

METHANOL 67-56-1 YES 200 200 D

WARNING: THIS PRODUCT CONTAINS A CHEMICAL OR CHEMICALS KNOWN TO THE
STATE OF CALIFORNIA TO CAUSE BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM.

SECTION 2 - PHYSICAL/CHEMICAL CHARACTERISTICS

BOILING POINT: N/A

SPECIFIC GRAVITY (H₂O=1): CONCENTRATE ONLY = 0.81

VAPOR PRESSURE: PSIG @ 70 F (AEROSOLS): MAX 60

VAPOR PRESSURE (NON-AEROSOLS)(MM HG AND TEMPERATURE): N/A

ITEM#: 10022308 40J4596 40M3219 40T8789 60Z2586 60Z9475 DATE: 05/04/06

M2004067 MATERIAL SAFETY DATA SHEET PAGE 2 OF 4

PRODUCT NAME: ALLSTAR VANGUARD(U17532) DATE ISSUED: 03/16/99

UNISOURCE ITEM #: 2660XX SUPERSEDES:

VAPOR DENSITY (AIR=1): N/E

EVAPORATION RATE (=1): N/E

SOLUBILITY IN WATER: SOLUBLE

WATER REACTIVE: NO

APPEARANCE AND ODOR: CLEAR GEL, AROMATIC SOLVENT ODOR.

SECTION 3 - FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY AS PER USA FLAME PROJECTION TEST

(AEROSOLS) EXTREMELY FLAMMABLE

AUTOIGNITION TEMPERATURE: N/E

FLAMMABILITY LIMITS IN AIR BY % IN VOLUME:

% LEL: N/E % UEL: N/E

FLASH POINT AND METHOD USED (NON-AEROSOLS): N/A

EXTINGUISHER MEDIA: FOAM, DRY CHEMICAL, CARBON DIOXIDE, WATER FOG.

SPECIAL FIRE FIGHTING PROCEDURES: SELF-CONTAINED BREATHING APPARATUS.

UNUSUAL FIRE & EXPLOSION HAZARDS: DO NOT EXPOSE AEROSOLS TO TEMPERATURES

ABOVE 130 F OR THE CONTAINER MAY RUPTURE.

SECTION 4 - REACTIVITY HAZARD DATA

STABILITY: (X)STABLE ()UNSTABLE

HAZARDOUS POLYMERIZATION: ()WILL (X)WILL NOT OCCUR

INCOMPATIBILITY (MAT. TO AVOID): ACIDS AND STRONG OXIDIZERS.

CONDITIONS TO AVOID: OPEN FLAME, WELDING ARCS, HEAT, SPARKS.

HAZARDOUS DECOMPOSITION PRODUCTS: CO, CO2.

SECTION 5- HEALTH HAZARD DATA

PRIMARY ROUTES OF ENTRY: (X)INHALATION ()INGESTION (X)SKIN ABSORPTION
()EYE ()NOT HAZARDOUS

ACUTE EFFECTS:

INHALATION: EXCESSIVE INHALATION OF VAPORS CAN BE HARMFUL AND MAY CAUSE
HEADACHE, DIZZINESS, ASPHYXIA, ANESTHETIC EFFECTS AND POSSIBLE
UNCONSCIOUSNESS.

EYE CONTACT: IRRITATION.

ITEM#: 10022308 40J4596 40M3219 40T8789 60Z2586 60Z9475
DATE: 05/04/06

M2004067

MATERIAL SAFETY DATA SHEET

PAGE 3 OF 4

PRODUCT NAME: ALLSTAR VANGUARD (U17532) DATE ISSUED: 03/16/99

UNISOURCE ITEM #: 2660XX

SUPERSEDES:

SKIN CONTACT: IRRITATION.

INGESTION: POSSIBLE CHEMICAL PNEUMONITIS IF ASPIRATED INTO LUNGS. NAUSEA.

THIS MIXTURE) MAY CAUSE CARDIAC ABNORMALITY, LIVER ABNORMALITIES, KIDNEY AND/

OR LIVER DAMAGE. LAB ANIMALS HAVE EXPERIENCED ANEMIA, LIVER, KIDNEY, LUNG, BLOOD DAMAGE TO GLYCOL ETHER EB.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: MAY AGGRAVATE EXISTING

EYE, SKIN, OR UPPER RESPIRATORY CONDITIONS.

EMERGENCY FIRST AID PROCEDURES

EYE CONTACT: FLUSH WITH WATER FOR 15 MINUTES. IF IRRITATED, SEEK MEDICAL ATTENTION.

SKIN CONTACT: WASH WITH SOAP AND WATER. IF IRRITATED, SEEK MEDICAL ATTENTION.

INHALATION: REMOVE TO FRESH AIR. RESUSCITATE IF NECESSARY. GET MEDICAL ATTENTION.

INGESTION: DRINK TWO LARGE GLASSES OF WATER. GET IMMEDIATE MEDICAL ATTENTION.

SECTION 6 - CONTROL AND PROTECTIVE MEASURES

RESPIRATORY PROTECTION (SPECIFY TYPE): IF VAPOR CONCENTRATION EXCEEDS TLV,

USE RESPIRATOR APPROVED BY U.S. BUREAU OF MINES FOR ORGANIC VAPOR.

PROTECTIVE GLOVES: RUBBER GLOVES.

EYE PROTECTION: SAFETY GLASSES RECOMMENDED.

VENTILATION REQUIREMENTS: ADEQUATE VENTILATION TO KEEP VAPOR CONCENTRATION

BELOW TLV.

OTHER PROTECTIVE CLOTHING & EQUIPMENT: NONE

HYGIENIC WORK PRACTICES: WASH WITH SOAP AND WATER BEFORE HANDLING FOOD.

REMOVE CONTAMINATED CLOTHING.

SECTION 7 - PRECAUTIONS FOR SAFE HANDLING AND USE

STEPS TO BE TAKEN IF MATERIAL IS SPILLED OR RELEASED: ABSORB WITH SUITABLE
MEDIUM. INCINERATE OR LANDFILL ACCORDING TO LOCAL, STATE OR FEDERAL
REGULATIONS. PREVENT FROM ENTERING DRAINS AND SEWER.

ITEM#: 10022308 40J4596 40M3219 40T8789 60Z2586 60Z9475 DATE: 05/04/06

M2004067 MATERIAL SAFETY DATA SHEET PAGE 4 OF 4

PRODUCT NAME: ALLSTAR VANGUARD (U17532) DATE ISSUED: 03/16/99

UNISOURCE ITEM #: 2660XX SUPERSEDES:

WASTE DISPOSAL METHODS: AEROSOL CANS WHEN VENTED TO ATMOSPHERIC
PRESSURE

THROUGH NORMAL USE, POSE NO DISPOSAL HAZARD.

PRECAUTIONS TO BE TAKEN IN HANDLING & STORAGE: DO NOT PUNCTURE OR
INCINERATE

CONTAINERS. DO NOT STORE AT TEMPERATURES ABOVE 130 F.

OTHER PRECAUTIONS &/OR SPECIAL HAZARDS: KEEP OUT OF REACH OF CHILDREN.

AVOID FOOD CONTAMINATION. AVOID BREATHING VAPORS. REMOVE IGNITION
SOURCES.

WE BELIEVE THE STATEMENTS, TECHNICAL INFORMATION AND RECOMMENDATIONS
CONTAINED HEREIN ARE RELIABLE, BUT THEY ARE GIVEN WITHOUT WARRANTY OR
GUARANTEE OF ANY KIND.



MATERIAL SAFETY DATA SHEET

320 37th Avenue, St. Charles, Illinois 60174 • 214 Dolomite Drive, Downsview, Ontario M3J2N2
www.unitedlabsinc.com

To Reorder Call:
 800-323-2594

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME
 UNITED 912 BLUE GEM

USE/DESCRIPTION
 Vehicle Wash and Wax

FOR MEDICAL AND TRANSPORTATION EMERGENCIES
 24 Hour INFOTRAC (US and CANADA): **800-535-5053**
REVISION DATE
 September 22, 2008

HEALTH (0 = Maximum Safety)

1

Always follow Label Directions and Cautions.

4 Extreme 3 High 2 Moderate 1 Slight 0 Minimal

See Hazards Identification Section of this MSDS for more detailed information.

REACTIVITY (0 = Maximum Safety)

0

Susceptible to Release of Energy.

4 May detonate-vacate area if materials are exposed to fire.
 3 Strong shock of heat may detonate-use monitors from behind explosion resistant barriers.

2 Violent chemical change possible-use hose stream from distance
 1 Unstable if heated-use precaution.
 0 Normally stable.

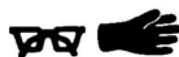
FLAMMABILITY (0 = Maximum Safety)

0

Susceptibility of Material to Burning.

4 Extremely flammable. 1 Must be preheated
 3 Ignites at normal temperature. to burn.
 2 Ignites when moderately heated. 0 Will not burn.

PERSONAL PROTECTION: B



2. COMPOSITION/INFORMATION ON INGREDIENTS

In accordance with Federal Regulation 29 CFR 1910.1200, all materials in this product are considered non-hazardous.

3. HAZARDS IDENTIFICATION

Eyes: Can cause irritation.

Skin: Prolonged or repeated contact may cause irritation.

Inhalation: Mists of this product may irritate nasal passages.

Ingestion: Swallowing large amounts (more than a few ounces) may cause nausea, upset stomach and vomiting.

4. FIRST AID MEASURES

Eyes: Flush eyes with cool water for at least 15 minutes while holding eyelids open and call a physician or poison center.

Skin: Wash with soap and water. If irritation persists, call a physician or poison center.

Inhalation: Remove patient to fresh air. If irritation persists, call a physician or poison center.

If swallowed: Induce vomiting only under direction of a physician or poison center. Call a physician immediately.

5. FIRE FIGHTING MEASURES

Flash Point (TCC): > 200°F / > 93.3°F

Explosive Limits: Lower (LEL): None Upper (UEL): None

Flame Projection (Aerosol): NA

Hazardous Products of Combustion: When strongly heated, as in a fire, this product may produce carbon dioxide, carbon monoxide, and oxides of nitrogen.

Fire and Explosion Hazards: None known.

Extinguishing Media: Dry chemical, Dry foam, Carbon dioxide, or Water may be used.

Fire Fighting Instructions: Firefighters should wear NIOSH approved self-contained breathing apparatus with full protective clothing/equipment.

6. ACCIDENTAL RELEASE MEASURES

Small Spills: Flush it with water to the nearest sewer to drain. This product may cause slippery conditions, rinse thoroughly.

Large Spills: Remove with a wet vac or scrub area with scrubber or floor machine if available. Contain spill and put in a container for disposal. This product may cause slippery conditions, rinse thoroughly.

7. HANDLING AND STORAGE

Keep this product in a properly labeled, tightly closed container. Wash hands and face with soap and water after using this product. Keep out of reach of children.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Eyes: Safety glasses are recommended when handling the concentrated product.

Skin: Chemical resistant gloves recommended only for prolonged or repeated exposure to the concentrated product.

Respiratory: Normally not required.

Engineering Controls: Normally not required.

9. PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point: ~212°F/ ~100°C **Specific Gravity:** 0.998 (H2O=1) **Vapor Pressure:** ~17.5 mmHg @77°F/25°C

Melting Point: NA **Vapor Density:** ND **Evaporation Rate:** ~1 (Water=1) **Solubility in Water:** 100% soluble **pH:** 7.0

Appearance and Odor: Dark blue liquid with fresh scent.

10. STABILITY AND REACTIVITY

Hazardous Polymerization: Will not occur.

Hazardous Decomposition: When strongly heated, as in a fire, this product may produce carbon dioxide, carbon monoxide and oxides of nitrogen..

Chemical Stability: Stable

Incompatibility: Strong oxidizing agents.

11. TOXICOLOGICAL INFORMATION

Carcinogenicity (NTP/IARC/OSHA): None

California Proposition 65: Does this product contain chemical(s) known to the State of California to cause cancer and/or to cause birth defects or other reproductive harm? None

12. ECOLOGICAL INFORMATION

ND

13. DISPOSAL CONSIDERATIONS

Consult your local, state, and federal regulations for proper disposal guidelines. Disposal regulations may be different for each state, provincial and/or locality.

14. TRANSPORT INFORMATION

DOT: Available upon request

TDG: Available upon request

UN: Available upon request

15. REGULATORY INFORMATION

VOC(Volatile Organic Compounds): None

TSCA (Toxic Substances Control Act): Listed

SARA Title III Section 302 EHS: None

SARA Title III Section 311/312: None

SARA Title III Section 313 Toxic Chemicals: None

WHMIS Classification:

This product has been classified in accordance with the hazard criteria of the CPR (Controlled Products Regulations/ WHMIS) and the MSDS contains all the information required by the CPR.

16. OTHER INFORMATION

Read and follow all label directions and precautions before using this product. These products are intended for industrial and institutional use only. NOT FOR HOUSEHOLD USE OR RESALE. KEEP OUT OF REACH OF CHILDREN.

UNITED 912 BLUE GEM

PREPARED BY: Sandy Kopacz



Material Safety Data Sheet

An **RPM** Company

24 Hour Emergency Phone Numbers:
Medical/Poison Control:
 In U.S.: Call 1-800-222-1222
 Outside U.S.: Call your local poison control center
Transportation/National Response Center:
 1-800-535-5053
 1-352-323-3500

.....
 • NOTE: The National Response Center emergency numbers to
 • be used only in the event of chemical emergencies involving a
 • spill, leak, fire, exposure or accident involving chemicals.

IMPORTANT: Provide this information to employees, customers, and users of this product. Read this MSDS before handling or disposing of this product. This product is covered by the OSHA Hazard Communication Standard and this document has been prepared in accordance with requirements of this standard. All abbreviated terms used in this MSDS are further described in Section 16.

Section 1 - Chemical Product / Company Information

This Material Safety Data Sheet is available in American Spanish upon request.
 Los Datos de Seguridad del Producto pueden obtenerse en Espanol si lo requiere.

Product Name:	Window, Door & Siding 100% Silicone Rubber Sealant - Clear	Revision Date:	07/16/2013
Product UPC Number:	070798086418	Supersedes:	01/26/2011
Product Use/Class:	Xiameter Acetoxo Cure Silicone Sealant	MSDS Number:	00008641001
Manufacturer:	DAP Products Inc. 2400 Boston Street Suite 200 Baltimore, MD 21224-4723 888-327-8477 (non-emergency matters)		

Section 2 - Hazards Identification

Emergency Overview: A(n) clear paste product with a acetic acid odor. **WARNING** May cause eye, skin, nose, throat and respiratory tract irritation. May be harmful if swallowed. Remove contact lenses before using.

Refer to other MSDS sections for other detailed information.

Effects Of Overexposure - Eye Contact: Direct contact may cause mild irritation.

Effects Of Overexposure - Skin Contact: May cause mild irritation.

Effects Of Overexposure - Inhalation: Material is not likely to present an inhalation hazard at ambient conditions. However, if material is heated or high vapor concentration is attained, central nervous system depression may occur, which is characterized by drowsiness, dizziness, confusion or loss of coordination.

Effects Of Overexposure - Ingestion: Low ingestion hazard in normal use. Harmful if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Ingestion may result in obstruction when material hardens.

Effects Of Overexposure - Chronic Hazards: Prolonged or repeated contact with skin can cause defatting of the skin, which may lead to dermatitis.

Primary Route(s) Of Entry: Skin Contact, Inhalation, Ingestion, Eye Contact

Medical Conditions which May be Aggravated by Exposure: No known applicable information.

Carcinogenicity:

CAS No.	Chemical Name	ACGIH	OSHA	IARC	NTP
64742-46-7	Hydrotreated middle distillate	Suspected human carcinogen.	Not Listed.	Not classifiable as to carcinogenicity to humans.	Not Listed.

Section 3 - Composition / Information On Ingredients

Chemical Name	CASRN	Wt%
Dimethylsiloxane, hydroxy term	51721300-5110P	60-100
Hydrotreated middle distillate	64742-46-7	10-30
Silica, amorphous	7631-86-9	5-10
Silanetriol, methyl-, triaceta	4253-34-3	1-5
Ethyltriacetoxysilane	17689-77-9	1-5

Section 4 - First Aid Measures

First Aid - Eye Contact: Immediately flush the contaminated eye(s) with lukewarm, gently flowing water for 5 minutes while holding the eyelid(s) open. Obtain medical attention.

First Aid - Skin Contact: Remove contaminated clothing, shoes and leather goods (e.g. watchbands, belts). Quickly and gently blot or brush away excess chemical. Flush with lukewarm gently flowing water for 15 minutes. If irritation persists, repeat flushing. If irritation persists, obtain medical advice.

First Aid - Inhalation: Material is not likely to present an inhalation hazard at ambient conditions. If material is heated or vapor is generated, care should be taken to prevent inhalation. In case of exposure to vapor, move to fresh air.

First Aid - Ingestion: If irritation or discomfort occur, obtain medical advice.

Note to Physician: Treat according to person's condition and specifics of exposure.

COMMENTS: If over-exposure occurs, call your poison control center at 1-800-222-1222.

Section 5 - Fire Fighting Measures

Extinguishing Media: Carbon Dioxide, Dry Chemical, Foam, Water Fog

Unusual Fire And Explosion Hazards: None.

Special Firefighting Procedures: Self-contained breathing apparatus and protective clothing should be worn in fighting large fires involving chemicals. Determine the need to evacuate or isolate the area according to your local emergency plan. Use water spray to keep fire exposed containers cool.

Section 6 - Accidental Release Measures

Steps To Be Taken If Material Is Released Or Spilled: Wear proper protective equipment as specified in Section 8. Observe all personal protection equipment recommendations described in Sections 5 and 8. Wipe up or scrape up and contain for salvage or disposal. Clean area as appropriate since spilled materials, even in small quantities, may present a slip hazard. Final cleaning may require use of steam, solvents or detergents. Dispose of saturated absorbant or cleaning materials appropriately, since spontaneous heating may occur. Local, state and federal laws and regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which federal, state and local laws and regulations are applicable. Sections 13 and 15 of this MSDS provide information regarding certain federal and state requirements.

Note: See Section 8 for Personal Protective Equipment for Spills.

Section 7 - Handling And Storage

Handling: Use with adequate ventilation. Product evolves acetic acid (HOAc) when exposed to water or humid air. Provide ventilation during use to control HOAc within exposure guidelines or use respiratory protection. Avoid eye contact. Avoid breathing vapor, mist, dust, or fumes. Keep container closed. Avoid skin contact.

Storage: Use reasonable care and store away from oxidizing materials. Keep container closed and store away from water or moisture. This material in its finely divided form presents an explosion hazard. Follow NFPA 654 (for chemical dusts) or 484 (for metal dusts) as appropriate for managing dust hazards to minimize secondary explosion potential.

Section 8 - Exposure Controls / Personal Protection

Chemical Name	CASRN	ACGIH TWA	ACGIH STEL	ACGIH CEIL	OSHA TWA	OSHA STEL	OSHA CEIL	Skin
Dimethylsiloxane, hydroxy term	51721300-5110P	N.E.	N.E.	N.E.	N.E.	N.E.	N.E.	No
Hydrotreated middle distillate	64742-46-7	5 MGM3	N.E.	N.E.	5 MGM3	N.E.	N.E.	No
Silica, amorphous	7631-86-9	10 MGM3	N.E.	N.E.	5 MGM3	N.E.	N.E.	No
Silanetriol, methyl-, triaceta	4253-34-3	N.E.	N.E.	N.E.	N.E.	N.E.	N.E.	No
Ethyltriacetoxysilane	17689-77-9	N.E.	N.E.	N.E.	N.E.	N.E.	N.E.	No

Important: Listed Permissible Exposure Levels (PEL) are from the U.S. Dept. of Labor OSHA Final Rule Limits (CFR 29 1910.1000); these limits may vary between states.

Note: An employee's skin exposure to substances having a "YES" in the "SKIN" column in the table above shall be prevented or reduced to the extent necessary under the circumstances through the use of gloves, coveralls, goggles or other appropriate personal protective equipment, engineering controls or work practices.

Exposure Notes:

Consult local authorities for acceptable provincial values.

Acetic acid is formed upon contact with water or humid air. Provide adequate ventilation to control exposures within guidelines of OSHA PEL: TWA 10 ppm and ACGIH TLV: TWA 10 ppm, STEL 15 ppm.

Precautionary Measures: Avoid eye contact. Avoid breathing vapor, mist, dust, or fumes. Keep container closed. Avoid skin contact. Use reasonable care.

Comments: Product evolves acetic acid (HOAc) when exposed to water or humid air. Provide ventilation during use to control HOAc within exposure guidelines or use respiratory protection.

Note: These precautions are for room temperature handling. Use at elevated temperature or aerosol/spray applications may require added precautions.

Engineering Controls: Local Ventilation: Recommended.
General Ventilation: Recommended.

Respiratory Protection: Personal Protective Equipment for Routine Handling:

Inhalation:

Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines. IH personnel can assist in judging the adequacy of existing engineering controls.

Suitable Respirator:

Respiratory protection is not needed under ambient conditions. If vapor is generated when material is heated or handled, the following is advised. General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators.

Personal Protective Equipment for Spills:**Inhalation/Suitable Respirator:**

Respiratory protection recommended. Follow OSHA Respirator Regulations (29 CFR 1910.134) and use NIOSH/MHSA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection.

Skin Protection: Personal Protective Equipment for Routine Handling:

Wash at mealtime and end of shift. Contaminated clothing and shoes should be removed as soon as practical and thoroughly cleaned before reuse. Chemical protective gloves are recommended.

Suitable Gloves:

Avoid skin contact by implementing good industrial hygiene practices and procedures. Select and use gloves and/or protective clothing to further minimize the potential for skin contact. Consult with your glove and/or personnel protective equipment manufacturer for selection of appropriate compatible materials.

Personal Protective Equipment for Spills:

Wash at mealtime and end of shift. Contaminated clothing and shoes should be removed as soon as practical and thoroughly cleaned before reuse. Chemical protective gloves are recommended.

Eye Protection: Personal Protective Equipment for Routine Handling:

Use proper protection - safety glasses as a minimum.

Personal Protective Equipment for Spills:

Use full face respirator.

Other protective equipment: None.

Hygienic Practices: Wash hands before breaks and at the end of workday. Remove and wash contaminated clothing and gloves, including the inside, before re-use.

Section 9 - Physical And Chemical Properties

Boiling Range:	Not Established	Vapor Density:	Heavier Than Air
Odor:	Acetic Acid	Odor Threshold:	Not Established
Color:	Clear	Evaporation Rate:	Slower Than n-Butyl Acetate
Solubility in H₂O:	Not Established	Specific Gravity:	0.96 - 0.96
Freeze Point:	Not Established	pH:	Not Applicable
Vapor Pressure:	Not Established	Viscosity:	Not Established
Physical State:	Paste	Flammability:	Non-Flammable
Flash Point, F:	Greater than 200	Method:	(Seta Closed Cup)
Lower Explosive Limit, %:	Not Determined	Upper Explosive Limit, %:	Not Determined

When reported, vapor pressure of this product has been calculated theoretically based on its constituent makeup and has not been determined experimentally.

(See section 16 for abbreviation legend)

Section 10 - Stability And Reactivity

Conditions To Avoid: Excessive heat and freezing.

Incompatibility: Oxidizing material can cause a reaction. Water, moisture, or humid air can cause hazardous vapors to

form as described in Section 8. Incompatible with strong bases and oxidizing agents.

Hazardous Decomposition Products: Thermal breakdown of this product during fire or very high heat conditions may evolve the following decomposition products: Carbon oxides and traces of incompletely burned carbon compounds. Silicon dioxide. Formaldehyde.

Hazardous Polymerization: Hazardous polymerization will not occur under normal conditions.

Stability: Stable under recommended storage conditions.

Section 11 - Toxicological Information

Product LD50: Not Established

Product LC50: Not Established

No toxicological information is available.

Significant Data with Possible Relevance to Humans: None.

Section 12 - Ecological Information

Ecological Information: Ecological injuries are not known or expected under normal use.

Section 13 - Disposal Information

Disposal Information: Dispose of material in accordance with all federal, state and local regulations. State and Local regulations/restrictions are complex and may differ from Federal regulations. Responsibility for proper waste disposal is with the owner of the waste.

EPA Waste Code if Discarded (40 CFR Section 261): None.

Section 14 - Transportation Information

DOT Proper Shipping Name: Not Regulated.

Packing Group: N.A.

DOT Technical Name: N.A.

Hazard Subclass: N.A.

DOT Hazard Class: N.A.

DOT UN/NA Number: N.A.

Section 15 - Regulatory Information

CERCLA - SARA Hazard Category:

This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

Immediate Health Hazard, Chronic Health Hazard

SARA Section 313:

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

None

Toxic Substances Control Act:

All ingredients in this product are either on TSCA inventory list, or otherwise exempt.

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States:

None

New Jersey Right-to-Know:

The following materials are non-hazardous, but are among the top five components in this product:

None

Pennsylvania Right-to-Know:

The following non-hazardous ingredients are present in the product at greater than 3%:

None

California Proposition 65:

None.

Section 16 - Other Information

HMIS Ratings:

Health: 1	Flammability: 1	Reactivity: 0	Personal Protection: X
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Volatile Organic Compounds (VOC), less water less exempts: g/L: 28.8 lb/gal: 0.24 wt:wt%: 3.0

Volatile Organic Compounds (VOC), less water less exempts, less LVP-VOCs: wt:wt%: 3.0

REASON FOR REVISION: Periodic Update

Legend:

N.A. – Not Applicable	ACGIH – American Conference of Governmental Industrial Hygienists
N.E. – Not Established	SARA – Superfund Amendments and Reauthorization Act of 1986
N.D. – Not Determined	NJRTK – New Jersey Right-to-Know Law
VOC – Volatile Organic Compound	OSHA – Occupational Safety and Health Administration
PEL – Permissible Exposure Limit	HMIS – Hazardous Materials Identification System
TLV – Threshold Limit Value	NTP – National Toxicology Program
CEIL – Ceiling Exposure Limit	STEL – Short Term Exposure Limit
LD50 – Lethal Dose 50	LC50 – Lethal Concentration 50
F – Degree Fahrenheit	MSDS – Material Safety Data Sheet
C – Degree Celsius	CASRN – The Chemical Abstracts Service Registry Number

DAP believes the data and statements contained herein are accurate as of the date hereof. They are offered in good faith as typical

values and not as a product specification. **NO WARRANTY OF MERCHANTABILITY, WARRANTY OF FITNESS FOR ANY PARTICULAR PURPOSE OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, IS MADE WITH REGARD TO THE INFORMATION HEREIN PROVIDED OR THE PRODUCT TO WHICH THE INFORMATION REFERS.** Since this document is intended only as a guide to the appropriate use and precautionary handling of the referenced product by a properly trained person, it is therefore the responsibility of the user to (i) review the recommendations with due consideration for the specific context of the intended use and (ii) determine if they are appropriate.

<End of MSDS>

Material Safety Data Sheet

MANUFACTURER:

GPM
201 Jandus Road
Cary, IL 60013

EMERGENCY TELEPHONE NUMBER:
(800)228-5635 ext 017
DATE: October 24, 2003

TECHNICAL INFORMATION:
(800)345-9218
SUPERSEDES: June 9, 2002

HMIS:
H [2]
F [4]
R [0]

SECTION 1- PRODUCT IDENTIFICATION

PRODUCT CODE: XO-1, 2, 4, 6-8, 11, 14, 15, 19, 20, 23, 25-27, 30, 33-38
PRODUCT NAME: XO-Rust Enamel Spray
PRODUCT CLASS: Aerosol Paint

SECTION 2 - HAZARDOUS INGREDIENTS

INGREDIENT	CAS NUMBER	WT. %	OCCUPATIONAL EXPOSURE LIMITS		VAPOR PRESSURE mmHg@20°C
			TLV	PEL	
Acetone	67-64-1	30-35	750 ppm	1000 ppm	186.0
Propane/Isobutane Blend	Mixture	26-29	1000 ppm	1000 ppm	80 p.s.i.
(S)Toluene	108-88-3	7-14	50 ppm	100 ppm	22.0
(S)Xylene	1330-20-7	1-7	100 ppm	100 ppm	14.0
(S)Ethyl Benzene	100-41-4	.5-3	100ppm	100ppm	12.0
VM&P Naphtha(1)	8030-30-6	1-11	300 ppm	300 ppm	5.2
Talc(2)	14807-96-6	4-7	2 mg/m ³	2 mg/m ³	NA
Carbon Black(3)	1333-86-4	.1-.6	3.5 mg/m ³	3.5 mg/m ³	NA
Crystalline Silica Cristabolite(4)	14464-46-1	.6-.8	.05 mg/m ³	.05 mg/m ³	NA
Yellow Iron Oxide (5)	51274-00-1	1-3	5 mg/m ³	5 mg/m ³	NA
Mineral Spirits (6)	8052-41-3	1-3	100 ppm	100 ppm	2.6

(1) - In XO-2, 4, 6, 7, 8, 11, 14, 15, 19, 20, 25, 26, 27, 30, 33, 34, 35, 36, 37, 38 only (2) - In XO-19, 30 only

(3) - In XO-2, 19, 20 only (4) - In XO-30 only (5) - In XO-11, 20, 38 only. (6) - In XO-11 only.

(S) - This ingredient is subject to the reporting requirements of Section 313 SARA Title III.

NA - Not applicable.

NE - Not established.

SECTION 3 - PHYSICAL DATA

VAPOR DENSITY: [X] HEAVIER [] LIGHTER THAN AIR BOILING RANGE: <0°F
EVAPORATION RATE: [] FASTER [X] SLOWER THAN ETHER 89-93 % VOLATILE VOLUME
APPEARANCE/ODOR: Colored liquid/solvent DENSITY: 6.1-6.7 Wt(lbs)/Gal
VOLATILE ORGANIC COMPOUND(VOC): Less Than 60% flat, 65% nonflat MIR: 1.20 (XO-19, 30, 38 only), 1.40

SECTION 4 - FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY CLASSIFICATION: OSHA Class IA FLASH POINT: <20°F LEL: 2.0
DOT ORM-D

EXTINGUISHING MEDIA:

[X] FOAM [] ALCOHOL FOAM [X] CO₂ [X] DRY CHEMICAL [X] WATER FOG [] OTHER

UNUSUAL FIRE AND EXPLOSION HAZARDS: Closed containers may explode when exposed to extreme heat.

Isolate from heat, sparks and open flame. Vapors may accumulate and travel to ignition sources distant from handling site.

SPECIAL FIRE FIGHTING PROCEDURES: Use a self-contained breathing apparatus with full face mask in a positive pressure demand mode. Treat as a volatile liquid fire. Water spray may be ineffective. If water spray is used, fog nozzles are preferable. Water may be used to cool sealed containers to prevent pressure build-up and possible explosion or auto-ignition when exposed to the heat of a fire.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, carbon dioxide and unidentified organic compounds.

SECTION 5 - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE:

INHALATION: Exposure to large amounts of vapors, mists or sanding dusts may cause moderate irritation to the lungs, nose, and throat. May also cause dizziness, nausea, fatigue, or headache. Vapors or spray mists may be irritating to eyes, nose or throat. Prolonged overexposure may cause coughing, shortness of breath, dizziness, and intoxication. This product contains crystalline silica (cs), which is considered a hazard by inhalation.

SKIN CONTACT: Exposure may cause mild irritation. Prolonged exposure may cause drying and cracking.

EYE CONTACT: Causes irritation, including redness, stinging and watering.

INGESTION: Moderately toxic in large amounts. Could cause drowsiness, nausea or headache. (See additional information in Section 9)

CARCINOGENICITY: This product contains carbon black, crystalline silica and ethyl benzene (see section 2). Carbon black and ethyl benzene have been classified by IARC (not NTP or OSHA) as possible carcinogens for human (2B) from lab animal studies. Crystalline silica has been classified by IARC as a carcinogen for humans (Group 1) from lab animal studies.

MEDICAL CONDITIONS PRONE TO AGGRAVATION BY EXPOSURE: Preexisting skin, eye and respiratory disorders may be aggravated by exposure to this product.

PRIMARY ROUTE(S) OF ENTRY: ☒ DERMAL ☒ INHALATION ☐ INGESTION

EMERGENCY AND FIRST AID PROCEDURES:

INHALATION: Remove to fresh air. Use artificial respiration if necessary. Seek medical attention.

SKIN CONTACT: Remove contaminated clothing. Wash affected area with soap and water. Wash clothing before reuse.

EYE CONTACT: Immediately flush eyes with large amounts of water. If symptoms persist, seek medical attention.

INGESTION: Give 1 or 2 glasses of water to dilute. Do not induce vomiting. Get medical attention immediately.

SECTION 6 - REACTIVITY DATA

STABILITY: Stable **HAZARDOUS POLYMERIZATION:** Will not occur

INCOMPATIBILITY (Materials to avoid): Avoid contact with strong oxidizing agents.

SECTION 7 - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Eliminate all ignition sources. Contain spill, absorb liquid with clay, sand or floor absorbent. Prevent run-off to sewers, streams or other bodies of water.

WASTE DISPOSAL METHOD: Observe all federal, state and local regulations regarding proper disposal.

SECTION 8 - SAFE HANDLING AND USE INFORMATION

RESPIRATORY PROTECTION: NIOSH/MSHA jointly approved air purifying respirator if TLV limits are exceeded. Approved mechanical filter to remove solid airborne particles of overspray during application.

VENTILATION: Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below TLV.

PROTECTIVE CLOTHING: Wear safety glasses with side shields to prevent eye contact. Contact lenses should not be worn. Use solvent resistant gloves to avoid prolonged contact.

OTHER PROTECTIVE EQUIPMENT: Eyewash fountains and safety showers in the event of an accident.

HYGIENIC PRACTICES: Wash hands thoroughly after use, and before eating, drinking or smoking.

SECTION 9 - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Handle as an extremely flammable material. Keep liquid and vapor away from heat, sparks, and open flame. Close container after each use. Store in a cool dry area. Do not expose container to temperatures above 120°F.

OTHER PRECAUTIONS: CAUTION: Keep out of reach of children. Reports have associated repeated and prolonged occupational exposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling contents may be harmful or fatal.

WARNING: This product contains chemicals known to the state of California to cause cancer and birth defects or other reproductive harm.

The information contained in this MSDS is based on information and data provided by the supplier of the raw material used in the manufacture of this product. Although GPM believes such information and data to be reliable, GPM makes no warranty, expressed or implied, regarding the accuracy and completeness of such information and data.

Material Safety Data Sheet



Zep Inc.
1310 Seaboard Industrial Blvd.
Atlanta, GA 30318
1-877-793-7776

Section 1. Chemical Product and Company Identification

Product name VINYL & RUBBER PROTECTANT
Product use Surface Protectant
Product code R083
Date of issue 08/11/08 **Supersedes**

Emergency Telephone Numbers

For MSDS Information:

Compliance Services 1-877-793-7776

For Medical Emergency

INFOTRAC: (877) 541-2016 Toll Free - All Calls Recorded

For Transportation Emergency

CHEMTREC: (800) 424-9300 - All Calls Recorded
In the District of Columbia (202) 483-7616

Prepared By

Compliance Services
1420 Seaboard Industrial Blvd.
Atlanta, GA 30318

Section 2. Hazards Identification

Emergency overview

CAUTION

MAY CAUSE EYE IRRITATION.

*Hazard Determination System (HDS): Health, Flammability, Reactivity



NOTE: MSDS data pertains to the product as delivered in the original shipping container(s). Risk of adverse effects are lessened by following all prescribed safety precautions, including the use of proper personal protective equipment.

Acute Effects

Routes of Entry

Not available.

Eyes

Direct contact may cause irritation and redness. Inflammation of the eye is characterized by redness, watering and itching.

Skin

No known acute effects of this product resulting from skin contact.

Inhalation

No known acute effects of this product resulting from inhalation.

Ingestion

No known significant effects or critical hazards.

Chronic effects

Prolonged or repeated contact may dry skin and cause irritation.

Additional Information: See Toxicological Information (Section 11)

Section 3. Composition/Information on Ingredients

OSHA's Hazard Communication Standard (29 CFR 1910.1200) does not require the listing of any ingredient for this product.

Section 4. First Aid Measures

Eye Contact

Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.

Skin Contact

Rinse with plenty of running water. Get medical attention if irritation develops.

Inhalation

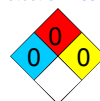
Inhalation not likely under normal use conditions. If inhaled, remove to fresh air.

Ingestion

Do not induce vomiting unless directed to do so by medical personnel. If affected person is conscious, give plenty of water to drink. Never give anything by mouth to an unconscious person. Get medical attention immediately.

Section 5. Fire Fighting Measures

National Fire Protection Association (U.S.A.)



Flash Point

None.

Flammable Limits

Not available.

Flammability

Non-combustible.

Fire hazard

In a fire or if heated, a pressure increase will occur and the container may burst.

Fire-Fighting Procedures

Use an extinguishing agent suitable for the surrounding fire.

Section 6. Accidental Release Measures

Spill Clean up Put on appropriate personal protective equipment (see section 8). Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble or absorb with an inert dry material and place in an appropriate waste disposal container.

Section 7. Handling and Storage

Handling Put on appropriate personal protective equipment (see section 8). Avoid contact with eyes. Avoid prolonged or repeated contact with skin. Do not ingest. Wash thoroughly after handling. Do not reuse container.

Storage Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Store between the following temperatures: 40°F - 120°F (4.4°C - 49°C). Keep out of the reach of children.

Section 8. Exposure Controls/Personal Protection**Product name****Exposure limits**

No exposure limit value known.

Personal Protective Equipment (PPE)

Eyes Safety glasses.



Body For prolonged or repeated handling, use the following type of gloves: Rubber gloves. Neoprene gloves. Nitrile gloves.

Respiratory No special protection is required.

Section 9. Physical and Chemical Properties

Physical State Liquid.

Color Milky-white

pH 5.5 - 6.5

Odor Faint odor.

Boiling Point 101.67°C (215°F)

Vapor Pressure Not determined.

Specific Gravity 1

Vapor Density Not determined.

Solubility Soluble in the following materials: cold water and hot water.

Evaporation Rate 1 (Water = 1)

VOC (Consumer) 0 (g/l).

Section 10. Stability and Reactivity

Stability and Reactivity The product is stable.

Incompatibility None identified.

Hazardous Polymerization Not available.

Hazardous Decomposition Products carbon oxides (CO, CO₂)

Section 11. Toxicological Information**Acute Toxicity**

Not available.

Section 12. Ecological Information

Environmental Effects No known significant effects or critical hazards.

Aquatic Ecotoxicity

Not available.

Section 13. Disposal Considerations**Waste Information**

Waste must be disposed of in accordance with federal, state and local environmental control regulations. Consult your local or regional authorities for additional information.

Waste Stream Non-hazardous waste

Section 14. Transport Information

Regulatory information **UN number** **Proper shipping name** **Classes** **PG*** **Label**

DOT Classification	None.	Not a DOT controlled material (United States).			
IMDG Class	Not determined.				

NOTE: DOT classification applies to most package sizes. For specific container size classifications or for size exceptions, refer to the Bill of Lading with your shipment.

PG : Packing group

Section 15. Regulatory Information**U.S. Federal Regulations**

SARA 313 toxic chemical notification and release reporting:

No products were found.

Clean Water Act (CWA) 307: No products were found.

Clean Water Act (CWA) 311: No products were found.

Clean Air Act (CAA) 112 regulated toxic substances: No products were found.

[All Components of this product are listed or exempt from listing on TSCA Inventory.](#)

State Regulations

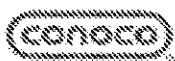
California Prop 65 No products were found.

Section 16. Other Information

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

*NOTE: Hazard Determination System (HDS) ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although these ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HDS ratings are to be used with a fully implemented program to relay the meanings of this scale.



Turbine Oil (All Grades)

Material Safety Data Sheet

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Turbine Oil (All Grades)

MSDS Number: 778982

Synonyms: Turbine Oil 32
Turbine Oil 46
Turbine Oil 68
Turbine Oil 100

Intended Use: Turbine Oil

Manufacturer/Supplier: ConocoPhillips
600 N. Dairy Ashford
Houston, Texas 77079-1175

Emergency Health and Safety Number: Chemtrec: 800-424-9300 (24 Hours)

MSDS Information: Phone: 800-762-0942
Email: MSDS@conocophillips.com
Internet: <http://w3.conocophillips.com/NetMSDS/>

2. HAZARDS IDENTIFICATION

Emergency Overview

This material is not considered hazardous according to OSHA criteria.

NFPA



Appearance: Clear and bright

Physical Form: Liquid

Odor: Petroleum

Potential Health Effects

Eye: Contact may cause mild eye irritation including stinging, watering, and redness.

Skin: Contact may cause mild skin irritation including redness and a burning sensation. Prolonged or repeated contact can defat the skin, causing drying and cracking of the skin, and possibly dermatitis (inflammation). A component of this material may cause an allergic skin reaction. No harmful effects from skin absorption are expected.

Inhalation (Breathing): No information available on acute toxicity.

Ingestion (Swallowing): No harmful effects expected from ingestion.

Signs and Symptoms: Effects of overexposure may include irritation of the digestive tract, nausea and diarrhea. Inhalation of oil mist or vapors at elevated temperatures may cause respiratory irritation.

Pre-Existing Medical Conditions: Conditions aggravated by exposure may include skin disorders.

See Section 11 for additional Toxicity Information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Component	CASRN	Concentration*
Lubricant Base Oil (Petroleum)	VARIOUS	>99
Additives	PROPRIETARY	<1

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. FIRST AID MEASURES

Eye Contact: If irritation or redness develops from exposure, flush eyes with clean water. If symptoms persist, seek medical attention.

Skin Contact: Remove contaminated shoes and clothing and cleanse affected area(s) thoroughly by washing with mild soap and water or a waterless hand cleaner. If irritation or redness develops and persists, seek medical attention.

Inhalation (Breathing): If respiratory symptoms develop, move victim away from source of exposure and into fresh air in a position comfortable for breathing. If symptoms persist, seek medical attention.

Ingestion (Swallowing): First aid is not normally required; however, if swallowed and symptoms develop, seek medical attention.

Notes to Physician: Acute aspirations of large amounts of oil-laden material may produce a serious aspiration pneumonia. Patients who aspirate these oils should be followed for the development of long-term sequelae. Inhalation exposure to oil mists below current workplace exposure limits is unlikely to cause pulmonary abnormalities.

5. FIRE-FIGHTING MEASURES

NFPA 704 Hazard Class

Health: 0 **Flammability:** 1 **Instability:** 0 (0-Minimal, 1-Slight, 2-Moderate, 3-Serious, 4-Severe)

Unusual Fire & Explosion Hazards: This material may burn, but will not ignite readily. If container is not properly cooled, it can rupture in the heat of a fire.

Extinguishing Media: Dry chemical, carbon dioxide, foam, or water spray is recommended. Water or foam may cause frothing of materials heated above 212°F. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces.

Fire Fighting Instructions: For fires beyond the incipient stage, emergency responders in the immediate hazard area should wear bunker gear. When the potential chemical hazard is unknown, in enclosed or confined spaces, a self contained breathing apparatus should be worn. In addition, wear other appropriate protective equipment as conditions warrant (see Section 8).

Isolate immediate hazard area and keep unauthorized personnel out. Stop spill/release if it can be done safely. Move undamaged containers from immediate hazard area if it can be done safely. Water spray may be useful in minimizing or dispersing vapors and to protect personnel. Cool equipment exposed to fire with water, if it can be done safely. Avoid spreading burning liquid with water used for cooling purposes.

Hazardous Combustion Products: Combustion may yield smoke, carbon monoxide, and other products of incomplete combustion. Oxides of sulfur, nitrogen or phosphorus may also be formed.

See Section 9 for Flammable Properties including Flash Point and Flammable (Explosive) Limits

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: This material may burn, but will not ignite readily. Keep all sources of ignition away from spill/release. The use of explosion-proof electrical equipment is recommended. Stay upwind and away from spill/release. Notify persons down wind of the spill/release, isolate immediate hazard area and keep unauthorized personnel out. Wear appropriate protective equipment, including respiratory protection, as conditions warrant (see Section 8). See Sections 2 and 7 for additional information on hazards and precautionary measures.

Environmental Precautions: Stop spill/release if it can be done safely. Prevent spilled material from entering sewers, storm drains, other unauthorized drainage systems, and natural waterways. Use water sparingly to minimize environmental contamination and reduce disposal requirements. Spills into or upon navigable waters, the contiguous zone, or adjoining shorelines that cause a sheen or discoloration on the surface of the water, may require notification of the National Response Center (phone number 800-424-8802).

Methods for Containment and Clean-Up: Notify relevant authorities in accordance with all applicable regulations. Immediate cleanup of any spill is recommended. Dike far ahead of spill for later recovery or disposal. Absorb spill with inert material such as sand or vermiculite, and place in suitable container for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling: Wear protective gloves. Avoid breathing vapors or mists. Contaminated work clothing should not be allowed out of the workplace. Wash thoroughly after handling. Use good personal hygiene practices and wear appropriate personal protective equipment.

Do not enter confined spaces such as tanks or pits without following proper entry procedures such as ASTM D-4276 and 29CFR 1910.146. Do not wear contaminated clothing or shoes.

"Empty" containers retain residue and may be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury or death. "Empty" drums should be completely drained, properly bunged, and promptly shipped to the supplier or a drum reconditioner. All containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations. Before working on or in tanks which contain or have contained this material, refer to OSHA regulations, ANSI Z49.1, and other references pertaining to cleaning, repairing, welding, or other contemplated operations.

Conditions for safe storage: Keep container(s) tightly closed. Use and store this material in cool, dry, well-ventilated area away from heat and all sources of ignition. Store only in approved containers. Keep away from any incompatible material (see Section 10). Protect container(s) against physical damage.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Component	US-ACGIH	OSHA	Other
Lubricant Base Oil (Petroleum)	TWA: 5mg/m ³ STEL: 10 mg/m ³ as Oil Mist, if generated	TWA: 5 mg/m ³ as Oil Mist, if generated	---

Note: State, local or other agencies or advisory groups may have established more stringent limits. Consult an industrial hygienist or similar professional, or your local agencies, for further information.

Engineering controls: If current ventilation practices are not adequate to maintain airborne concentrations below the established exposure limits, additional engineering controls may be required.

Eye/Face Protection: The use of eye protection that meets or exceeds ANSI Z 87.1 is recommended to protect against potential eye contact, irritation, or injury. Depending on conditions of use, a face shield may be necessary.

Skin/Hand Protection: The use of gloves impervious to the specific material handled is advised to prevent skin contact. Users should check with manufacturers to confirm the breakthrough performance of their products. Suggested protective materials: Nitrile.

Respiratory Protection: Where there is potential for airborne exposure above the exposure limit a NIOSH certified air purifying respirator equipped with R or P95 filters may be used.

A respiratory protection program that meets or is equivalent to OSHA 29 CFR 1910.134 and ANSI Z88.2 should be followed whenever workplace conditions warrant a respirator's use. Air purifying respirators provide limited protection and cannot be used in atmospheres that exceed the maximum use concentration (as directed by regulation or the manufacturer's instructions), in oxygen deficient (less than 19.5 percent oxygen) situations, or under conditions that are immediately dangerous to life and health (IDLH).

Suggestions provided in this section for exposure control and specific types of protective equipment are based on readily available information. Users should consult with the specific manufacturer to confirm the performance of their protective equipment. Specific situations may require consultation with industrial hygiene, safety, or engineering professionals.

9. PHYSICAL AND CHEMICAL PROPERTIES

Note: Unless otherwise stated, values are determined at 20°C (68°F) and 760 mm Hg (1 atm). Data represent typical values and are not intended to be specifications.

Appearance:	Clear and bright
Physical Form:	Liquid
Odor:	Petroleum

Odor Threshold:	No data
pH:	Not applicable
Vapor Pressure:	<1 mm Hg
Vapor Density (air=1):	>1
Boiling Point/Range:	No data
Melting/Freezing Point:	<-0.4°F / <-18°C
Pour Point:	<-0.4°F / <-18°C
Solubility in Water:	Negligible
Partition Coefficient (n-octanol/water) (Kow):	No data
Specific Gravity:	0.86 - 0.87 @ 60°F (15.6°C)
Bulk Density:	7.2 - 7.3 lbs/gal
Viscosity:	5 - 11 cSt @ 100°C; 30 - 110 cSt @ 40°C
Percent Volatile:	Negligible
Evaporation Rate (nBuAc=1):	<1
Flash Point:	>302°F / >150°C
Test Method:	Pensky-Martens Closed Cup (PMCC), ASTM D93, EPA 1010
LEL (vol % in air):	No data
UEL (vol % in air):	No data
Autoignition Temperature:	No data

10. STABILITY AND REACTIVITY

Stability: Stable under normal ambient and anticipated conditions of storage and handling.

Conditions to Avoid: Extended exposure to high temperatures can cause decomposition.

Hazardous Decomposition Products: Not anticipated under normal conditions of use.

Hazardous Polymerization: Not known to occur.

11. TOXICOLOGICAL INFORMATION

Chronic Data:

Lubricant Base Oil (Petroleum)

Carcinogenicity: The petroleum base oils contained in this product have been highly refined by a variety of processes including severe hydrocracking/hydroprocessing to reduce aromatics and improve performance characteristics. All of the oils meet the IP-346 criteria of less than 3 percent PAH's and are not considered carcinogens by NTP, IARC, or OSHA.

Acute Data:

Component	Oral LD50	Dermal LD50	Inhalation LC50
Lubricant Base Oil (Petroleum)	>5 g/kg	>2 g/kg	No data

12. ECOLOGICAL INFORMATION

Ecotoxicity: Experimental studies show that acute aquatic toxicity values are greater than 1000 mg/l. These values are consistent with the predicted aquatic toxicity of these substances based on their hydrocarbon compositions.

Mobility: Volatilization to air is not expected to be a significant fate process due to the low vapor pressure of this material. In water, base oils will float and spread over the surface at a rate dependent upon viscosity. There will be significant removal of hydrocarbons from the water by sediment adsorption. In soil and sediment, hydrocarbon components will show low mobility with adsorption to sediments being the predominant physical process. The main fate process is expected to be slow biodegradation of base oil components in soil and sediment.

Persistence and degradability: The hydrocarbons in this material are not readily biodegradable, but since they can be degraded by microorganisms, they are regarded as inherently biodegradable.

Bioaccumulation Potential: Log Kow values measured for the hydrocarbon components of this material range from 4 to over 6, and therefore regarded as having the potential to bioaccumulate. In practice, metabolic processes may reduce bioconcentration.

13. DISPOSAL CONSIDERATIONS

13. DISPOSAL CONSIDERATIONS

The generator of a waste is always responsible for making proper hazardous waste determinations and needs to consider state and local requirements in addition to federal regulations.

This material, if discarded as produced, would not be a federally regulated RCRA "listed" hazardous waste and is not believed to exhibit characteristics of hazardous waste. See Sections 7 and 8 for information on handling, storage and personal protection and Section 9 for physical/chemical properties. It is possible that the material as produced contains constituents which are not required to be listed in the MSDS but could affect the hazardous waste determination. Additionally, use which results in chemical or physical change of this material could subject it to regulation as a hazardous waste.

This material under most intended uses would become "Used Oil" due to contamination by physical or chemical impurities. Whenever possible, Recycle Used Oil in accordance with applicable federal and state or local regulations. Container contents should be completely used and containers should be emptied prior to discard.

14. TRANSPORTATION INFORMATION**U.S. Department of Transportation (DOT)**

Shipping Description: *Not regulated*

Note: *If shipped by land in a packaging having a capacity of 3,500 gallons or more, the provisions of 49 CFR, Part 130 apply. (Contains oil)*

International Maritime Dangerous Goods (IMDG)

Shipping Description: *Not regulated*

Note: *U.S. DOT compliance requirements may apply. See 49 CFR 171.22, 23 & 25.*

International Civil Aviation Org. / International Air Transport Assoc. (ICAO/IATA)

UN/ID #: *Not regulated*

	LTD. QTY	Passenger Aircraft	Cargo Aircraft Only
Packaging Instruction #:	---	---	---
Max. Net Qty. Per Package:	---	---	---

15. REGULATORY INFORMATION**CERCLA/SARA - Section 302 Extremely Hazardous Substances and TPQs (in pounds):**

This material does not contain any chemicals subject to the reporting requirements of SARA 302 and 40 CFR 372.

CERCLA/SARA - Section 311/312 (Title III Hazard Categories)

Acute Health: No
 Chronic Health: No
 Fire Hazard: No
 Pressure Hazard: No
 Reactive Hazard: No

CERCLA/SARA - Section 313 and 40 CFR 372:

This material does not contain any chemicals subject to the reporting requirements of SARA 313 and 40 CFR 372.

EPA (CERCLA) Reportable Quantity (in pounds):

This material does not contain any chemicals with CERCLA Reportable Quantities.

California Proposition 65:

This material does not contain any chemicals which are known to the State of California to cause cancer, birth defects or other reproductive harm at concentrations that trigger the warning requirements of California Proposition 65.

Canadian Regulations:

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the Regulations.

WHMIS Hazard Class
None

National Chemical Inventories:

All components are either listed on the US TSCA Inventory, or are not regulated under TSCA.
All components are either on the DSL, or are exempt from DSL listing requirements.

U.S. Export Control Classification Number: EAR99

16. OTHER INFORMATION

References used in compiling safety data sheet information:

Dangerous Substances Directive 67/548/EEC

Issue Date:	08-Aug-2008
Status:	Final
Revised Sections or Basis for Revision:	New MSDS
MSDS Number:	778982

Guide to Abbreviations:

ACGIH = American Conference of Governmental Industrial Hygienists; ADR = Agreement on Dangerous Goods by Road; CASRN = Chemical Abstracts Service Registry Number; CEILING = Ceiling Limit (15 minutes); EINECS = European Inventory of Existing Commercial Chemical Substances; EPA = [US] Environmental Protection Agency; Germany-TRGS = Technical Rules for Dangerous Substances; IARC = International Agency for Research on Cancer; ICAO/IATA = International Civil Aviation Organization / International Air Transport Association; IMDG = International Maritime Dangerous Goods; Ireland-HSA = Ireland's National Health and Safety Authority; LEL = Lower Explosive Limit; N/A = Not Applicable; N/D = Not Determined; NTP = [US] National Toxicology Program; RID = Regulations Concerning the International Transport of Dangerous Goods by Rail; STEL = Short Term Exposure Limit (15 minutes); TLV = Threshold Limit Value; TWA = Time Weighted Average (8 hours); UEL = Upper Explosive Limit; UK-EH40 = United Kingdom EH40/2005 Workplace Exposure Limits

Disclaimer of Expressed and implied Warranties:

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