



MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Product name	Never-Seez Regular Grade Cmpd.
MSDS name	Never-Seez Regular Grade Compound Series
Product name(s) covered	See Section 16 for Product Names Covered.
CAS #	Mixture
Product use	Lubricants
Generic description	Petroleum Based Grease Formulations
Manufacturer	Bostik, Inc. 11320 Watertown Plank Rd Wauwatosa, WI 53226 USA
24 hour emergency assistance	Telephone: 1-800-227-0332 (Outside U.S.) 1-703-527-3887
General assistance	Telephone: 1-800-843-0844
MSDS assistance	Telephone: 1-800-843-0844

2. Hazards Identification

Emergency overview	Contact with this material can cause irritation to the skin, eyes and mucous membranes. Irritating fumes and gases may be released upon thermal processing or during combustion. Primary Routes of Exposure: eyes, skin, and inhalation.
Potential health effects	
Eyes	This product may cause irritation to the eyes.
Skin	This product may cause irritation to the skin. Prolonged and/or repeated skin contact with this product may cause irritation/dermatitis.
Inhalation	Fumes released during thermal processing may irritate respiratory system, skin and eyes.
Ingestion	Ingestion can cause gastrointestinal irritation, nausea, vomiting and diarrhea.
Target organs	Skin.

3. Composition / Information on Ingredients

Components	CAS #	Percent
Copper Powder	7440-50-8	7 - 13
Aluminum	7429-90-5	1 - 5

4. First Aid Measures

First aid procedures	
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention or advice.
Skin contact	For skin contact flush with large amounts of water while removing contaminated clothing. If skin irritation persists, call a physician.
Inhalation	Move to fresh air in case of accidental inhalation of fumes from overheating or combustion. If the affected person is not breathing, apply artificial respiration. Call a physician if symptoms develop or persist.
Ingestion	If the material is swallowed, get immediate medical attention or advice. Never give anything by mouth to a victim who is unconscious or is having convulsions. Do not induce vomiting without medical advice.
Notes to physician	Provide general supportive measures and treat symptomatically. Contact Bostik to determine whether any additional information is available.
Medical conditions aggravated by exposure	Dermatitis.

5. Fire Fighting Measures

Extinguishing media

Suitable extinguishing media Dry chemical, foam, carbon dioxide, water fog.

Fire fighting equipment/instructions Firefighters should wear full protective clothing including self contained breathing apparatus.

Dust explosion hazard None Known

Sensitivity to static discharge None Known

Unusual fire & explosion hazards Product may burn and produce toxic gases in a fire.

Flash point 475 °F (246.1 °C)

6. Accidental Release Measures

Emergency action Wear appropriate protective equipment and clothing during clean-up. Do not allow product to enter sewer or waterways. Follow all Local, State, Federal and Provincial regulations for disposal.

Spill or leak procedure Scrape up grease and deposit into appropriate containers for disposal.

Containment procedures Stop source of leak if possible. Contain the discharged material.

Reporting See Federal reporting requirements listed in Section 15. We recommend you contact local authorities to determine if there may be other local reporting requirements.

7. Handling and Storage

Handling Wear appropriate protective equipment to avoid contact with skin and eyes.

Storage Keep tightly closed in a dry and cool place.

Empty container precaution Attention! Follow label warnings even after container is emptied since empty containers may retain product residues. Do not reuse empty container without professional cleaning for food, clothing, or products for human or animal consumption, or where skin contact can occur.

8. Exposure Controls / Personal Protection

Engineering controls Ventilation is not normally required.

Personal protective equipment

Eye protection Wear safety glasses with side shields.

Skin and body protection Use impervious gloves. Work clothing sufficient to prevent all skin contact should be worn, such as coveralls and long sleeves.

Respiratory protection Not normally needed. Special applications may necessitate the use of more stringent respiratory protection equipment.

9. Physical & Chemical Properties

Target solids 100 %

Density 1.19 g/cc

Odor Grease-like

Color Silver

Physical state Paste

Freeze protect No

VOC (Volatile Organic Compounds) 0 lb/gal

10. Chemical Stability & Reactivity Information

Hazardous reactions/decomposition products Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.

Hazardous polymerization Will not occur.

Stability Stable under normal conditions.

11. Toxicological Information

Chronic effects Chronic exposure may cause dermatitis.

Carcinogenicity If this product contains any carcinogens, they will be noted below:

12. Ecological Information

Ecotoxicological information No data available for this product.

13. Disposal Considerations

It is the obligation of each user of the product mentioned herein to determine and comply with the requirements of all applicable local, state and federal regulations.

Waste disposal Dispose of waste material according to Local, State, Federal, and Provincial Environmental Regulations.

14. Transport Information

DOT

Not regulated as hazardous goods.

IATA

Basic shipping requirements:

Proper shipping name	Environmentally Hazardous Substance, Solid, N.O.S. (COPPER)
Hazard class	9
UN number	UN3077
Packing group	III



IMDG

Basic shipping requirements:

Proper shipping name	Environmentally Hazardous Substance, Solid, N.O.S. (COPPER)
Hazard class	9
UN number	UN3077
Packing group	III
Marine pollutant	Copper Powder



15. Regulatory Information

This MSDS is prepared and distributed pursuant to the Federal Hazard Communication Standard, 29 CFR 1910.1200

The product(s) covered by this (M)SDS do not include any of the substances above a concentration of 0.1% weight by weight (w/w) in the Candidate List of Substances of Very High Concern (SVHC) for authorization published or proposed by ECHA on the following dates:

- October 28, 2008
- August 31, 2009
- January 13, 2010
- March 8, 2010
- June 18, 2010
- October 14, 2010
- December 15, 2010
- June 20, 2011
- December 19, 2011

Federal regulations	All components are on the U.S. EPA TSCA Inventory List.
US EPCRA (SARA Title III) Section 313 - Toxic Chemical: Listed substance	
Aluminum	7429-90-5 ALUMINUM (FUME OR DUST) US EPCRA (SARA Title III) Section 313 - Toxic Chemical: Listed substance
Copper Powder	7440-50-8 COPPER US EPCRA (SARA Title III) Section 313 - Toxic Chemical: Listed substance
State regulations	If this product contains any California Proposition 65 chemicals at reportable levels they will be listed below:
International regulations	This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and contains all the information required by the Controlled Products Regulations.
HMIS Ratings	Health: 1* Flammability: 1 Physical hazard: 0 Personal protection: X
SARA 311/312 HAZARD CATEGORIES	Immediate Hazard - Yes Delayed Hazard - Yes Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No
WHMIS status	Non-controlled

16. Other Information

Product name(s) covered	BNRG1-BTC12 - REGULAR GRADE 12/1# BT C BNRG1-CTGC12 - REGULAR GRADE 12/1# CTG C BNRG1-FTC12 - REGULAR GRADE 12/1# FT C BNRG130K1 - REGULAR GRADE 130# K BNRG1TC150 - REGULAR GRADE 150/1 OZ TUBE C BNRG425D1 - REGULAR GRADE 425# D BNRG425DL1 - REGULAR GRADE 425# DL BNRG42PP1 - REGULAR GRADE 42# PP BNRG42PS1 - REGULAR GRADE 42# PS BNRG4BTC24 - REGULAR GRADE 24/4OZ BT C BNRG4TC24 - REGULAR GRADE 24/4OZ TUBE C BNRG8-FTC4 - REGULAR GRADE 4/8# FT C BNRG8BTC12 - REGULAR GRADE 12/8 OZ BT C BNRGETC100 - REGULAR GRADE 100/7.5 GR PP C V048740 - NEV-SZ REG NS160 12/1LB CAN V054351 - NEV-SZ REG NS42B 42LB STEEL PL V058650 - NEV-SZ REG NS130B 130LB DR V059052 - NEV-SZ REG NS425B 425LB DR V166252 - NEV-SZ REG NS425B W/LINER
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Disclaimer	The data in this MSDS has been compiled from publicly available sources. This data relates only to the designated product and not to the use of said product in combination with other materials. 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 which exist. Responsibility for proper precautions and safe use of the product lies with the user. All data in this MSDS is typical of the product as a whole, and does not represent any individual lot or batch, therefore, Bostik, Inc. makes no warranty about the accuracy of the data herein and assumes no liability for the use of such data. It is the responsibility of the user to comply with all applicable federal, state, and local laws and regulations.
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Further information	If there are any characters following an individual item number, they are just designations for the various types of packaging that are available for this product. For example, a product "G12345-XX" is item number "G12345" with a packaging designation of "XX". These characters do not indicate a different product nor a different regulatory, health, safety and/or environmental status. This document covers the item numbers listed above for all of their packaging types.
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Issue date	02/16/2012
Prepared by	Bostik, Inc. Regulatory Affairs
Supersedes	11/07/2011

**This data sheet contains
changes from the previous
version in section(s):**

Regulatory Information: Default Statements



MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Product name	Never-Seez Reg NSA16 Aerosol
MSDS name	Never-Seez Regular Grade Aerosol
Product name(s) covered	See Section 16 for Product Names Covered.
CAS #	Mixture
Product use	Lubricants
Generic description	Aerosol Spray Flammable
Manufacturer	Bostik, Inc. 11320 Watertown Plank Rd Wauwatosa, WI 53226 USA
24 hour emergency assistance	Telephone: 1-800-227-0332 (Outside U.S.) 1-703-527-3887
General assistance	Telephone: 1-800-843-0844
MSDS assistance	Telephone: 1-800-843-0844

2. Hazards Identification

Emergency overview	Contact with this material can cause irritation to the skin, eyes and mucous membranes. Product is a flammable aerosol. Pressurized container may explode when exposed to heat or flame. May be harmful by inhalation, ingestion, skin adsorption.
Potential health effects	
Eyes	Liquid or vapors may irritate the eyes. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause irreversible eye damage.
Skin	This product may cause irritation to the skin. Prolonged or repeated contact with this product may dry and/or defat the skin. This product may be harmful if it is absorbed through the skin. Rapid evaporation of the liquid may cause frostbite.
Inhalation	This product may cause irritation to the respiratory system. Excessive inhalation of this material causes headache, dizziness, nausea and incoordination. High concentration of vapours may induce unconsciousness.
Ingestion	This product is harmful if swallowed. Ingestion can cause gastrointestinal irritation, nausea, vomiting and diarrhea.
Target organs	Respiratory system. Eyes. Skin. Central nervous system.
Signs and symptoms	Signs and symptoms of overexposure to this product include headache, irritation of upper respiratory tract, asthmatic symptoms, chest tightness, breathing difficulty, coughing, eye irritation, skin irritation, diarrhea.

3. Composition / Information on Ingredients

Hazardous components	CAS #	Percent
Heptane	142-82-5	15 - 40
Acetone	67-64-1	7 - 13
Propane	74-98-6	7 - 13
Copper Powder	7440-50-8	1 - 5
Aluminum	7429-90-5	0.1 - 1

4. First Aid Measures

First aid procedures	
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention or advice.
Skin contact	For skin contact, wash immediately with soap and water. If irritation persists, get medical attention.
Inhalation	Move person to non-contaminated air. Call a physician if symptoms develop or persist.

Ingestion

If ingested, get immediate medical attention. Do not induce vomiting unless instructed to do so by medical personnel. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration.

Notes to physician

This material, if aspirated into the lungs, may cause chemical pneumonitis; treat the affected person appropriately. If overexposure to the solvents in this product is suspected, testing should include nervous system and brain effects including recent memory, mood, concentration, headaches and altered sleep patterns. Liver and kidney function should be evaluated.

5. Fire Fighting Measures

Extinguishing media**Suitable extinguishing media**

Dry chemical, foam, carbon dioxide. Use water to cool fire-exposed containers and to protect personnel. Do not direct a solid stream of water or foam into hot, burning pools; this may result in frothing and increase fire intensity.

Basic fire fighting procedures

DANGEROUS when exposed to heat or flame. This material can be ignited by flame or spark under all normal atmospheric conditions. Vapors are heavier than air and may travel along the ground to some distant source of ignition and flash back. Pressurized Container: May explode when exposed to heat or flame. Empty containers may retain product residue including Flammable or Explosive vapors. Do not cut, drill, grind, or weld near full, partially full, or empty product containers.

Fire fighting equipment/instructions

Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask.

Sensitivity to static discharge

Sparks generated by static discharge may ignite this product or its vapors. All containers and equipment must be bonded or grounded to minimize risk.

Unusual fire & explosion hazards

During a fire, irritating and highly toxic gases may be generated during combustion or decomposition. High temperatures can cause sealed containers to rupture due to a buildup of internal pressures. Cool with water.

Flash point

-156 °F (-104.4 °C)

6. Accidental Release Measures

Emergency action

Evacuate the area promptly and keep upwind of the spilled material. Isolate the spill area to prevent people from entering. Wear appropriate protective equipment and clothing during clean-up.

Environmental precautions

Prevent further leakage or spillage if safe to do so.

Containment procedures

Eliminate sources of ignition. Stop the flow of material, if this is without risk. Stop material from contaminating soil or from entering sewers or water streams. Cover spills with non-flammable absorbent and place in closed chemical waste containers.

Reporting

See Federal reporting requirements listed in Section 15. We recommend you contact local authorities to determine if there may be other local reporting requirements.

7. Handling and Storage

For Commercial Use Only - Not Packaged or Labeled for Home Use!

Handling

Keep this product from heat, sparks, or open flame. Avoid getting this material into contact with your skin and eyes. Avoid breathing mists or aerosols of this product. Use this product with adequate ventilation. Do not reuse the empty container.

Storage

Store in a cool, dry, well-ventilated area. Do not handle or store near an open flame, heat or other sources of ignition. Keep away from direct sunlight. Do not store, incinerate, or heat this material above 120 degrees Fahrenheit.

Empty container precaution

Attention! Follow label warnings even after container is emptied since empty containers may retain product residues. Do not reuse empty container without professional cleaning for food, clothing, or products for human or animal consumption, or where skin contact can occur.

8. Exposure Controls / Personal Protection

Engineering controls

Provide local and general exhaust ventilation to effectively remove and prevent buildup of any vapors or mists generated from the handling of this product. Explosion proof exhaust ventilation should be used. Additional area ventilation or local exhaust may be required to maintain air concentrations below recommended exposure limits.

Personal protective equipment

Eye protection	Wear safety glasses with side shields.
Skin and body protection	Impervious gloves should be used at all times when handling this product. Recommended gloves include rubber, neoprene, nitrile or viton. Use of protective coveralls and long sleeves is recommended.
Respiratory protection	Do not inhale aerosol. In case of insufficient ventilation wear suitable respiratory equipment. Special applications may necessitate the use of more stringent respiratory protection equipment.

General Eyewash fountains and emergency showers are required.

Additional exposure data

US ACGIH Threshold Limit Values: Time Weighted Average (TWA): mg/m³ & ppm

Acetone	67-64-1	ACETONE 500 PPM
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US NIOSH Pocket Guide to Chemical Hazards: Ceiling Limit Value and Time Period (if specified)

Heptane	142-82-5	N-HEPTANE 1800 MGM3 - 440 PPM 15-min
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US OSHA Table Z-1-A: Time Weighted Average (TWA): mg/m³ & ppm

Heptane	142-82-5	HEPTANE (N-HEPTANE) 1600 MGM3 - 400 PPM
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Acetone	67-64-1	ACETONE 1800 MGM3 - 750 PPM
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Propane	74-98-6	PROPANE 1800 MGM3 - 1000 PPM
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9. Physical & Chemical Properties

Target solids	40 %
pH	N/A
Density	0.789 g/cc
Odor	Grease-like
Color	Dark Gray
Physical state	Aerosol
Freeze protect	No
VOC (Volatile Organic Compounds)	50 %

10. Chemical Stability & Reactivity Information

Hazardous reactions/decomposition products	Upon decomposition, this product may yield oxides of nitrogen and ammonia, carbon dioxide, carbon monoxide and other low molecular weight hydrocarbons.
Hazardous polymerization	Will not occur.
Conditions to avoid	Keep away from sources of ignition. Avoid contact with Strong Oxidizers, Reducers, Acids and Alkalis.
Stability	Stable under normal conditions.

11. Toxicological Information

Chronic effects	Chronic exposure to solvents can cause reproductive problems, reduced fertility, dryness and cracking of skin, headaches, loss of appetite and nausea.
Carcinogenicity	If this product contains any carcinogens, they will be noted below:

12. Ecological Information

Ecotoxicological information	Organic solvents produce slight to moderate toxicity to aquatic life. Insufficient data exists to evaluate the effect on plants, birds or land animals.
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13. Disposal Considerations

It is the obligation of each user of the product mentioned herein to determine and comply with the requirements of all applicable local, state and federal regulations.

Waste disposal	Dispose of waste material according to Local, State, Federal, and Provincial Environmental Regulations. Wastes must be tested using methods described in 40 CFR Part 261 to determine if it meets applicable definitions of hazardous wastes.
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14. Transport Information

DOT

Basic shipping requirements:

Proper shipping name Consumer Commodity
Hazard class ORM-D

IATA

Basic shipping requirements:

Proper shipping name Aerosols, Flammable (each not exceeding 1 L capacity)
Hazard class 2.1
UN number 1950



IMDG

Basic shipping requirements:

Proper shipping name Aerosols, Flammable, (each not exceeding 1 L capacity)
Hazard class 2.1
UN number 1950
Marine pollutant Copper Powder



15. Regulatory Information

This MSDS is prepared and distributed pursuant to the Federal Hazard Communication Standard, 29 CFR 1910.1200

The product(s) covered by this M(SDS) do not include any of the substances above a concentration of 0.1% weight by weight (w/w) in the Candidate List of Substances of Very High Concern (SVHC) for authorization published or proposed by ECHA as follows: the list of 15 substances for authorization published on October 28, 2008, the list of 15 substances proposed on August 31, 2009, the list of 14 substances proposed on January 13, 2010, the list of 8 substances proposed on March 8, 2010, the list of 8 substances proposed on June 18, 2010, the list of 11 substances proposed on October 14, 2010 and the list of 8 substances proposed on December 15, 2010.

Federal regulations All components are on the U.S. EPA TSCA Inventory List.

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

Aluminum	7429-90-5	ALUMINUM (FUME OR DUST) US EPCRA (SARA Title III) Section 313 - Toxic Chemical: Listed substance
Copper Powder	7440-50-8	COPPER US EPCRA (SARA Title III) Section 313 - Toxic Chemical: Listed substance

US TSCA Section 12(b) Export Notification: Export Notification requirement/De minimis concentration

Heptane	142-82-5	N-HEPTANE
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State regulations

If this product contains any California Proposition 65 chemicals at reportable levels they will be listed below:

International regulations

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and contains all the information required by the Controlled Products Regulations.

All components are included on the Canadian Domestic Substances List (DSL).

HMIS Ratings

Health: 2*
Flammability: 4
Physical hazard: 0
Personal protection: X

SARA 311/312 HAZARD CATEGORIES

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

WHMIS status**WHMIS labeling****WHMIS classification**

A - Compressed Gas
B5 - Flammable/Combustible
D2A - Other Toxic Effects-VERY TOXIC
D2B - Other Toxic Effects-TOXIC

16. Other Information**Product name(s) covered**

BNRG12AC12 - REGULAR GRADE 12/12OZ AERO C
V056260 - NEV-SZ REG NSA16 12.5OZ AERO

Disclaimer

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Further information

If there are any characters following an individual item number, they are just designations for the various types of packaging that are available for this product. For example, a product "G12345-XX" is item number "G12345" with a packaging designation of "XX". These characters do not indicate a different product nor a different regulatory, health, safety and/or environmental status. This document covers the item numbers listed above for all of their packaging types.

Issue date

05/13/2011

Prepared by

Bostik, Inc. Regulatory Affairs

Supercedes

11/12/2010

This data sheet contains changes from the previous version in section(s):

First Aid Measures: Notes to physician
Regulatory Information: International regulations
Regulatory Information: Default Statements
Other Information: Further information

MATERIAL SAFETY DATA SHEET

1406
03 00

DATE OF PREPARATION
Apr 5, 2012

SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER

1406

PRODUCT NAME

KRYLON® Metallic Spray Paint, Bright Silver

MANUFACTURER'S NAME

Krylon Products Group
Cleveland, OH 44115

Telephone Numbers and Websites

Product Information	(800) 247-3268 www.krylon.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
18	74-98-6	Propane		
		ACGIH TLV	2500 PPM	760 mm
		OSHA PEL	1000 PPM	
13	64742-89-8	Lt. Aliphatic Hydrocarbon Solvent		
		ACGIH TLV	100 PPM	53 mm
		OSHA PEL	100 PPM	
4	64742-89-8	V. M. & P. Naphtha		
		ACGIH TLV	300 PPM	12 mm
		OSHA PEL	300 PPM	
		OSHA PEL	400 PPM STEL	
1	64742-88-7	Mineral Spirits		
		ACGIH TLV	100 PPM	2 mm
		OSHA PEL	100 PPM	
4	108-88-3	Toluene		
		ACGIH TLV	20 PPM	22 mm
		OSHA PEL	100 ppm (Skin)	
		OSHA PEL	150 ppm (Skin) STEL	
0.7	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	
47	67-64-1	Acetone		
		ACGIH TLV	500 PPM	180 mm
		ACGIH TLV	750 PPM STEL	
		OSHA PEL	1000 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.

HMIS Codes

Health	2*
Flammability	4
Reactivity	1

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 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.

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

0.9

UEL

12.8

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	6.16 lb/gal	737 g/l
SPECIFIC GRAVITY	0.74	
BOILING POINT	<0 - 395 °F	<-18 - 201 °C
MELTING POINT	Not Available	
VOLATILE VOLUME	96%	
EVAPORATION RATE	Faster than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	N.A.	
pH	7.0	
VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)		
Volatile Weight 45.25%	Less Water and Federally Exempt Solvents	

SECTION 10 — STABILITY AND REACTIVITY
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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.

TOXICOLOGY DATA

CAS No.	Ingredient Name			
74-98-6	Propane	LC50 RAT LD50 RAT	4HR	Not Available Not Available
64742-89-8	Lt. Aliphatic Hydrocarbon Solvent	LC50 RAT LD50 RAT	4HR	Not Available Not Available
64742-89-8	V. M. & P. Naphtha	LC50 RAT LD50 RAT	4HR	Not Available Not Available
64742-88-7	Mineral Spirits	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

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, ADR (D)

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	4	
100-41-4	Ethylbenzene	0.6	
1330-20-7	Xylene	4	

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.



UTILITY MANUFACTURING CO., INC.
700 MAIN STREET, WESTBURY, NY 11590
(516) 997-6300 - FAX # (516) 997-6345

MATERIAL SAFETY DATA SHEET

PASTE SOLDERING FLUX

FOR CHEMICAL EMERGENCY: Spill, Leak, Fire, Exposure, or Accident - Call **CHEMTREC** - Day or Night: **1-800-424-9300**
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 and users of this product.

PRODUCT IDENTIFICATION

DOT Shipping name: CONSUMER COMMODITY, ORM-D **CAS NO.:** MIXTURE
Chemical Family: CHLORIDE **UN/NA** #:N/R
DOT Hazard Class: N/R **DATE OF ISSUE:** 4/08

SECTION I - HAZARDOUS INGREDIENTS/EXPOSURE LIMITS

Hazardous Ingredients:	CAS #	TLV/PEL	AGENCY	TYPE	SARA-313(% Range)
ZINC CHLORIDE	7646-85-7	1 MG/M3	ACGIH	TWA	40-50

SECTION II - EMERGENCY AND FIRST AID PROCEDURES

WARNING: CORROSIVE

EYE CONTACT: If product is splashed into eyes, flush eyes with clean water for at least 15 minutes and **seek medical attention.**

SKIN CONTACT: Remove contaminated shoes and clothing and cleanse affected areas thoroughly by washing with mild soap and water and **seek medical attention.**

INHALATION: (breathing) Not expected to be a hazard under normal operating conditions..

INGESTION: (swallowing) If swallowed, **seek emergency medical attention.** Do not induce vomiting. Offer victim water or milk. Do not give diluents to someone who is unconscious or having trouble swallowing.

SECTION III - HEALTH HAZARDS / ROUTES OF ENTRY

EYE CONTACT: Eye contact with one or more components of this product can lead to conjunctivitis and corneal burns.

SKIN CONTACT: Contact with the skin can lead to severe burns or dermatitis and ulceration depending on duration of exposure.

SKIN ABSORPTION: Components of this product are not known to be skin absorbing agents.

INHALATION: (breathing) Not expected to be a hazard under normal operating conditions.

INGESTION: (swallowing) Ingestion can lead to stomach pains, nausea, vomiting, bloody diarrhea, edema, albuminuria, ad shock.

SECTION IV - SPECIAL PROTECTION INFORMATION

VENTILATION: Use with adequate ventilation to maintain airborne concentrations below established exposure limits (see section I), Additional ventilation or exhaust systems may be required.

RESPIRATORY PROTECTION: None required under routine conditions of use. The use of respiratory protection is advised when concentrates exceed the established exposure limits (see Section I).

PROTECTIVE GLOVES: The use of gloves impermeable to the specific material handled is advised to prevent possible irritation.

EYE PROTECTION: Approved eye protection to safeguard against potential eye contact, irritation or injury is recommended.

SECTION V - REACTIVITY DATA

STABILITY: Stable

INCOMPATIBILITY: (materials to avoid) This product is incompatible with: Oxidizing agents, strong acids and bases potassium, bromine pentafluoride, nitrogen trioxide, hydrogen cyanide, iodine pentafluoride and potassium chlorate.

HAZARDOUS DECOMPOSITION PRODUCTS: Thermal decomposition in the presence of air may yield carbon monoxide, carbon dioxide.

HAZARDOUS POLYMERIZATION: Will not occur

SECTION VI - SPILL OR LEAK PROCEDURES

PRECAUTIONS IN CASE OF LEAK OR SPILL: Keep all sources of ignition and hot metal surfaces away from spill/release. Stay upwind and away from spill/release. Isolate hazard area and limit entry to emergency crew only. Stop spill/release if it can be done without risk. Wear appropriate protective equipment including respiratory protection as conditions warrant (see Section IV). Prevent spilled material from entering sewers, storm drains, and natural waterways. Dike far ahead of spill for later recovery and disposal. Spilled material may be absorbed by an appropriate absorbent. Notify fire authorities and appropriate federal, state, and local agencies. If spill/release is excess of EPA reportable quantity, immediately notify the **National Response Center**. Phone **800-424-8802**

WASTE DISPOSAL METHOD: Dispose of product in accordance with local, county, state, and federal regulations.

SECTION VII - STORAGE AND SPECIAL PRECAUTIONS



UTILITY MANUFACTURING CO., INC.
 700 MAIN STREET, WESTBURY, NY 11590
 (516) 997-6300 - FAX # (516) 997-6345

MATERIAL SAFETY DATA SHEET

PASTE SOLDERING FLUX

HANDLING AND STORAGE PRECAUTIONS: Avoid getting this product ON YOU or IN YOU. Wash hands after handling this product. Do not eat or drink while handling this product. Store product in properly labeled, closed containers. Always use this product in areas where adequate ventilation is provided.

SECTION VIII - FIRE AND EXPLOSION HAZARD DATA

EXTINGUISHING MEDIA: Extinguish with dry chemical, CO₂, or a universal type foam.
FIRE AND EXPLOSION HAZARD: May decompose during contact with flames, heating elements, or in combustion engines releasing irritating gases. Container may explode if heated due to resulting pressure rise.
FIRE FIGHTING PROCEDURES: Wear appropriate protective equipment including respiratory protection as conditions warrant (see Section IV). Stop spill/release if it can be done without risk. Water spray may be useful in minimizing or dispersing vapors and cooling equipment exposed to heat and flame. Avoid spreading burning liquid with water used for cooling purposes.

SECTION IX - PHYSICAL DATA

APPROXIMATE BOILING POINT (DEG F): >200	PER CENT VOLATILE: NONE
SPECIFIC GRAVITY (68 F): >1	FLASH POINT (TCC, DEG F): >300
RELATIVE EVAPORATION RATE (ESTIMATED): <1	PER CENT SOLUBILITY IN WATER: NEGLIGIBLE
VAPOR PRESSURE @20C mmHg (CALCULATED): <1	

SECTION X - OTHER REGULATORY DATA

<u>SARA</u>	<u>HMIS</u>
<i>SECTION 302:</i> NONE	Health: 1
<i>SECTION 311 & 312:</i> ACUTE	Flammability: 0
<i>SECTION 313:</i> See Section I.I	Reactivity: 0
<u>TSCA</u>	<u>CALIFORNIA PROPOSITION 65</u>
All components are in full compliance with the TSCA inventory.	NOT LISTED
<u>RCRA</u>	<u>CERCLA</u>
Waste material would be a D002	ZINC CHLORIDE RQ: 1000 LBS.

CARCINOGENICITY:
 NOT LISTED with NTP or IARC.

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 manufactures 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 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.



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700 MAIN STREET, WESTBURY, NY 11590
(516) 997-6300 - FAX # (516) 997-6345

MATERIAL SAFETY DATA SHEET

B-813 PASTE SOLDERING FLUX

FOR CHEMICAL EMERGENCY: Spill, Leak, Fire, Exposure, or Accident - Call INFOTRAC - Day or Night: **1-800-535-5053**
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 and users of this product.

PRODUCT IDENTIFICATION

DOT Shipping name: CONSUMER COMMODITY, ORM-D CAS NO.: MIXTURE
Chemical Family: CHLORIDE UN/NA #:N/R
DOT Hazard Class: N/R DATE OF ISSUE: 4/08

SECTION I - HAZARDOUS INGREDIENTS/EXPOSURE LIMITS

Hazardous Ingredients:	CAS #	TLV/PEL	AGENCY	TYPE	SARA-313(% Range)
ZINC CHLORIDE	7646-85-7	1 MG/M3	ACGIH	TWA	40-50

SECTION II - EMERGENCY AND FIRST AID PROCEDURES

WARNING: CORROSIVE

EYE CONTACT: If product is splashed into eyes, flush eyes with clean water for at least 15 minutes and **seek medical attention.**

SKIN CONTACT: Remove contaminated shoes and clothing and cleanse affected areas thoroughly by washing with mild soap and water and **seek medical attention.**

INHALATION: (breathing) Not expected to be a hazard under normal operating conditions.

INGESTION: (swallowing) If swallowed, **seek emergency medical attention.** Do not induce vomiting. Offer victim water or milk. Do not give diluents to someone who is unconscious or having trouble swallowing.

SECTION III - HEALTH HAZARDS / ROUTES OF ENTRY

EYE CONTACT: Eye contact with one or more components of this product can lead to conjunctivitis and corneal burns.

SKIN CONTACT: Contact with the skin can lead to severe burns or dermatitis and ulceration depending on duration of exposure.

SKIN ABSORPTION: Components of this product are not known to be skin-absorbing agents.

INHALATION: (breathing) Not expected to be a hazard under normal operating conditions.

INGESTION: (swallowing) Ingestion can lead to stomach pains, nausea, vomiting, bloody diarrhea, edema, albuminuria, and shock.

SECTION IV - SPECIAL PROTECTION INFORMATION

VENTILATION: Use with adequate ventilation to maintain airborne concentrations below established exposure limits (see section I); Additional ventilation or exhaust systems may be required.

RESPIRATORY PROTECTION: None required under routine conditions of use. The use of respiratory protection is advised when concentrations exceed the established exposure limits (see Section I).

PROTECTIVE GLOVES: The use of gloves impermeable to the specific material handled is advised to prevent possible irritation.

EYE PROTECTION: Approved eye protection to safeguard against potential eye contact, irritation or injury is recommended.

SECTION V - REACTIVITY DATA

STABILITY: Stable

INCOMPATIBILITY: (materials to avoid) This product is incompatible with: Oxidizing agents, strong acids and bases potassium, bromine pentafluoride, nitrogen trioxide, hydrogen cyanide, iodine pentafluoride and potassium chlorate.

HAZARDOUS DECOMPOSITION PRODUCTS: Thermal decomposition in the presence of air may yield carbon monoxide, carbon dioxide.

HAZARDOUS POLYMERIZATION: Will not occur

SECTION VI - SPILL OR LEAK PROCEDURES

PRECAUTIONS IN CASE OF LEAK OR SPILL: Keep all sources of ignition and hot metal surfaces away from spill/release. Stay upwind and away from spill/release. Isolate hazard area and limit entry to emergency crew only. Stop spill/release if it can be done without risk. Wear appropriate protective equipment including respiratory protection as conditions warrant (see Section IV). Prevent spilled material from entering sewers, storm drains, and natural waterways. Dike far ahead of spill for later recovery and disposal. Spilled material may be absorbed by an appropriate absorbent. Notify fire authorities and appropriate federal, state, and local agencies. If spill/release is in excess of EPA reportable quantity, immediately notify the **National Response Center**. Phone **800-424-8802**

WASTE DISPOSAL METHOD: Dispose of product in accordance with local, county, state, and federal regulations.



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 (516) 997-6300 - FAX # (516) 997-6345

MATERIAL SAFETY DATA SHEET

B-813 PASTE SOLDERING FLUX

SECTION VII - STORAGE AND SPECIAL PRECAUTIONS

HANDLING AND STORAGE PRECAUTIONS: Avoid getting this product ON YOU or IN YOU. Wash hands after handling this product. Do not eat or drink while handling this product. Store product in properly labeled closed containers. Always use this product in areas where adequate ventilation is provided.

SECTION VIII - FIRE AND EXPLOSION HAZARD DATA

EXTINGUISHING MEDIA: Extinguish with dry chemical, CO₂, or a universal type foam.
FIRE AND EXPLOSION HAZARD: May decompose during contact with flames, heating elements, or in combustion engines releasing irritating gases. Container may explode if heated due to resulting pressure rise.
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SECTION IX - PHYSICAL DATA

APPROXIMATE BOILING POINT (DEG F): >200	PER CENT VOLATILE: NONE
SPECIFIC GRAVITY (68 F): >1	FLASH POINT (TCC, DEG F): >300
RELATIVE EVAPORATION RATE (ESTIMATED): <1	PER CENT SOLUBILITY IN WATER: NEGLIGIBLE
VAPOR PRESSURE @20C mmHg (CALCULATED): <1	

SECTION X - OTHER REGULATORY DATA

<u>SARA</u>	<u>HMIS</u>	
<i>SECTION 302:</i> NONE	Health:	1
<i>SECTION 311 & 312:</i> ACUTE	Flammability:	0
<i>SECTION 313:</i> See Section I.I	Reactivity:	0
<u>TSCA</u>	<u>CALIFORNIA PROPOSITION 65</u>	
All components are in full compliance with the TSCA inventory.	NOT LISTED	
<u>RCRA</u>	<u>CERCLA</u>	
Waste material would be a D002	ZINC CHLORIDE RQ: 1000 LBS.	

CARCINOGENICITY:
 NOT LISTED with NTP or IARC.

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 manufactures 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 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

1508
07 00

DATE OF PREPARATION
Apr 5, 2012

SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER

1508

PRODUCT NAME

KRYLON® Interior/Exterior Paint, Semi-Gloss White

MANUFACTURER'S NAME

THE SHERWIN-WILLIAMS COMPANY
KRYLON PRODUCTS GROUP
Cleveland, OH 44115

Telephone Numbers and Websites

Product Information	(800) 247-3266 www.kpg-industrial.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	
14	74-98-6	Propane	ACGIH TLV	2500 PPM	760 mm
			OSHA PEL	1000 PPM	
6	106-97-8	Butane	ACGIH TLV	800 PPM	760 mm
			OSHA PEL	800 PPM	
2	100-41-4	Ethylbenzene	ACGIH TLV	20 PPM	7.1 mm
			OSHA PEL	100 PPM	
			OSHA PEL	125 PPM STEL	
9	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	
39	67-64-1	Acetone	ACGIH TLV	500 PPM	180 mm
			ACGIH TLV	750 PPM STEL	
			OSHA PEL	1000 PPM	
8	78-93-3	Methyl Ethyl Ketone	ACGIH TLV	200 PPM	70 mm
			ACGIH TLV	300 PPM STEL	
			OSHA PEL	200 PPM	
			OSHA PEL	300 PPM STEL	
6	108-65-6	1-Methoxy-2-Propanol Acetate	ACGIH TLV	Not Available	1.8 mm
			OSHA PEL	Not Available	
6	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.

HMIS Codes

Health	2*
Flammability	3
Reactivity	0

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 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.

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	6.59 lb/gal	790 g/l
SPECIFIC GRAVITY	0.79	
BOILING POINT	<0 - 302 °F	<-18 - 150 °C
MELTING POINT	Not Available	
VOLATILE VOLUME	92%	
EVAPORATION RATE	Faster than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	N.A.	
pH	7.0	

VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)

Volatile Weight 45.26%

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
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
108-65-6	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, ADR (D)

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
100-41-4	Ethylbenzene	2	
1330-20-7	Xylene	9	

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

Distributed By: WATERLESS CO. • (800) 244-6364
CHEMTEL—24 Hour Emergency Response (800) 255-3924

TRADE NAME: **EverPrime™**
 CHEMICAL OR COMMON NAME:
 Odor Trap

HAZARDOUS COMPONENTS

MATERIAL	CAS #	TLV(ppm)
Contains no hazardous materials.		

PHYSICAL DATA

BOILING PT(Degrees F): >400	SOLUBILITY IN WATER: Slightly miscible
SPECIFIC GRAVITY: 0.84	VOLATILES(% by WT.): <1
APPEARANCE: Green Liquid	ODOR: Floral
VAPOR PRESSURE(@ 100 Degrees F): N/A	pH: 7 ± 0.5
EVAPORATION RATE(BUTYL ACETATE=1): N/A	

***< means less than; > means more than

***These physical data are typical values based on material tested but may vary from sample to sample. Typical values should not be construed as a guaranteed analysis of any specific lot or as specification items.

FIRE AND EXPLOSION HAZARD INFORMATION

FLASH POINT (Degrees F --PMCC): >200	AUTOIGNITION TEMP (Degrees F): No Data
FLAMMABLE LIMITS IN AIR Volume %: No Data Lower: No Data Upper: No Data	
EXTINGUISHING MEDIA: WATER SPRAY, FOAM, CO2, DRY CHEMICAL. Product will float and can re-ignite on surface of water.	
SPECIAL FIREFIGHTING PROCEDURES: Evacuate non-essential people. Firefighters should wear a positive pressure NIOSH approved self-contained breathing apparatus.	
UNUSUAL FIRE AND EXPLOSION HAZARDS: Containers exposed to intense heat from fires should be cooled with water fog to prevent vapor pressure buildup which could result in container rupture.	

NFPA HAZARD RATING

Health (blue): 1	Flammability(red): 0	Reactivity (yellow): 0
Least - 0	Slight - 1 Moderate - 2 High - 3	Extreme -4

HEALTH HAZARD DATA

***It is important to determine whether exposure is to concentrated or dilute product. The information included in this document is intended to deal with exposure to concentrated product. Generally, exposure to diluted product will result in substantially less risk of injury than described herein.

PRINCIPLE ROUTES OF EXPOSURE: Eyes, skin contact, ingestion, inhalation.

CONTACT WITH EYES: Irritating, and causes further irritation if not removed promptly.

CONTACT WITH SKIN: Prolonged or repeated liquid contact may result in drying of the skin, which may result in skin irritation.

INHALATION: Negligible hazard at ambient temperature (0 to 100°F).

INGESTION: Ingestion of product may result in vomiting.

EMERGENCY AND FIRST AID PROCEDURES

EYES: Flush with plenty of water. Get medical attention if problem persists.

SKIN: Flush skin with water.

INHALATION: If discomfort is experienced, remove to fresh air. If breathing is difficult, give oxygen and call physician.

INGESTION: DO NOT INDUCE VOMITING. Get medical attention immediately.

TOXICITY DATA

SUSPECTED CANCER AGENT: NO
PROPOSITION 65: NO

OSHA REGULATED: NO
NTP & IARC: NO

REACTIVITY DATA

STABILITY: STABLE

CONDITIONS TO AVOID: Heat, temperature extremes, flames, ignition sources.

MATERIALS TO AVOID: Strong oxidizing agents

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon oxides.

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

SPILL OR LEAK PROCEDURES

WARNING: COMBUSTIBLE: Eliminate all ignition sources.

LARGE SPILLS: (Over 55 gallons) Eliminate all ignition sources and evacuate the hazard area of non-essential personnel. Wear appropriate protective clothing and rubber boots. Shut off source of leak if safe to do so. Dike and contain. Pump/vacuum/scoop to non-leaking salvage drum or container for disposal.

SMALL SPILLS: Mop up and rinse area.

WASTE DISPOSAL METHOD: Dispose of wastes in accordance with federal, state and local regulations.

SPECIAL PROTECTION INFORMATION

VENTILATION AND ENGINEERING CONTROLS: If applicable, in confined areas provide adequate local exhaust ventilation to lower the concentration of mists, vapors, or sprayed material.

RESPIRATORY PROTECTION: For an excess of mists and sprayed material, use NIOSH approved respirator.

PROTECTIVE GLOVES: Use of gloves will decrease skin dryness and coating of the skin.

EYE PROTECTION: Chemical splash glasses may be used if there is risk of sprayed product coming into contact with eyes.

SPECIAL PRECAUTIONS

PRECAUTIONARY STATEMENTS: CAUTION: **KEEP OUT OF REACH OF CHILDREN**

Do not get in eyes, on skin or on clothing. Do not take internally. Avoid breathing vapors.

D.O.T. INFORMATION: This product **IS NOT** D.O.T. Regulated.

THE INFORMATION CONTAINED HEREIN IS BASED ON THE DATA AVAILABLE TO US. IT IS BELIEVED TO BE CORRECT. WATERLESS CO., HOWEVER, MAKES NO WARRANTY, EXPRESSED OR IMPLIED, REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF. WATERLESS CO. ASSUMES NO RESPONSIBILITY FOR PERSONAL INJURY OR PROPERTY DAMAGE TO VENDEES, USERS OR THIRD PARTIES FROM THE USE OF THE PRODUCT DESCRIBED HEREIN. SUCH VENDEES OR USERS ASSUME ALL RISKS ASSOCIATED WITH THE USE OF THE PRODUCT.

MATERIAL SAFETY DATA SHEET

1613
04 00

DATE OF PREPARATION
Apr 5, 2012

SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER

1613

PRODUCT NAME

KRYLON® Interior/Exterior Paint, Semi-Gloss Black

MANUFACTURER'S NAME

THE SHERWIN-WILLIAMS COMPANY
KRYLON PRODUCTS GROUP
Cleveland, OH 44115

Telephone Numbers and Websites

Product Information	(800) 247-3266 www.kpg-industrial.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
15	74-98-6	Propane		
		ACGIH TLV	2500 PPM	760 mm
		OSHA PEL	1000 PPM	
7	106-97-8	Butane		
		ACGIH TLV	800 PPM	760 mm
		OSHA PEL	800 PPM	
1	100-41-4	Ethylbenzene		
		ACGIH TLV	20 PPM	7.1 mm
		OSHA PEL	100 PPM	
		OSHA PEL	125 PPM STEL	
8	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	
42	67-64-1	Acetone		
		ACGIH TLV	500 PPM	180 mm
		ACGIH TLV	750 PPM STEL	
		OSHA PEL	1000 PPM	
11	78-93-3	Methyl Ethyl Ketone		
		ACGIH TLV	200 PPM	70 mm
		ACGIH TLV	300 PPM STEL	
		OSHA PEL	200 PPM	
		OSHA PEL	300 PPM STEL	
1	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	
4	108-65-6	1-Methoxy-2-Propanol Acetate		
		ACGIH TLV	Not Available	1.8 mm
		OSHA PEL	Not Available	
1.0	1333-86-4	Carbon Black		
		ACGIH TLV	3.5 MG/M3	
		OSHA PEL	3.5 MG/M3	

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 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 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

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	6.21 lb/gal	743 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	N.A.	
pH	7.0	
VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)	Less Water and Federally Exempt Solvents	
	Volatile Weight 49.37%	

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.

Carbon Black is classified by IARC as possibly carcinogenic to humans (group 2B) based on experimental animal data, however, there is insufficient evidence in humans for its carcinogenicity.

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
100-41-4	Ethylbenzene	LC50 RAT	4HR	Not Available
		LD50 RAT		3500 mg/kg
1330-20-7	Xylene	LC50 RAT	4HR	5000 ppm
		LD50 RAT		4300 mg/kg
67-64-1	Acetone	LC50 RAT	4HR	Not Available
		LD50 RAT		5800 mg/kg
78-93-3	Methyl Ethyl Ketone	LC50 RAT	4HR	Not Available
		LD50 RAT		2740 mg/kg
108-10-1	Methyl Isobutyl Ketone	LC50 RAT	4HR	Not Available
		LD50 RAT		2080 mg/kg
108-65-6	1-Methoxy-2-Propanol Acetate	LC50 RAT	4HR	Not Available
		LD50 RAT		8500 mg/kg
1333-86-4	Carbon Black	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, ADR (D)

IATA/ICAO

UN1950, AEROSOLS, 2.1, LIMITED QUANTITY

SECTION 15 — REGULATORY INFORMATION**SARA 313 (40 CFR 372.65C) SUPPLIER NOTIFICATION**

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element
100-41-4	Ethylbenzene	1	
1330-20-7	Xylene	8	
108-10-1	Methyl Isobutyl Ketone	1	

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

Distributed By: WATERLESS CO. • (800) 244-6364
CHEMTEL—24 Hour Emergency Response (800) 255-3924

TRADE NAME: **Nviroclean™**
 CHEMICAL OR COMMON NAME:
 Waterless Urinal Cleaner & Deodorizer

HAZARDOUS COMPONENTS

MATERIAL	CAS #	TLV(ppm)
Contains no hazardous materials.		

PHYSICAL DATA

BOILING PT(Degrees F): >212°F	SOLUBILITY IN WATER: Soluble
SPECIFIC GRAVITY: 1.01	VOLATILES(% by WT.): <1
APPEARANCE: White	ODOR: Peppermint
VAPOR PRESSURE(@ 100 Degrees F): < 17 mm Hg	pH: 7 – 8
EVAPORATION RATE(BUTYL ACETATE=1): < 1	

***< means less than; > means more than

***These physical data are typical values based on material tested but may vary from sample to sample. Typical values should not be construed as a guaranteed analysis of any specific lot or as specification items.

FIRE AND EXPLOSION HAZARD INFORMATION

FLASH POINT (Degrees F --PMCC): >200	AUTOIGNITION TEMP (Degrees F): No Data
FLAMMABLE LIMITS IN AIR Volume %: No Data Lower: No Data Upper: No Data	
EXTINGUISHING MEDIA: WATER SPRAY, FOAM, CO2, DRY CHEMICAL. Product will float and can re-ignite on surface of water.	
SPECIAL FIREFIGHTING PROCEDURES: Evacuate non-essential people. Firefighters should wear a positive pressure NIOSH approved self-contained breathing apparatus.	
UNUSUAL FIRE AND EXPLOSION HAZARDS: Containers exposed to intense heat from fires should be cooled with water fog to prevent vapor pressure buildup which could result in container rupture.	

NFPA HAZARD RATING

Health (blue): 0	Flammability(red): 0	Reactivity (yellow): 0
Least - 0	Slight - 1 Moderate - 2 High - 3	Extreme -4

HEALTH HAZARD DATA

***It is important to determine whether exposure is to concentrated or dilute product. The information included in this document is intended to deal with exposure to concentrated product. Generally, exposure to diluted product will result in substantially less risk of injury than described herein.

PRINCIPLE ROUTES OF EXPOSURE: Eyes, skin contact, ingestion, inhalation.

CONTACT WITH EYES: Irritating, and causes further irritation if not removed promptly.

CONTACT WITH SKIN: Prolonged or repeated liquid contact may result in drying of the skin, which may result in skin irritation.

INHALATION: Negligible hazard at ambient temperature (0 to 100°F).

INGESTION: Ingestion of product may result in vomiting.

EMERGENCY AND FIRST AID PROCEDURES

EYES: Flush with plenty of water. Get medical attention if problem persists.

SKIN: Flush skin with water.

INHALATION: If discomfort is experienced, remove to fresh air. If breathing is difficult, give oxygen and call physician.

INGESTION: DO NOT INDUCE VOMITING. Get medical attention immediately.

TOXICITY DATA

SUSPECTED CANCER AGENT: NO
PROPOSITION 65: NO

OSHA REGULATED: NO
NTP & IARC: NO

REACTIVITY DATA

STABILITY: STABLE

CONDITIONS TO AVOID: Heat, temperature extremes, flames, ignition sources.

MATERIALS TO AVOID: Strong oxidizing agents

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon, Sulfur and Nitrogen oxides.

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

SPILL OR LEAK PROCEDURES

WARNING: COMBUSTIBLE: Eliminate all ignition sources.

LARGE SPILLS: (Over 55 gallons) Eliminate all ignition sources and evacuate the hazard area of non-essential personnel. Wear appropriate protective clothing and rubber boots. Shut off source of leak if safe to do so. Dike and contain. Pump/vacuum/scoop to non-leaking salvage drum or container for disposal.

SMALL SPILLS: Mop up and rinse area.

WASTE DISPOSAL METHOD: Dispose of wastes in accordance with federal, state and local regulations.

SPECIAL PROTECTION INFORMATION

VENTILATION AND ENGINEERING CONTROLS: If applicable, in confined areas provide adequate local exhaust ventilation to lower the concentration of mists, vapors, or sprayed material.

RESPIRATORY PROTECTION: For an excess of mists and sprayed material, use NIOSH approved respirator.

PROTECTIVE GLOVES: Use of gloves will decrease skin dryness and coating of the skin.

EYE PROTECTION: Chemical splash glasses may be used if there is risk of sprayed product coming into contact with eyes.

SPECIAL PRECAUTIONS

PRECAUTIONARY STATEMENTS: CAUTION: **KEEP OUT OF REACH OF CHILDREN**

Do not get in eyes, on skin or on clothing. Do not take internally. Avoid breathing vapors.

D.O.T. INFORMATION: This product **IS NOT** D.O.T. Regulated.

THE INFORMATION CONTAINED HEREIN IS BASED ON THE DATA AVAILABLE TO US. IT IS BELIEVED TO BE CORRECT. WATERLESS CO., HOWEVER, MAKES NO WARRANTY, EXPRESSED OR IMPLIED, REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF. WATERLESS CO. ASSUMES NO RESPONSIBILITY FOR PERSONAL INJURY OR PROPERTY DAMAGE TO VENDEES, USERS OR THIRD PARTIES FROM THE USE OF THE PRODUCT DESCRIBED HEREIN. SUCH VENDEES OR USERS ASSUME ALL RISKS ASSOCIATED WITH THE USE OF THE PRODUCT.

MATERIAL SAFETY DATA SHEET

1813
10 00

DATE OF PREPARATION
Apr 5, 2012

SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER

1813

PRODUCT NAME

KRYLON® OSHA Colors, Daisy Yellow (Safety Yellow)

MANUFACTURER'S NAME

Krylon Products Group

Cleveland, OH 44115

Telephone Numbers and Websites

Product Information	(800) 247-3268 www.krylon.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
14	74-98-6	Propane		
		ACGIH TLV	2500 PPM	760 mm
		OSHA PEL	1000 PPM	
6	106-97-8	Butane		
		ACGIH TLV	800 PPM	760 mm
		OSHA PEL	800 PPM	
1	100-41-4	Ethylbenzene		
		ACGIH TLV	20 PPM	7.1 mm
		OSHA PEL	100 PPM	
		OSHA PEL	125 PPM STEL	
7	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	
35	67-64-1	Acetone		
		ACGIH TLV	500 PPM	180 mm
		ACGIH TLV	750 PPM STEL	
		OSHA PEL	1000 PPM	
12	78-93-3	Methyl Ethyl Ketone		
		ACGIH TLV	200 PPM	70 mm
		ACGIH TLV	300 PPM STEL	
		OSHA PEL	200 PPM	
		OSHA PEL	300 PPM STEL	
8	108-65-6	1-Methoxy-2-Propanol Acetate		
		ACGIH TLV	Not Available	1.8 mm
		OSHA PEL	Not Available	
3	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.

HMIS Codes

Health	2*
Flammability	3
Reactivity	0

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 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.

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	6.52 lb/gal	780 g/l
SPECIFIC GRAVITY	0.78	
BOILING POINT	<0 - 302 °F	<-18 - 150 °C
MELTING POINT	Not Available	
VOLATILE VOLUME	91%	
EVAPORATION RATE	Faster than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	N.A.	
pH	7.0	
VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)		
Volatile Weight 49.34%	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
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
108-65-6	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, ADR (D)

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
100-41-4	Ethylbenzene	1	
1330-20-7	Xylene	7	

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.



UTILITY MANUFACTURING CO., INC.
700 MAIN STREET, WESTBURY, NY 11590
(516) 997-6300 - FAX # (516) 997-6345

MATERIAL SAFETY DATA SHEET

NO-FREEZ

FOR CHEMICAL EMERGENCY: Spill, Leak, Fire, Exposure, or Accident - Call **INFOTRAC** - Day or Night: **1-800-535-5053**
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 and users of this product.

PRODUCT IDENTIFICATION

DOT Shipping name:	PROPYLENE GLYCOL	CAS NO.: MIXTURE
Chemical Family:	GLYCOL	UN/NA #: N/A
DOT Hazard Class:	NONE	DATE OF ISSUE: 4/08

SECTION I - HAZARDOUS INGREDIENTS/EXPOSURE LIMITS

Hazardous Ingredients:	CAS #	TLV/PEL	AGENCY	TYPE	SARA-313(% Range)
NO HAZARDOUS INGREDIENTS					

SECTION II - EMERGENCY AND FIRST AID PROCEDURES

EYE CONTACT: Flush eyes with plenty of water.

SKIN CONTACT: Wash off in flowing water or shower.

INHALATION: (breathing) Remove to fresh air if effects occur. Consult a physician.

INGESTION: (swallowing) No adverse effects anticipated by this route of exposure incidental to proper industrial handling.

SECTION III - HEALTH HAZARDS / ROUTES OF ENTRY

EYE CONTACT: May cause slight transient (temporary) eye irritation. Corneal injury is unlikely. Mists may cause eye irritation.

SKIN CONTACT: Prolonged contact is essentially non-irritating to skin. A single prolonged exposure is not likely to result in the material being absorbed through skin in harmful amounts. Repeated exposures may cause flaking and softening of skin.

INHALATION: (breathing) At room temperature, vapors are minimal due to physical properties. Mists may cause irritation of upper respiratory tract.

INGESTION: (swallowing) Single dose oral toxicity is considered to be extremely low. No hazards anticipated from swallowing small amounts incidental to normal handling operations.

SECTION IV - SPECIAL PROTECTION INFORMATION

VENTILATION: Provide general and/or local exhaust ventilation to control airborne levels below the exposure guidelines.

RESPIRATORY PROTECTION: Atmospheric levels should be maintained below the exposure guideline. When respiratory protection is required for certain operations, use an approved air-purifying respirator. In misty atmospheres, use an approved mist respirator.

SKIN PROTECTION: Use gloves impervious to this material.

EYE PROTECTION: Use safety glasses. Safety glasses should be sufficient for most operations; however, for misty operations wear chemical goggles.

EXPOSURE GUIDELINE(S): Propylene glycol: AIHA WEEL is 50 ppm total, 10mg/m3 aerosol only.

SECTION V - REACTIVITY DATA

STABILITY: Stable

INCOMPATIBILITY: (materials to avoid) This product is incompatible with: *Oxidizing agents.*

HAZARDOUS DECOMPOSITION PRODUCTS: When available oxygen is limited, as in a fire or when heated to very high temperatures by hot wire or plate, carbon monoxide and other hazardous compounds such as aldehydes might be generated.

HAZARDOUS POLYMERIZATION: Will not occur

SECTION VI - SPILL OR LEAK PROCEDURES

PRECAUTIONS IN CASE OF LEAK OR SPILL: Clean up spill with absorbent material

WASTE DISPOSAL METHOD: Do not dump into any sewers, on the ground, or into any body of water. All disposal methods must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator.



UTILITY MANUFACTURING CO., INC.
 700 MAIN STREET, WESTBURY, NY 11590
 (516) 997-6300 - FAX # (516) 997-6345

MATERIAL SAFETY DATA SHEET

NO-FREEZ

SECTION VII - STORAGE AND SPECIAL PRECAUTIONS

HANDLING AND STORAGE PRECAUTIONS: Keep containers tightly closed when not in use.

SECTION VIII - FIRE AND EXPLOSION HAZARD DATA

EXTINGUISHING MEDIA: Extinguish with water fog or fine spray, dry chemical, CO₂, or a universal type foam.

FIRE AND EXPLOSION HAZARD: During a fire, smoke may contain the original material in addition to unidentified toxic and/or irritating compounds. Hazardous combustion products may include and are not limited to: aldehydes, carbon monoxide.

FIRE FIGHTING PROCEDURES: Keep people away. Isolate fire area and deny unnecessary entry. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage. Burning liquids may be extinguished by dilution with water. Do not use direct water stream. May spread fire.

SECTION IX - PHYSICAL DATA

APPROXIMATE BOILING POINT (DEG F):	>500	PER CENT VOLATILE:	0
SPECIFIC GRAVITY (68 F):	1.036	FLASH POINT (TCC, DEG F):	471
RELATIVE EVAPORATION RATE (ESTIMATED):	>1	PER CENT SOLUBILITY IN WATER:	100
VAPOR PRESSURE @20C mmHg (CALCULATED):	<.1		

SECTION X - OTHER REGULATORY DATA

SARA

SECTION 302: NOT LISTED
SECTION 311 & 312: NOT LISTED
SECTION 313: See Section I.I

HMS

Health: 0
 Flammability: 0
 Reactivity: 0

TSCA

All components are in full compliance with the TSCA inventory.

CALIFORNIA PROPOSITION 65

NOT LISTED

RCRA

Waste material would be a D001

CERCLA

NOT LISTED

CARCINOGENICITY:

NOT LISTED with NTP or IARC.

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 manufactures 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 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

2101
08 00

DATE OF PREPARATION
Apr 5, 2012

SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER

2101

PRODUCT NAME

KRYLON® Interior/Exterior Paint, Cherry Red

MANUFACTURER'S NAME

THE SHERWIN-WILLIAMS COMPANY
KRYLON PRODUCTS GROUP
Cleveland, OH 44115

Telephone Numbers and Websites

Product Information	(800) 247-3266 www.kpg-industrial.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
14	74-98-6	Propane	ACGIH TLV OSHA PEL 2500 PPM 1000 PPM	760 mm
6	106-97-8	Butane	ACGIH TLV OSHA PEL 800 PPM 800 PPM	760 mm
1	100-41-4	Ethylbenzene	ACGIH TLV OSHA PEL OSHA PEL 20 PPM 100 PPM 125 PPM STEL	7.1 mm
7	1330-20-7	Xylene	ACGIH TLV ACGIH TLV OSHA PEL OSHA PEL 100 PPM 150 PPM STEL 100 PPM 150 PPM STEL	5.9 mm
40	67-64-1	Acetone	ACGIH TLV ACGIH TLV OSHA PEL 500 PPM 750 PPM STEL 1000 PPM	180 mm
7	78-93-3	Methyl Ethyl Ketone	ACGIH TLV ACGIH TLV OSHA PEL OSHA PEL 200 PPM 300 PPM STEL 200 PPM 300 PPM STEL	70 mm
4	108-10-1	Methyl Isobutyl Ketone	ACGIH TLV ACGIH TLV OSHA PEL OSHA PEL 50 PPM 75 PPM STEL 50 PPM 75 PPM STEL	16 mm
7	108-65-6	1-Methoxy-2-Propanol Acetate	ACGIH TLV OSHA PEL Not Available Not Available	1.8 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
- 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 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

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	6.36 lb/gal	762 g/l
SPECIFIC GRAVITY	0.77	
BOILING POINT	<0 - 302 °F	<-18 - 150 °C
MELTING POINT	Not Available	
VOLATILE VOLUME	92%	
EVAPORATION RATE	Faster than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	N.A.	
pH	7.0	

VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)

Volatile Weight 47.63%

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.

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
100-41-4	Ethylbenzene	LC50 RAT	4HR	Not Available
		LD50 RAT		3500 mg/kg
1330-20-7	Xylene	LC50 RAT	4HR	5000 ppm
		LD50 RAT		4300 mg/kg
67-64-1	Acetone	LC50 RAT	4HR	Not Available
		LD50 RAT		5800 mg/kg
78-93-3	Methyl Ethyl Ketone	LC50 RAT	4HR	Not Available
		LD50 RAT		2740 mg/kg
108-10-1	Methyl Isobutyl Ketone	LC50 RAT	4HR	Not Available
		LD50 RAT		2080 mg/kg
108-65-6	1-Methoxy-2-Propanol Acetate	LC50 RAT	4HR	Not Available
		LD50 RAT		8500 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 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, ADR (D)

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
100-41-4	Ethylbenzene	1	
1330-20-7	Xylene	7	
108-10-1	Methyl Isobutyl Ketone	4	

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

2203
01 00

Section 1 -- PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER	2203	HMIS CODES	
		Health	2
		Flammability	4
		Reactivity	0
PRODUCT NAME	KRYLON* Metallic Spray Paint, Copper Metallic		
MANUFACTURER'S NAME	THE SHERWIN-WILLIAMS COMPANY	EMERGENCY TELEPHONE NO.	(216) 566-2917
	KRYLON Products Group		
	Cleveland, OH 44115		
DATE OF PREPARATION	06-SEP-04	INFORMATION TELEPHONE NO.	(800) 832-2541

Section 2 -- COMPOSITION/INFORMATION ON INGREDIENTS

% by WT	CAS No.	INGREDIENT	UNITS	VAPOR PRESSURE
16	74-98-6	Propane		
		ACGIH TLV	2500 ppm	760 mm
		OSHA PEL	1000 ppm	
16	106-97-8	Butane		
		ACGIH TLV	800 ppm	760 mm
		OSHA PEL	800 ppm	
37	108-88-3	Toluene		
		ACGIH TLV	50 ppm (Skin)	22 mm
		OSHA PEL	100 ppm (Skin)	
		OSHA PEL	150 ppm (Skin) STEL	
14	67-64-1	Acetone		
		ACGIH TLV	500 ppm	180 mm
		ACGIH TLV	750 ppm STEL	
		OSHA PEL	1000 ppm	
5	7440-50-8	Copper		
		ACGIH TLV	1 mg/m3	
		OSHA PEL	1 mg/m3	

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.

 =====

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	LEL	UEL
Propellant < 0 F	1.0	12.8

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

Continued on page 3

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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).

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

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.

Continued on page 4

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 Section 9 -- PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT WEIGHT 6.34 lb/gal 760 g/l
 SPECIFIC GRAVITY 0.76
 BOILING POINT <0 - 238 F <-18 - 114 C
 MELTING POINT Not Available
 VOLATILE VOLUME 92 %
 EVAPORATION RATE Faster than ether
 VAPOR DENSITY Heavier than air
 SOLUBILITY IN WATER N.A.
 pH 7.0
 VOLATILE ORGANIC COMPOUNDS (VOC Theoretical)
 Volatile Weight 70.10 % 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 overexposure to solvent ingredients in Section 2 may cause
 adverse effects to the liver, urinary, cardiovascular and reproductive
 systems.

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
108-88-3	Toluene	LC50	RAT	4HR	4000 ppm
		LD50	RAT		5000 mg/kg
67-64-1	Acetone	LC50	RAT	4HR	Not Available
		LD50	RAT		5800 mg/kg
7440-50-8	Copper	LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available

Continued on page 5

=====
 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

No data available.

 =====
 Section 15 -- REGULATORY INFORMATION

SARA 313 (40 CFR 372.65C) SUPPLIER NOTIFICATION

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element
108-88-3	Toluene	37	
	Copper		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.



UTILITY MANUFACTURING CO., INC.
700 MAIN STREET, WESTBURY, NY 11590
(516) 997-6300 - FAX # (516) 997-6345

MATERIAL SAFETY DATA SHEET

SILICONE SPRAY DRY LUBRICANT

FOR CHEMICAL EMERGENCY: Spill, Leak, Fire, Exposure, or Accident - Call **INFOTRAC**- Day or Night: **1-800-535-5053**
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 and users of this product.

PRODUCT IDENTIFICATION

DOT Shipping name: CONSUMER COMMODITY, ORM-D **CAS NO.:** MIXTURE
Chemical Family: COMPOUND **UN/NA #:** N/A
DOT Hazard Class: ORM-D **DATE OF ISSUE:** 5/08

SECTION I - HAZARDOUS INGREDIENTS/EXPOSURE LIMITS

Hazardous Ingredients:	CAS #	TLV/PEL	AGENCY	TYPE	SARA-313 (% RANGE)
TRICHLOROETHYLENE	79-01-6	100 PPM	ACGIH	TWA	YES (55-75%)
ISOBUTANE	75-28-5	800 PPM	ACGIH	TWA	
PROPANE	74-98-6	1000 PPM	ACGIH	TWA	

SECTION II - EMERGENCY AND FIRST AID PROCEDURES

WARNING: CONTENTS UNDER PRESSURE

EYE CONTACT: Move person away from exposure. Flush eyes with clean water for at least 15 minutes. **Seek medical attention.**

SKIN CONTACT: Remove contaminated shoes and clothing and cleanse affected areas thoroughly by washing with mild soap and water. If irritation persists **seek medical attention.**

INHALATION: (breathing) Move person away from exposure to fresh air. Give artificial respiration if not breathing. Give oxygen if breathing is difficult. **Seek medical attention.**

INGESTION: (swallowing) If swallowed, induce vomiting immediately. Do **not** give anything by mouth to an unconscious person. **Seek emergency medical attention.**

SECTION III - HEALTH HAZARDS / ROUTES OF ENTRY

EYE CONTACT: Vapors may cause irritation with redness and pain. May cause eye damage.

SKIN CONTACT: Continuous contact with this material may cause drying of skin. Chemical itself is an irritant or sensitizer.

SKIN ABSORPTION: Prolonged or repeated exposure will cause symptoms of toxicity.

INHALATION: (breathing) Vapors can cause irritation to the respiratory tract. Inhalation of high concentrations may cause unconsciousness and heart, liver or kidney damage.

INGESTION: (swallowing) Ingestion may cause the following: Irritation of digestive tract, signs of nervous system depression, such as headache, drowsiness, dizziness, loss of coordination, fatigue, and nausea.

SECTION IV - SPECIAL PROTECTION INFORMATION

VENTILATION: If current ventilation practices are not adequate to maintain airborne concentrations below established exposure limits (see section I), additional ventilation or exhaust systems are required.

RESPIRATORY PROTECTION: The use of respiratory protection is advised when concentrations exceed the established exposure limits (see Section I).

PROTECTIVE GLOVES: The use of gloves impermeable to the specific material handled is advised to prevent possible irritation.

EYE PROTECTION: Approved eye protection to safeguard against potential eye contact, irritation or injury is recommended.

SECTION V - REACTIVITY DATA

STABILITY: Stable

INCOMPATIBILITY: (materials to avoid) This product is incompatible with: *Oxidizing agents, strong acids and bases*

HAZARDOUS DECOMPOSITION PRODUCTS: Thermal decomposition in the presence of air may yield carbon monoxide, carbon dioxide, hydrogen chloride, and phosgene.

HAZARDOUS POLYMERIZATION: Will not occur

SECTION VI - SPILL OR LEAK PROCEDURES

PRECAUTIONS IN CASE OF LEAK OR SPILL: Keep all sources of ignition and hot metal surfaces away from spill/release. Stay upwind and away from spill/release. Isolate hazard area and limit entry to emergency crew only. Stop spill/release if it can be done without risk. Wear appropriate protective equipment including respiratory protection as conditions warrant (see Section IV). Prevent spilled material from entering sewers, storm drains, and natural waterways. An appropriate absorbent may absorb spilled material.

WASTE DISPOSAL METHOD: Dispose of product in accordance with local, county, state, and federal regulations. Do not flush to sewer



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MATERIAL SAFETY DATA SHEET

SILICONE SPRAY DRY LUBRICANT

SECTION VII - STORAGE AND SPECIAL PRECAUTIONS

HANDLING AND STORAGE PRECAUTIONS: Do not get in eyes, skin or clothing. Do not breathe vapor mist or gas. Keep containers tightly closed, cool, dry, and away from all sources of ignition. Use and store this product with adequate ventilation. Avoid inhalation of vapors and personal contact with the product. Use good personal hygiene practices. Bond and ground equipment when transferring to another container. "Empty" containers contain residue (liquid and/or vapor) and can be dangerous. Do not puncture, 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 and death. Contents under pressure. Do not puncture or incinerate container. All other containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations.

SECTION VIII - FIRE AND EXPLOSION HAZARD DATA

EXTINGUISHING MEDIA: Extinguish with dry chemical, CO₂, or a universal type foam.
FIRE AND EXPLOSION HAZARD: May decompose during contact with flames, heating elements, or in combustion engines releasing irritating gases. Container may explode if heated due to pressure rise.
FIRE FIGHTING PROCEDURES: Wear appropriate protective equipment including respiratory protection as conditions warrant (see Section IV). Stop spill/release if it can be done without risk. Water spray may be useful in minimizing or dispersing vapors and cooling equipment exposed to heat and flame. Avoid spreading burning liquid with water used for cooling purposes.

SECTION IX - PHYSICAL DATA

APPROXIMATE BOILING POINT (DEG F):	188	PER CENT VOLATILE:	N/A
SPECIFIC GRAVITY (68 F):	.96	FLASH POINT (TCC, DEG F):	140
RELATIVE EVAPORATION RATE (ESTIMATED):	<1	PER CENT SOLUBILITY IN WATER:	Insoluble
VAPOR PRESSURE @70 F mmHg (CALCULATED):	56 PSI		

SECTION X - OTHER REGULATORY DATA

<u>SARA</u>		<u>HMIS</u>	
<i>SECTION 302:</i>	NOT LISTED	Health:	2
<i>SECTION 311 & 312:</i>	NOT LISTED	Flammability:	2
<i>SECTION 313:</i>	See Section I.I	Reactivity:	0
<u>TSCA</u>	All components are in full compliance with the TSCA inventory.	<u>CALIFORNIA PROPOSITION 65</u>	TRICHLOROETHYLENE
<u>RCRA</u>	Waste material would be a U070	<u>CERCLA</u>	NOT LISTED

CARCINOGENICITY:
 TRICHLOROETHYLENE IS LISTED AS A SUSPECTED CARCINOGEN. RISK IS DEPENDENT ON LEVEL AND DURATION OF EXPOSURE.

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 manufactures 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 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.

Permatex, Inc.
 10 Columbus Blvd.
 Hartford, CT 06106 USA
 Telephone: 1-87-Permatex
 (877) 376-2839
 Emergency: 800-255-3924 (ChemTel)
 International Emergency: +01-813-248-0585

Material Safety Data Sheet

1. PRODUCT IDENTIFICATION

Product Name: 2C FORM-A-GASKET #2 SEALANT 11OZ
Item No: 80011
Product Type: Sealant

2. COMPOSITION/INFORMATION ON INGREDIENTS

Component	Weight%	ACGIH; TLV-TWA	OSHA PEL
KAOLIN 1332-58-7	50-60	2 mg/m ³	15 mg/m ³
VEGETABLE OIL 68187-84-8	15-25	5 mg/m ³	Not listed
ROSIN 8050-09-7	10-20	Not listed	Not listed
ETHANOL 64-17-5	<10	1000 ppm	1000 ppm; 1900 mg/m ³
2-PROPANOL 67-63-0	<2	200 ppm	400 ppm; 980 mg/m ³
CRYSTALLINE SILICA 14808-60-7	0.1-1.0	0.025 mg/m ³	Not listed
TITANIUM DIOXIDE 13463-67-7	0.1-1.0	10 mg/m ³	15 mg/m ³
METHANOL 67-56-1	0.1-1.0	200 ppm	200 ppm; 260 mg/m ³

3. HAZARDS IDENTIFICATION

Toxicity: May cause eye, skin and respiratory irritation. This product contains encapsulated silicon dioxide (quartz silica). No exposure to free respirable silica is anticipated during normal use of this product. Silica may be released by grinding or machining of coated material. Use NIOSH-approved dust/mist respirator when grinding or machining.

Primary Routes of Entry: Eye and skin contact, ingestion, inhalation

Signs and Symptoms of Exposure: Excessive accidental exposure may cause headache, dizziness, nausea and mild respiratory irritation. Overexposure may cause eye and skin redness.

Component	Weight%	NTP	ACGIH Carcinogens	IARC
KAOLIN 1332-58-7	50-60		A4-Not classifiable as a human carcinogen	
ETHANOL 64-17-5	<10		A4 - Not Classifiable as a Human Carcinogen	
2-PROPANOL 67-63-0	<2		A4 - Not classifiable as a human carcinogen	Group 3 Monograph 71, 1999; Supp.7, 1987; Monograph 15, 1977
CRYSTALLINE SILICA 14808-60-7	0.1-1.0		A2 - Suspected Human Carcinogen	Group 1 Monograph 68, 1997 (inhalation of quartz)
TITANIUM DIOXIDE 13463-67-7	0.1-1.0	male rat-negative, female rat-negative, male mice-negative, female mice-negative	A4	Group 2B; Vol 93,2006; Vol 47,1989

Medical Conditions Recognized as Being Aggravated by Exposure: Preexisting eye, skin and respiratory disorders may be aggravated by overexposure to this product.

4. FIRST AID MEASURES

Ingestion: Do not induce vomiting. Slowly dilute with 1-2 glasses of water or milk and seek medical attention. Never give anything by mouth to an unconscious person.

4. FIRST AID MEASURES

Inhalation:	Move to fresh air in case of accidental inhalation of vapours. Oxygen or artificial respiration if needed. Obtain medical attention.
Skin Contact:	Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. If skin irritation persists, call a physician.
Eye Contact:	In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention if irritation persists.

5. FIRE FIGHTING MEASURES

Flash Point °F(C°):	Does not apply. Per ASTM D4359 this product is a solid.
Recommended Extinguishing Media:	Carbon Dioxide, Dry Chemicals, Foam.
Special Fire-Fighting Procedures:	Firefighters should wear self-contained breathing apparatus. Water spray may be ineffective on flames but should be used to keep fire-exposed containers cool.
Hazardous Products of Combustion:	Oxides of carbon, Aldehydes, Carboxylic acids
Unusual Fire/Explosion Hazards:	Closed containers may rupture or explode when exposed to extreme heat
Lower Explosive Limit:	Not determined
Upper Explosive Limit:	Not determined

6. ACCIDENTAL RELEASE MEASURES

Spill Procedures:	Eliminate all sources of ignition. Maintain good ventilation. Take up with an inert absorbent. Store in a closed waste container until disposal. Residues may be cleaned up with isopropyl alcohol.
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7. HANDLING AND STORAGE

Storage:	Store away from heat, sparks or open flame. Do not store at temperatures above 100°F (38°C).
Handling:	Avoid contact with skin and eyes. Do not inhale vapors. Wash thoroughly after handling. Keep container closed when not in use.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Eyes:	Safety glasses.
Skin:	Neoprene or nitrile gloves recommended.
Ventilation:	General; local exhaust ventilation as necessary to control any air contaminants to within their exposure limits (or to the lowest feasible levels when limits have not been established) during the use of this product.
Respiratory Protection:	An approved organic vapor respirator should be worn when exposures are expected to exceed the applicable limits.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Reddish brown paste
Odor:	Alcoholic
Boiling Point:	180°F
pH:	Does not apply
Solubility in Water:	Partial
Specific Gravity:	1.5
VOC(Wt.%):	11 %; 165.4 g/L
Vapor Pressure:	33 mm Hg @ 68°F
Vapor Density (Air=1):	2.07
Evaporation Rate:	7.7 (ether = 1)

10. STABILITY AND REACTIVITY

Chemical Stability:	Stable at normal conditions
Hazardous Polymerization:	Will not occur
Incompatibilities:	Strong oxidizers
Conditions to Avoid:	Keep away from heat, sparks and open flame.
Hazardous Products of Combustion:	Oxides of carbon, Aldehydes, Carboxylic acids

11. TOXICOLOGICAL INFORMATION

See Section 3

12. ECOLOGICAL INFORMATION

No data available

13. DISPOSAL CONSIDERATIONS

Recommended Method of Disposal: Disposal should be made in accordance with federal, state and local regulations..
US EPA Waste Number: NH - Not a RCRA Hazardous Waste Material

14. TRANSPORTATION INFORMATION

DOT (49CFR 172)

Ground Transport (DOT)

DOT Shipping Name: Not regulated
Hazard Class: None
UN/ID Number: None

IATA

Proper Shipping Name: Not regulated
Class or Division: None
UN/ID Number: None

IMDG

Proper Shipping: Not regulated
Hazard Class: None
UN Number: None

Marine Pollutant: None

15. REGULATORY INFORMATION

SARA 313 Chemicals: The following component(s) is listed as a SARA Section 313 Toxic Chemical.

NONE

California Proposition 65: No California Prop 65 chemicals are known to be present.

TSCA Inventory Status: All components of this product are listed (or exempt) on the EPA TSCA inventory.

16. OTHER INFORMATION

Estimated NFPA Rating: HEALTH 2, FLAMMABILITY 1, REACTIVITY 0.

Estimated HMIS Classification: HEALTH 2, FLAMMABILITY 1, 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, Manager-Environmental, Health & Safety
Company: Permatex, Inc. 10 Columbus Blvd. Hartford, CT USA 06106

Revision Date: October 28, 2010

Revision Number: 3

Telephone No.: 1-87-Permatex (877) 376-2839

MATERIAL SAFETY DATA SHEET

RTA9242
04 00

DATE OF PREPARATION
Apr 5, 2012

SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER

RTA9242

PRODUCT NAME

KRYLON® RUST TOUGH® HAMM-R Finish (aerosol), Charcoal Gray

MANUFACTURER'S NAME

THE SHERWIN-WILLIAMS COMPANY
KRYLON PRODUCTS GROUP
Cleveland, OH 44115

Telephone Numbers and Websites

Product Information	(800) 247-3266 www.kpg-industrial.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
15	74-98-6	Propane		
		ACGIH TLV	2500 PPM	760 mm
		OSHA PEL	1000 PPM	
4	108-88-3	Toluene		
		ACGIH TLV	20 PPM	22 mm
		OSHA PEL	100 ppm (Skin)	
		OSHA PEL	150 ppm (Skin) STEL	
3	100-41-4	Ethylbenzene		
		ACGIH TLV	20 PPM	7.1 mm
		OSHA PEL	100 PPM	
		OSHA PEL	125 PPM STEL	
16	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	
42	67-64-1	Acetone		
		ACGIH TLV	500 PPM	180 mm
		ACGIH TLV	750 PPM STEL	
		OSHA PEL	1000 PPM	
0.2	1333-86-4	Carbon Black		
		ACGIH TLV	3.5 MG/M3	
		OSHA PEL	3.5 MG/M3	

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.

HMIS Codes

Health	2*
Flammability	3
Reactivity	0

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 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.

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	LEL	UEL	EXTINGUISHING MEDIA
Propellant < 0 °F	1.0	12.8	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	6.54 lb/gal	783 g/l
SPECIFIC GRAVITY	0.79	
BOILING POINT	<0 - 292 °F	<-18 - 144 °C
MELTING POINT	Not Available	
VOLATILE VOLUME	87%	
EVAPORATION RATE	Faster than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	N.A.	
pH	7.0	

VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)

Volatile Weight 39.57%

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.

Carbon Black is classified by IARC as possibly carcinogenic to humans (group 2B) based on experimental animal data, however, there is insufficient evidence in humans for its carcinogenicity.

TOXICOLOGY DATA

CAS No.	Ingredient Name			
74-98-6	Propane	LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available
108-88-3	Toluene	LC50 RAT	4HR	4000 ppm
		LD50 RAT		5000 mg/kg
100-41-4	Ethylbenzene	LC50 RAT	4HR	Not Available
		LD50 RAT		3500 mg/kg
1330-20-7	Xylene	LC50 RAT	4HR	5000 ppm
		LD50 RAT		4300 mg/kg
67-64-1	Acetone	LC50 RAT	4HR	Not Available
		LD50 RAT		5800 mg/kg
1333-86-4	Carbon Black	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, ADR (D)

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	4	
100-41-4	Ethylbenzene	3	
1330-20-7	Xylene	16	

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.



Code: AG-CU-SN
Date: 12 NOV 1997
Revised: 11 APR 2012
Printed: 11 APR 2012

WOLVERINE JOINING TECHNOLOGIES, LLC

MATERIAL SAFETY DATA SHEET

Product: ECONOBRITE, SILVABRITE 100, SILVALOY B-7T, SILVALOY B-7TV, SILVALOY B-60T, SILVALOY B-60TV, 5371, 6601, 24752, 24786, 30668, 34053, 35509

SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Common Name : SILVER-COPPER-TIN ALLOY
Chemical Name : SILVER-COPPER-TIN ALLOY
Formula : SILVER-COPPER-TIN
Product CAS No.: CHEMICAL MIXTURE
Product Use : Welding/Brazing/Soldering

Supplier : WOLVERINE JOINING TECHNOLOGIES, LLC.
Address : 235 KILVERT STREET
City, St, Zip : WARWICK, RI 02886
Phone : 1-401-739-9550

FOR CHEMICAL EMERGENCY CALL CHEMTREC (24 HOURS):
1-800-424-9300 (US, Canada, Puerto Rico, Virgin Islands)
1-703-527-3887 (Outside Above Area)

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT	CAS NO.	% Wt.
SILVER	7440-22-4	3-60
COPPER	7440-50-8	3-85
TIN	7440-31-5	8-97

INGREDIENT NOTES

NOTE: The percentage by weight values reported for the ingredients in this product represent approximate formulation values. See Section 8 for Exposure Limits and Section 11 for Toxicological Information.

SECTION 3: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Metallic wire, rod or strip

Odorless

Flash Point: Not Applicable

Prolonged or repeated inhalation or ingestion may cause damage to the lungs, blood, kidneys, and liver.

May cause respiratory tract irritation. Overexposure to freshly formed fumes may cause a flu-like illness called "metal fume fever".

Harmful if swallowed. Causes gastrointestinal irritation, abdominal pain, nausea, vomiting and diarrhea.

May cause eye and skin irritation.

Not a fire or explosion hazard in solid form. Finely divided dust may ignite and burn rapidly when mixed with air in the proper proportions. Toxic metal fumes may be released in a fire situation.

ROUTES OF ENTRY

Eyes? YES

Skin? YES

Inhalation? YES

Ingestion? YES

POTENTIAL HEALTH EFFECTS

EYE CONTACT may cause irritation.

SKIN CONTACT may cause irritation.

INHALATION may cause irritation of the respiratory tract. Short-term overexposure may cause a flu-like illness called metal fume fever. Typically metal fume fever begins four to twelve hours after sufficient exposure to freshly formed fumes. The first symptoms are a metallic taste, dryness and irritation of the throat. Cough and shortness of breath may occur along with headache, fatigue, nausea, vomiting, muscle and joint pain, fever and chills. The syndrome runs its course in 24-48 hours.

INGESTION is harmful. May cause abdominal pain, nausea, vomiting and diarrhea. COPPER poisoning can result in hemolytic anemia and kidney, liver and spleen damage.

NOTE: The potential health effects described above only apply if dust or fume is formed.

CARCINOGENICITY

NTP? NO

IARC? NO

OSHA? NO

CHRONIC HEALTH HAZARDS

Overexposure may lead to COPPER poisoning, resulting in hemolytic anemia and liver, kidney and spleen damage.

Prolonged or repeated inhalation may cause a benign pneumoconiosis.

Prolonged or excessive exposures may result in argyria, a permanent localized blue-grey discoloration of the eyes, skin or mucous membranes.

Prolonged exposure to SILVER can cause damage to the nasal septum.

Refer to Potential Health Effects.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE

May adversely affect existing medical conditions, such as eye, skin, respiratory, blood, liver and/or kidney ailments.

Individuals with Wilson's Disease are at increased risk of COPPER poisoning.

NOTE: See Section 8 for Exposure Limits, Section 11 for Toxicological Information and Section 12 for Ecological Information.

SECTION 4: FIRST AID MEASURES

EYE CONTACT: Flush eyes with plenty of water. If irritation develops, call a physician.

SKIN CONTACT: Immediately wash skin with soap and plenty of water. If irritation persists, call a physician.

INHALATION: If exposed to excessive levels of metal fumes, remove to fresh air and seek medical attention.

INGESTION: If person is conscious and able to swallow, give large amounts of water to dilute. If vomiting occurs, keep head below hips to help prevent aspiration. Get medical attention immediately.

SECTION 5: FIRE-FIGHTING MEASURES

Flash Point: Not Applicable
Auto-Ignition: Not Applicable
LEL: Not Applicable
UEL: Not Applicable

NFPA HAZARD CLASSIFICATION

Health: 2 Flammable: 0 Reactivity: 0

HMIS HAZARD CLASSIFICATION

Health: 2* Flammable: 0 Reactivity: 0 Special: B

* Indicates the possibility of chronic health effects. See Chronic Health Hazards in Section 3 for more information.

EXTINGUISHING MEDIA

Use carbon dioxide, chemical foam or dry chemical. Use any means for extinguishing surrounding fire.

Do NOT use water on metal fires.

SPECIAL FIRE FIGHTING PROCEDURES

Wear NIOSH/MSHA approved positive-pressure self-contained breathing apparatus and protective clothing as specified in 29 CFR 1910.156.

UNUSUAL FIRE AND EXPLOSION HAZARDS

Not a fire or explosion hazard in solid form. Finely divided dust may ignite and burn rapidly when mixed with air in the proper proportions. Toxic metal fumes may be released in a fire situation.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Contain spillage and scoop up or vacuum. Notification of the National Response Center (800/424-8802) may be required. Refer to EPA, DOT and applicable state and local regulations for current response information.

It is recommended that each user establish a spill prevention, control and countermeasure plan (SPCC). Such plan should include procedures applicable to proper storage, control and clean-up of spills, including reuse or disposal as appropriate (see Section 13: Disposal Considerations).

****NOTE**** In the event of an accidental release of this material, the above procedures should be followed. Additionally, proper exposure controls and personal protection equipment should be used (see Section 8: Exposure Control/Personal Protection), and disposal of the material should be in accordance with Section 13: Disposal Considerations.

SECTION 7: HANDLING AND STORAGE

Wash thoroughly after handling.

Store in a cool, dry location away from incompatible materials.

Avoid breathing any dust, mist or fumes resulting from the use of this product.

Avoid contact with any dusts, mists or fumes resulting from the use of this product.

Use only with adequate ventilation.

Do not eat, drink, or smoke in work area.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

EXPOSURE LIMITS

INGREDIENT	PEL-OSHA	TLV-ACGIH
SILVER		
CAS NO.: 7440-22-4	0.01 mg/m3	0.1 mg/m3
COPPER		
CAS NO.: 7440-50-8	0.1 mg/m3 (Fume) 1 mg/m3 (Dust)	0.2 mg/m3 (Fume) 1 mg/m3 (Dust)
TIN		
CAS NO.: 7440-31-5	2 mg/m3	2 mg/m3

NOTE: Both OSHA and the ACGIH list welding fumes as having an exposure limit of 5 mg/m3 (total particulate not otherwise classified). However, the ACGIH states that welding fumes must be tested frequently for individual components which are likely to be present to determine whether specific exposure limits are exceeded.

NOTE: The permissible exposure limits (PELs), threshold limit values (TLVs), potential health effects statements and SARA hazard categories may not be applicable as the hazardous ingredients listed are in the solid form. If dust, powder or fume is generated then these statements will be applicable.

Unless otherwise noted, all values are reported as 8-hour Time-Weighted Averages (TWAs) and total dust (particulates only). All ACGIH TLVs refer to the 1998 Standards. All OSHA PELs refer to 29 CFR Part 1910 Air Contaminants: Final Rule, January 19, 1989.

RESPIRATORY PROTECTION

If dust or fume is generated, a NIOSH/MSHA approved respirator may be necessary. Follow all requirements for respiratory programs and selection set forth in the OSHA regulations (29 CFR 1910.139).

VENTILATION

General; local exhaust ventilation as necessary to control any air contaminants to within their PELs or TLVs during the use of this product.

PROTECTIVE EQUIPMENT

Refer to ANSI/ASC Z49.1-94 (Safety in Welding, Cutting and Allied Processes), published by the American Welding Society, for further information on the selection of personal protective equipment. Safety glasses (with side shields). Body protection as necessary to prevent skin contact.

PERSONNEL SAMPLING PROCEDURE

For COPPER (dust & fume): Refer to NIOSH Manual of Analytical Methods (NMAM), 4th Edition, Method 7029.

For SILVER: Refer to NIOSH Manual of Analytical Methods (NMAM), 4th Edition, Method 7300.

For TIN: Refer to NIOSH Manual of Analytical Methods (NMAM), 4th Edition, Method 7300.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Metallic wire, rod or strip
Odor: Odorless
Boiling Point: Not Determined
Specific Gravity (H2O=1): 7.35 to 9.90
Melting Point: 225 to 620 °C
Vapor Pressure (mm Hg): Not Applicable
Vapor Density (Air=1): Not Applicable
Evaporation Rate: Not Applicable
% Solubility In Water: Insoluble
pH: Not Applicable

SECTION 10: STABILITY AND REACTIVITY

Stability: Generally considered stable.
Avoid: None expected.

INCOMPATIBILITY (Materials to Avoid)

Strong acids and bases, strong oxidizers, acetylene, ammonia, hydrogen peroxide, chlorine, bromine, iodine, turpentine, magnesium metal, ammonium nitrate, hydrogen sulfide.

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS

Toxic metal oxides are emitted when heated above the melting point. The amount of fume evolved increases as the temperature rises.

Polymerization: Polymerization is not expected to occur.
Avoid: Not applicable.

SECTION 11: TOXICOLOGICAL INFORMATION

CHEMICAL NAME	% Wt.	LD50	LC50
SILVER			
CAS NO.: 7440-22-4	0.1-60	Not Available	Not Available
COPPER			
CAS NO.: 7440-50-8	4-85	3.5 mg/kg MOUSE, intraperitoneal	Not Available
TIN			
CAS NO.: 7440-31-5	8-97	Not Available	Not Available

NOTE: See Sections 3, 8 and 12 for additional information.

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICITY

No data available.

ENVIRONMENTAL FATE

No data available.

SECTION 13: DISPOSAL CONSIDERATIONS

US EPA Waste Number: D011

This product contains SILVER or silver compounds and disposal may be regulated under EPA hazardous waste regulations, waste number D011. Before disposal, this product or mixtures containing this product should be tested for toxicity characteristics (TC) under the current EPA Hazardous Waste Regulations TCLP testing procedures, 40 CFR Part 261 et seq. Disposal/recycling/reclamation requirements will vary by location and type of disposal selected. Consult with state and local regulatory authorities.

****NOTE**** Chemical additions, processing or otherwise altering this material may make the waste management information presented above incomplete, inaccurate or otherwise inappropriate.

As local regulations may vary; all waste must be disposed/recycled/reclaimed in accordance with federal, state, and local environmental control regulations.

SECTION 14: TRANSPORT INFORMATION

INTERNATIONAL

UN Number: Not Regulated

UNITED STATES

EPA Waste Number: D011

DOT Classification: Not Regulated

CANADA

PIN Number: Not Regulated

TDG Class: Not Regulated

EC

DGL: Not Determined

SECTION 15: REGULATORY INFORMATION

US FEDERAL REGULATIONS

TSCA: IN TSCA

SARA 311 AND 312 HAZARD CATEGORIES

IMMEDIATE (Acute) Health Hazard: YES
DELAYED (Chronic) Health Hazard: YES
FIRE Hazard: NO
REACTIVITY Hazard: NO
Sudden Release of PRESSURE: NO

SARA SECTION 313 NOTIFICATION

This product contains a toxic chemical (or chemicals) 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.

CHEMICAL NAME	CAS Number	% Wt.
SILVER	7440-22-4	0.1-60
COPPER	7440-50-8	4-85

OZONE DEPLETING SUBSTANCES (ODS)

This product neither contains nor is manufactured with an ozone depleting substance subject to the labeling requirements of the Clean Air Act Amendments 1990 and 40 CFR Part 82.

VOLATILE ORGANIC COMPOUNDS (VOC)

None

US STATE REGULATIONS

VOLATILE ORGANIC COMPOUND (CARB): Not Determined

CANADIAN 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**."

DSL/NDSL: DSL

WHMIS Classification: Uncontrolled Product

EUROPEAN REGULATIONS

EINECS: Yes

OTHER REGULATIONS

MITI (Japan): Yes

AICS (Australia): Yes

SECTION 16: OTHER INFORMATION

REVISIONS

Revision Number: 1

PREPARATION INFORMATION

Prepared By: Wolverine Joining Technologies, and Wolverine Tube Inc.
Corporate Environmental, Health and Safety Group.

Phone Number/Address: See Section 1

This Material Data Sheet is offered pursuant to OSHA's Hazard Communication Standard (29 CFR 1910.1200). Other government regulations must be reviewed for applicability to these products. The information in this Material Safety Data Sheet should be provided to all who will use, handle, store, transport, or otherwise be exposed to this product. This information has been prepared for the guidance of plant engineering, operations, and management and for persons working with or handling these products. The information presented in the MSDS is premised upon proper handling and anticipated uses and is for the material without chemical additions/alterations. We believe this information to be reliable and up-to-date as of the date of publication, but make no warranty that it is. Additionally, if this Material Safety Data Sheet is more than three years old, please contact the supplier at the phone number listed in Section 1 to make certain that this sheet is the most current. Copyright Wolverine Joining Technologies, LLC. License granted to make unlimited copies for internal use only.

MATERIAL SAFETY DATA SHEET

SECTION 1: IDENTIFICATION

Product identifier : **LIQUID BOILER SEAL**

Product Use : Sealing cracks and leaks in boilers and fittings.

Chemical Family : Mixture.

Manufacturer part no. : B232C

Supplier's name and address:
Radiator Specialty Co., of Canada
 1711 Aimco Blvd.
 Mississauga, ON, Canada
 L4W 1H7

Manufacturer's name and address:
 Refer to Supplier

Information Telephone # : (905) 625-9117 (Monday - Friday, 9AM - 5PM)

24 Hr. Emergency Tel # : 613-996-6666 (CANUTEC)

SECTION 2 - HAZARDS IDENTIFICATION

Classification : WHMIS information: This product is a WHMIS Controlled Product. It meets one or more of the criteria for a controlled product provided in Part IV of the Canadian Controlled Products Regulations (CPR).

WHMIS classification:
 Class E (Corrosive Material).

Labelling: Phrases recommended to appear on a supplier label, can be found in Section 15.

WHMIS symbols required on a supplier label:



Emergency Overview : Red viscous liquid. Mild odour.
 WARNING! Contact with metals may release small amounts of flammable hydrogen gas. Causes severe skin and eye irritation, possible burns on prolonged contact. Irritating to respiratory system. Harmful if swallowed.

POTENTIAL HEALTH EFFECTS:

Signs and symptoms of short-term (acute) exposure

Inhalation : May cause severe irritation to the nose, throat and respiratory tract. Symptoms may include coughing, chest pain and shortness of breath.

Skin : Causes severe irritation. Prolonged contact may produce chemical burns to affected skin areas.

Eyes : Severe irritation, burns and possibly permanent eye damage may result from direct contact.

Ingestion : May cause severe irritation and corrosive damage in the mouth, throat and stomach. Symptoms may include burning pain, vomiting and diarrhea.

Effects of long-term (chronic) exposure

: Chronic skin contact with low concentrations may cause dermatitis.

Carcinogenic status : See TOXICOLOGICAL INFORMATION, Section 11.

Additional health hazards : See TOXICOLOGICAL INFORMATION, Section 11.

Potential environmental effects

: See ECOLOGICAL INFORMATION, Section 12.

SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

<u>Ingredients</u>	<u>CAS #</u>	<u>Wt.%</u>
Sodium silicate	1344-09-8	40.00 - 70.00

SECTION 4 - FIRST AID MEASURES

- Inhalation** : Immediately remove person to fresh air. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen by qualified medical personnel only. Get medical attention.
- Skin contact** : Remove/Take off immediately all contaminated clothing. Wash off immediately with plenty of water for at least 15 minutes. Seek immediate medical attention/advice.
- Eye contact** : Immediately flush eyes with plenty of water for at least 15 minutes. Seek immediate medical attention/advice.
- Ingestion** : Seek immediate medical attention/advice. Do not induce vomiting. Never give anything by mouth to an unconscious person.
- Notes For Physician** : Treat symptomatically.

SECTION 5 - FIRE FIGHTING MEASURES

- Fire hazards/conditions of flammability** : Not flammable under normal conditions of use. Closed containers may rupture if exposed to excess heat or flame due to a build-up of internal pressure. Contact with metals may release small amounts of flammable hydrogen gas.
- Oxidizing properties** : None known.
- Explosion data: Sensitivity to mechanical impact / static discharge** : Not expected to be sensitive to mechanical impact or static discharge.
- Suitable extinguishing media** : Dry chemical, foam, carbon dioxide and water fog.
- Special fire-fighting procedures/equipment** : Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face piece operated in positive pressure mode. Move containers from fire area if safe to do so. Water spray may be useful in cooling equipment exposed to heat and flame.
- Hazardous combustion products** : silicon oxides; Sodium oxides.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

- Personal precautions** : All persons dealing with clean-up should wear the appropriate protective equipment including self-contained breathing apparatus. Keep all other personnel upwind and away from the spill/release. Restrict access to area until completion of clean-up.
- Environmental precautions** : Ensure spilled product does not enter drains, sewers, waterways, or confined spaces.
- Spill response/cleanup** : Ventilate area of release. Remove all sources of ignition. Contain and absorb spilled liquid with non-combustible, inert absorbent material (e.g. sand), then place absorbent material into a container for later disposal (see Section 13). Notify the appropriate authorities as required.
- Prohibited materials** : None known.

SECTION 7 - HANDLING AND STORAGE

- Safe Handling procedures** : Use in a well-ventilated area. Wear suitable protective equipment during handling. Do not breathe vapours or spray mist. Avoid contact with skin, eyes and clothing. Keep away from extreme heat and flame. Avoid contact with incompatible materials. Wash thoroughly after handling.
- Storage requirements** : Store in a cool, dry, well-ventilated area. Keep away from incompatibles. Inspect periodically for damage or leaks. Storage area should be clearly identified, clear of obstruction and accessible only to trained and authorized personnel.
- Incompatible materials** : Acids; halogens; Metals (e.g. tin, aluminum, zinc and alloys containing these metals).
- Special packaging materials** : Always keep in containers made of the same materials as the supply container.

SECTION 8 - EXPOSURE CONTROLS AND PERSONAL PROTECTION

<u>Exposure Limits</u>				
<u>Ingredients</u>	<u>ACGIH TLV</u>		<u>OSHA PEL</u>	
	<u>TWA</u>	<u>STEL</u>	<u>PEL</u>	<u>STEL</u>
Sodium silicate	N/Av	N/Av	N/Av	N/Av

Ventilation and engineering measures

- : Use general or local exhaust ventilation to maintain air concentrations below recommended exposure limits.
- Respiratory protection** : If the TLV is exceeded, a NIOSH/MSHA-approved respirator is advised. Advice should be sought from respiratory protection specialists.
- Skin protection** : Impervious gloves must be worn when using this product. Advice should be sought from glove suppliers.
- Eye / face protection** : Chemical splash goggles or face shield is recommended.
- Other protective equipment** : Depending on conditions of use, an impervious apron should be worn. An eyewash station and safety shower should be made available in the immediate working area.
- General hygiene considerations** : Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink, smoke or use cosmetics while working with this product. Remove and wash contaminated clothing before re-use. Wash thoroughly after handling.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

- Physical state** : viscous liquid
- Appearance** : Red viscous liquid.
- Odour** : Mild odour.
- Odour threshold** : N/Av
- pH** : 11 - 12
- Boiling point** : 100°C
- Specific gravity** : 1.24
- Melting/Freezing point** : N/Av
- Coefficient of water/oil distribution** : N/Av
- Vapour pressure (mmHg @ 20° C / 68° F)** : N/Av
- Solubility in water** : dispersible
- Vapour density (Air = 1)** : N/Av
- Evaporation rate (n-Butyl acetate = 1)** : N/Av
- Volatile organic Compounds (VOC's)** : N/Av
- Volatiles (% by weight)** : N/Av
- Flash point** : Non-flammable.
- Flash point Method** : N/Av
- Auto-ignition temperature** : N/Av
- Lower flammable limit (% by vol.)** : N/Av
- Upper flammable limit (% by vol.)** : N/Av
- Flame Projection Length** : Not applicable.
- Flashback observed** : Not applicable.
- Absolute pressure of container** : N/Av
- Viscosity** : N/Av
- General Information** : No additional information.

Section 10: STABILITY AND REACTIVITY

- Stability and reactivity** : Stable under the recommended storage and handling conditions prescribed. Contact with metals may release small amounts of flammable hydrogen gas.
- Hazardous polymerization** : Hazardous polymerisation does not occur.
- Conditions to avoid** : Open flames, sparks, high heat and close proximity to incompatible substances.
- Materials To Avoid And Incompatibility** : See Section 7 (Handling and Storage) for further details.
- Hazardous decomposition products** : None known, refer to hazardous combustion products in Section 5.

SECTION 11 - TOXICOLOGICAL INFORMATION

- Target organs** : Eyes, skin, respiratory system and digestive system.
- Routes of exposure** : *Inhalation:* YES *Skin Absorption:* NO *Skin & Eyes:* YES *Ingestion:* YES
- Irritancy** : Severe irritation, tissue damage, and possible blindness will result from direct contact.
- Toxicological data** : There is no available data for the product itself, only for the ingredients. See below for individual ingredient acute toxicity data.

Ingredients	LC₅₀(4hr)		LD₅₀	
	inh. rat	(Oral, rat)	(Rabbit, dermal)	
Sodium silicate	N/Av	1960 mg/kg	> 4640 mg/kg	

- Carcinogenic status** : No components are listed as carcinogens by ACGIH, IARC, OSHA or NTP.

- Reproductive effects** : None known. Not expected to cause reproductive effects.
- Teratogenicity** : None known. Not expected to be a teratogen.
- Mutagenicity** : None known. Not expected to be mutagenic in humans.
- Epidemiology** : None known or reported by the manufacturer.
- Sensitization to material** : None known. Not expected to be a skin or respiratory sensitizer.
- Synergistic materials** : None known or reported by the manufacturer.
- other important hazards** : None known or reported by the manufacturer.
- Conditions aggravated by overexposure** : None known or reported by the manufacturer.

SECTION 12 - ECOLOGICAL INFORMATION

- Ecotoxicity** : The ecological characteristics of this product have not been fully investigated. The product should not be allowed to enter drains or water courses, or be deposited where it can affect ground or surface waters.
- Mobility** : No data is available on the product itself.
- Persistence** : No data is available on the product itself.
- Bioaccumulation potential** : No data is available on the product itself.
- Other Adverse Environmental effects** : No data is available on the product itself.

SECTION 13 - DISPOSAL CONSIDERATIONS

- Handling for Disposal** : Handle waste according to recommendations in Section 7. Do not puncture or incinerate containers.
- Methods of Disposal** : Dispose of in accordance with federal, provincial and local hazardous waste laws.

SECTION 14: TRANSPORT INFORMATION

Regulatory Information	UN Number	Shipping Name	Class	Packing Group	Label
TDG	None	Not regulated.	Not regulated	none	
TDG Additional information	None.				

SECTION 15 - REGULATORY INFORMATION

Labelling:

WARNING! Contact with metals may release small amounts of flammable hydrogen gas. Causes severe skin and eye irritation, possible burns on prolonged contact. Irritating to respiratory system. Harmful if swallowed.

PRECAUTIONS: Use in a well-ventilated area. Wear chemically resistant protective equipment during handling. Do not breathe vapours or spray mist. Avoid contact with skin, eyes and clothing. Keep away from extreme heat and flame. Avoid contact with incompatible materials. Wash thoroughly after handling. Keep containers closed when not in use. Store in a cool, dry, well ventilated area, away from heat and ignition sources.

FIRST AID: If inhaled, move to fresh air. If breathing stopped, begin artificial respiration. If breathing is difficult, give oxygen by qualified medical personnel only. Get medical attention. For skin contact, flush with water for at least 15 minutes, while removing contaminated clothing. Seek immediate medical attention/advice. For eye contact, flush with running water for at least 15 minutes. Seek immediate medical attention/advice. If ingested, do not induce vomiting. Never give anything by mouth to an unconscious person. Seek immediate medical attention/advice.

Refer To Material Safety Data Sheet for further information.

Canadian Information:

Canadian Environmental Protection Act (CEPA) information: All ingredients listed appear on the Domestic Substances List (DSL).

WHMIS information: Refer to Section 2 for a WHMIS Classification for this product.

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.


US Federal Information:

TSCA: All listed ingredients appear on the Toxic Substances Control Act (TSCA) inventory.

SECTION 16 - OTHER INFORMATION

Legend : ACGIH: American Conference of Governmental Industrial Hygienists
 CAS: Chemical Abstract Services
 HSDB: Hazardous Substances Data Bank
 IARC: International Agency for Research on Cancer
 Inh: Inhalation
 LC: Lethal Concentration
 LD: Lethal Dose
 N/Ap: Not Applicable
 N/Av: Not Available
 NIOSH: National Institute of Occupational Safety and Health
 NTP: National Toxicology Program
 OSHA: Occupational Safety and Health Administration
 PEL: Permissible exposure limit
 RTECS: Registry of Toxic Effects of Chemical Substances
 STEL: Short Term Exposure Limit
 TDG: Canadian Transportation of Dangerous Goods Act & Regulations
 TLV: Threshold Limit Values
 TWA: Time Weighted Average
 WHMIS: Workplace Hazardous Materials Identification System

References : 1. ACGIH, Threshold Limit Values for Chemical Substances and Physical Agents & Biological Exposure Indices for 2010.
 2. International Agency for Research on Cancer Monographs, searched 2010.
 3. Canadian Centre for Occupational Health and Safety, CCIInfoWeb databases, 2010 (Chempendium, HSDB and RTECs).
 4. Material Safety Data Sheets from manufacturer.

<p>Prepared for: Radiator Specialty Co. of Canada 1711 Aimco Blvd. Mississauga, ON, Canada, L4W 1H7 Telephone: 905-625-9117 (Mon. - Fri., 9 AM - 5 PM) Please direct all enquiries to Radiator Specialty.</p>	
<p>Prepared by: ICC The Compliance Center Inc. http://www.thecompliancecenter.com</p>	

DISCLAIMER OF LIABILITY

This Material Safety Data Sheet was prepared by ICC The Compliance Center Inc. using information provided by Radiator Specialty Co. of Canada and CCOHS' Web Information Service. The information in the Material Safety Data Sheet is offered for your consideration and guidance when exposed to this product. ICC The Compliance Center Inc and Radiator Specialty Co. of Canada expressly disclaim all expressed or implied warranties and assume no responsibilities for the accuracy or completeness of the data contained herein. The data in this MSDS does not apply to use with any other product or in any other process.

This Material Safety Data Sheet may not be changed, or altered in any way without the expressed knowledge and permission of ICC The Compliance Center Inc. and Radiator Specialty Co. of Canada.

MSDS Preparation Date (mm/dd/yyyy)

: 08/14/2007

MSDS Revision Date (mm/dd/yyyy)

: 07/28/2010

Revision No.

: 2

Revision Information

: Sections 2 and 3, switched.

(M)SDS sections updated:

- 2. HAZARDS IDENTIFICATION;
- 3. COMPOSITION/INFORMATION ON INGREDIENTS;
- 5. FIRE-FIGHTING MEASURES;
- 8. EXPOSURE CONTROLS / PERSONAL PROTECTION;
- 9. PHYSICAL AND CHEMICAL PROPERTIES;
- 11. TOXICOLOGICAL INFORMATION;
- 12. ECOLOGICAL INFORMATION;
- 14. TRANSPORT INFORMATION;
- 15. REGULATORY INFORMATION.

END OF DOCUMENT

MATERIAL SAFETY DATA SHEET

MSDS 0135

Section 1 -- PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME	Better Bubble	HMIS CODES	Health	2
			Flammability	0
			Reactivity	0
PRODUCT CODES	65554, 65432, 65273		PPI	B
CHEMICAL FAMILY	Organic/Inorganic			
USE	Leak Locator			
MANUFACTURER'S NAME	The RectorSeal Corporation	EMERGENCY TELEPHONE NO.	Chemtrec 24 Hours	
	2601 Spenwick Drive		(800)424-9300 USA	
	Houston, Texas 77055 USA		001-527-3887 International	
DATE OF VALIDATION	April 19, 2012	TECHNICAL SERVICE TELEPHONE NO.	(800)231-3345 or (713)263-8001	
DATE OF PREPARATION	April 19, 2012			

Section 2 -- HAZARDS IDENTIFICATION

GHS CLASSIFICATION

PHYSICAL HAZARDS: None

HEALTH HAZARDS

Acute Toxicity:

Oral: Not Classified

Dermal: Not Classified

Inhalation: Not Classified

Skin Corrosion/Irritation: Not Classified

Serious Eye Damage/Eye Irritation: Not Classified

Respiratory or Skin Sensitization: Not Classified

Germ Cell Mutagenicity: Not Classified

Carcinogenicity: Not Classified

Reproductive Toxicology: Not Classified

Target Organ Systemic Toxicity - Single Exposure: Not Classified

Target Organ Systemic Toxicity - Repeated Exposure: Not Classified

Aspiration Toxicity: Not Classified

ENVIRONMENTAL HAZARDS

Hazardous to the Aquatic Environment: Not Classified

Acute aquatic toxicity: Not Classified

Chronic aquatic toxicity: Not Classified

Bioaccumulation potential: Not Classified

Rapid degradability: Not Classified

GHS Label elements, including precautionary statements

Pictogram: None

Signal Word: None

Hazard Statements: None

Precautionary Statements:

P102 - Keep out of reach of children.

P264 - Wash hands thoroughly after handling.

Classification according to EU Directives 67/548/EEC or 1999/45/EC

LABELING SYMBOLS: None

RISK R-PHRASES: None

SAFETY S-PHRASES:

S2 : Keep out of the reach of children.

SUMMARY OF ACUTE HAZARDS

None known.

ROUTE OF EXPOSURE, SIGNS AND SYMPTOMS

INHALATION

None

EYE CONTACT

May cause slight eye irritation.

SKIN CONTACT

None

INGESTION

May cause nausea and vomiting. Not expected to produce toxic effects unless large amounts are ingested.

SUMMARY OF CHRONIC HAZARDS

None known.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

None known.

Section 3 -- COMPOSITION/INFORMATION ON INGREDIENTS

% by WT CAS No. INGREDIENT UNITS
None as defined by OSHA Hazard Communication Standard 29 CFR 1910.1200.

Section 4 -- FIRST AID MEASURES

If INHALED: N/A
If on SKIN: Wash with water.
If in EYES: Flush eyes with large amounts of water.
Get medical attention if irritation persists.
If SWALLOWED: If swallowed, call a physician immediately. Only induce vomiting at the instruction of a physician. Never give anything by mouth to an unconscious person.

Section 5 -- FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

Non-flammable. Use agents appropriate for surrounding fires.
SPECIAL FIRE FIGHTING PROCEDURES: Wear self-contained full face piece breathing apparatus and other protective clothing.
UNUSUAL FIRE AND EXPLOSION HAZARDS: None

Section 6 -- ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Use absorbent materials to prevent footing hazard and to contain.

Section 7 -- HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Keep container closed and upright when not in use.
OTHER PRECAUTIONS: Avoid prolonged or repeated contact with skin or clothing. Empty containers may contain residues; treat as if full and observe all products precautions. Do not reuse empty containers.

Section 8 -- EXPOSURE CONTROLS/PERSONAL PROTECTION

RESPIRATORY PROTECTION (SPECIFY TYPE): None required.
VENTILATION - LOCAL EXHAUST: Acceptable
SPECIAL: N/A
MECHANICAL (GENERAL): Acceptable
OTHER: N/A
PROTECTIVE GLOVES: Wear rubber gloves.
EYE PROTECTION: Safety glasses (ANSI Z-87.1 or equivalent)
OTHER PROTECTIVE CLOTHING OR EQUIPMENT: N/A
WORK/HYGIENIC PRACTICES: Where use can result in skin contact, wash exposed areas thoroughly before eating, drinking, smoking, or leaving work area. Launder contaminated clothing before reuse.

Section 9 -- PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT: 212 F (100 C) @ 760mm Hg
SPECIFIC GRAVITY (H2O = 1): 0.99
VAPOR PRESSURE (mm Hg): < 1 @ 68 F (20 C)
MELTING POINT: N/A
VAPOR DENSITY (AIR = 1): >1
EVAPORATION RATE (ETHYL ACETATE = 1): <1
APPEARANCE/ODOR: Blue Liquid / Mild Odor
SOLUBILITY IN WATER: Soluble
VOLATILE ORGANIC COMPOUNDS(VOC)Content (Theoretical Percentage By Weight): <0% or <0 g/L
FLASH POINT: None
LOWER EXPLOSION LIMIT: N/D
UPPER EXPLOSION LIMIT: N/D

Section 10 -- STABILITY AND REACTIVITY

STABILITY: Stable
CONDITIONS TO AVOID: None
INCOMPATIBILITY (MATERIALS TO AVOID): None
HAZARDOUS DECOMPOSITION PRODUCTS: CO, CO, and fragmented hydrocarbons.
HAZARDOUS POLYMERIZATION: Will not occur.

Section 11 -- TOXICOLOGY INFORMATION

CHRONIC HEALTH HAZARDS

No ingredient in this product is an IARC, NTP or OSHA listed carcinogen.

TOXICOLOGY DATA
Ingredient Name

N/A
=====

Section 12 -- Ecological Information

ECOLOGICAL DATA
Ingredient Name
N/A

Section 13 -- DISPOSAL CONSIDERATIONS

Waste Classification: Non-regulated liquid waste.
Disposal Method: Dispose of in accordance with local, state and federal
regulations.
=====

Section 14 -- TRANSPORTATION INFORMATION

DOT: Non-regulated
OCEAN (IMDG): Non-regulated
AIR (IATA): Non-regulated
WHMIS (CANADA): Non-regulated
=====

Section 15 -- REGULATORY INFORMATION

REGULATORY DATA
Ingredient Name

N/A

SARA 313	No
TSCA Inventory	All ingredients listed
CERCLA RQ	N/A
RCRA Code	N/A

=====

Section 16 -- OTHER INFORMATION

LABELING SYMBOLS: None
RISK R-PHRASES: None
SAFETY S-PHRASES:
S2 : Keep out of the reach of children.

This document is prepared pursuant to 91/155/EEC ISO 11014-1. The information
herein is given in good faith, but no warranty, expressed or implied is made.
Consult RectorSeal for further information: (713) 263-8001

MATERIAL SAFETY DATA SHEET

SECTION 1 – PRODUCT INFORMATION

Supplier Name

The Mill-Rose Company
7310 Corporate Blvd.
Mentor, OH 44060
(800) 321-3598

Emergency Telephone No.

(800) 321-3598

Date Prepared: April 1, 2012

Replaces: January 1, 2008

Product

Blue Monster Thread Sealant

Trade Names and Synonyms

Blue Monster Industrial Grade Compound

SECTION 2 – HAZARDOUS INGREDIENTS/IDENTITY

Ingredients	OSHA PEL	ACGIH TLV	Other Limits	Percent
Isopropanol (CAS#67-63-0)	400 ppm	400 ppm	N/A	5-10%
Ethylene glycol (CAS#111-76-2)	50 ppm	25 ppm	N/A	13-18%

SECTION 3 – PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point – 180⁰F

Vapor Pressure (mm Hg) - .88

Vapor Density (Air=1) - >1

Solubility in Water - Slight

Appearance and odor – Blue paste – mild odor

Specific Gravity (H₂O=1) - 1.41

Melting Point: N/A

Evaporation Rate (Butyl Acetate=1): .6

VOC Content – 310 g/l

SECTION 4 – FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method Used): 82⁰F (28⁰C) ASTM Method D93-80

Flammable Limits: 921⁰F (494⁰C) Ignition temperature LEL – 0.9% UEL – 6.0%

Extinguishing Media: Carbon dioxide or dry chemical or water

Special Fire Fighting Procedure: None

Unusual Fire and Explosion Hazards – Contact with strong oxidizers may cause fires or explosions.
Carbon monoxide may be released.

SECTION 5 – REACTIVITY DATA

Stability: Stable

Incompatibility (Materials to avoid): Liquid oxygen systems, liquid sodium, gaseous fluorine, strong oxidizers

Hazardous Decomposition or Byproducts: N/A

Hazardous Polymerization: Will not occur

SECTION 6 - HEALTH HAZARD DATA

Route(s) of Entry: Inhalation: Yes Skin: Yes Ingestion: Yes

Health Hazards (Acute & Chronic) – N/A

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

Signs and Symptoms of Exposure – Inhalation: Possible dizziness if used in confined area. Skin: May cause mild irritation to sensitive skin.

Medical Condition Generally Aggravated by Exposure: - None known

Emergency and First Aid Procedure – Eye contact: Flush eyes with water. Skin: Wash skin with soap and water. Wash clothing before reuse. Inhalation: Move to well ventilated area. Ingestion: Call a physician.

SECTION 7 – PRECAUTIONS FOR SAFE HANDLING AND USE

Steps to Be Taken in case Material is Released or Spilled:

Normal good housekeeping procedures.

Waste Disposal Method: Disposable to be done in accordance with Local, State and Federal regulations.

Precautions to be taken in Handling and Storage: Store away from heat or open flame. Close container after use.

Other precautions: Wear protective gloves to prevent possible skin absorption and dermatitis. Keep out of reach of children.

SECTION 8 – CONTROL MEASURES

Respiratory Protection (Specify Type): Avoid breathing of fumes. If used in a confined area, a respirator may be necessary.

Ventilation – Local exhaust: Normal ventilation is adequate

Special: N/A

Mechanical (General): N/A

Other: N/A

Protective Gloves: May be necessary for sensitive skin.

Eye Protection: Keep out of eyes. Wear protective goggles where necessary.

Other Protective Clothing or Equipment: N/A

Work/Hygienic Practices: Wash up with soap and water after use.

NOTICE FROM THE MILL-ROSE COMPANY

The information in this Material Safety Data Sheet (MSDS) relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process. We believe that the information contained herein is current as of the date of the MSDS. Since use of this information and these opinions and the conditions of use of the product are not within the control of The Mill-Rose Company, it is the user's obligation to determine the conditions of safe use of the product.

Material Safety Data Sheet

Section 1 Product and Company Identification

Product Name:

COOL GEL

Revision #: 1.7

Date Prepared: November 3, 1998

Date Revised: May 26, 2010

Manufacturer:

LA-CO INDUSTRIES, Inc. *Markal Co.*

1201 Pratt Blvd.

Elk Grove Village, IL, USA 60007-5746

Information Telephone: 847-956-7600

Emergency Telephone: Call CHEMTREC

USA 800-424-9300

International (Call Collect) 1-703-527-3887

Chemical Formula: Mixture

CAS No.: Not Applicable. Derivation: Not Applicable.

Synonyms: Not Applicable.

General Use: Heat Dissipating Gel

Supplier/Importer:

Section 2 Composition/Information on Ingredients

Ingredient

CAS No.

%

No Hazardous ingredients according to the U.S. OSHA Hazard Communication Standard 29 CFR 1910.1200, Canadian WHMIS regulations, British CHIP2 regulation 6, and Australian Regulations for the Control of Workplace Hazardous Substances.

Section 3 Hazards Identification

EMERGENCY OVERVIEW: No adverse effects expected.

POTENTIAL HEALTH EFFECTS

Primary Exposure Routes:

Acute Effects

Eyes: Not applicable.

Skin: Not applicable.

Ingestion: Not applicable.

Inhalation: Not applicable.

Chronic Effects

Eyes: Not applicable.

Skin: Not applicable.

Ingestion: Not applicable.

Inhalation: Not applicable.

Carcinogenicity: Not Applicable.

Target Organ Effects: Not Applicable.

Medical Conditions Aggravated by Long-Term

Exposure: Not Determined.

Other Information: Not Applicable..

Section 4

First Aid

Eye Contact: Not applicable.

Skin Contact: Not applicable.

Ingestion: Not applicable.

Inhalation: Not applicable.

Other Information: Not applicable.

Section 5

Fire Fighting Measures

Flash Point (method): Not applicable.

Autoignition Temperature: Not applicable.

LEL: Not applicable. UEL: Not applicable.

Product Name:

COOL GEL

Revision #: 1.7

Date Prepared: November 3, 1998

Date Revised: May 26, 2010

Flammability Classification: Not applicable.
Extinguishing Media: Not applicable.
Hazardous Combustion Products: Not applicable.
Unusual Fire or Explosion Hazards: Not applicable.
Fire-Fighting Instructions/Equipment: Not applicable.

Section 6 Accidental Release Measures

Use recommended personal protective equipment (see Section 8). Wipe or scoop up.

Section 7 Handling and Storage

Handling Precautions: Not applicable.
Storage Requirements: Not applicable.

Section 8 Exposure Controls/Personal Protection

Eye/Face Protection: Suitable for related activities where this product is used.
Skin/Hand Protection: Suitable for related activities where this product is used.
Respiratory Protection: Suitable for related activities where this product is used.
Other Equipment: Suitable for related activities where this product is used.
Engineering Controls: Suitable for related activities where this product is used.
Administrative Controls: Users of this product must be properly trained and qualified in its use.
Other Information: None Known.

Section 9 Physical and Chemical Properties

Appearance/Physical State: Clear gel.
Odor: None.
Odor Threshold (ppm): Not applicable.
Specific Gravity (H₂O = 1): 1
pH: 7
Melting Point: 32°F / 0°C
Boiling Point: 212°F / 100°C
Vapor Pressure (mm Hg at 20°C): Negligible
Vapor Density (Air = 1): <1
Evaporation Rate (n-BuAc=1): <<1
V.O.C.: 0%(w/w), 0%(v/v), 0 lbs./gal.(U.S.), 0 kg/l, 0 g/l (SCAQMD)

Solubility - Water: Soluble
- **Fat:** Insoluble
Coefficient of Water/Oil Solubility: >>1
Partition Coefficient (n-octanol/water): <<1
Flash Point (method): (see Section 5)
Autoignition Temperature: (see Section 5)
Flammability Classification: (see Section 5)
Unusual Fire or Explosion Hazards: (see Section 5)
Oxidizing Properties: Not Applicable.
Other Information: None.

Section 10 Stability and Reactivity

Chemical Stability: Stable
Hazardous Polymerization: Will Not Occur
Conditions to Avoid: None Known.
Chemicals to Avoid: Any water reactive chemicals.
Hazardous Decomposition Products (non-thermal): Not Determined.

Section 11 Toxicological Information

Product Name:

COOL GEL

Revision #: 1.7

Date Prepared: November 3, 1998

Date Revised: May 26, 2010

Sensitization to Product: Not Applicable.

Irritancy of Product: Not applicable.

Reproductive Toxicity: Not Applicable.

Teratogenicity: Not Applicable.

Mutagenicity: Not Applicable.

Further hazard information, if applicable, may be found in Section 3. Toxicological information regarding individual ingredients, if applicable, may be found in Section 2.

Section 12

Ecological Information

Mobility: Not applicable.

Degradability: Not applicable.

Accumulation: Not applicable.

Ecotoxicity: Not applicable.

Other Adverse Effects: Not applicable.

Section 13

Disposal Considerations

Dispose of in accordance with all applicable regulations.

The conditions of handling, storage, and use of this product are beyond our control and may be beyond our knowledge. For this and other reasons, LA-CO Industries, Inc. 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

D.O.T. (U.S.)

Proper Shipping Name: Not Regulated.

Hazard Class or Division: Not Regulated.

Hazard Label: Not Regulated.

I.D. Number: Not Regulated.

TDG (Canada): Not Regulated.

IATA: Not Regulated.

ICAO: Not Regulated.

IMO: Not Regulated.

Australian Code for the Transport of Dangerous Goods

Dangerous Goods Class and Subsidiary Risk: Not Regulated.

Section 15

Regulatory Information

Footnotes for Section 2:

- 1 Subject to the reporting requirements of SARA Title III, Section 313.
- 2 Appears on the California Safe Drinking Water and Toxic Enforcement Act (Prop. 65) Substances List.
- 3 Appears on the Massachusetts Substances List.
- 4 Appears on the New Jersey Right-To-Know Hazardous Substances List.
- 5 Appears on the Pennsylvania Hazardous Substances List.
- 6 Appears on the Canadian WHMIS Ingredient Disclosure List.

U.S.A.

OSHA Hazard Status: This product is not considered to be hazardous as defined by the U.S. OSHA HCS (29 CFR 1910.1200).

EPA SARA sec. 311/312 Hazard Categories: Not Applicable.

Toxic Substances Control Act (TSCA): All ingredients contained in this product are listed on the U.S. EPA TSCA Chemical Substance Inventory.

HMIS Rating: Health 0, Flammability 0, Reactivity 0

NFPA Rating: Health 0, Flammability 0, Reactivity 0

Product Name:

COOL GEL

Revision #: 1.7

Date Prepared: November 3, 1998

Date Revised: May 26, 2010

CANADA

WHMIS Status: This product is not considered to be hazardous as defined by Canadian WHMIS Controlled Products Regulations.

WHMIS Rating: None.

WHMIS Risk Phrases: None.

WHMIS Precautionary Statements: None.

Domestic Substances List (DSL): All ingredients contained in this product are listed on the Canadian EPA (CEPA) Domestic Substances List (DSL).

E.U.

European Inventory of Existing Chemical Substances (EINECS): All ingredients contained in this product are listed on the European Inventory of Existing Chemical Substances (EINECS).

Categories of Danger (Labeling Information): None.

Risk (R) Phrases: None.

Safety (S) Phrases: None.

AUSTRALIA

Worksafe Australia Status: This product is not classified as hazardous according to criteria of Worksafe Australia.

HAZCHEM Code: None allocated.

Poisons Schedule Number: None allocated.

Further regulatory information regarding individual ingredients, if applicable, may be found in Section 2.

This product has been classified in accordance with the hazard criteria of the U.S. OSHA Hazard Communication Standard, the Canadian WHMIS Controlled Products Regulations, the British CHIP2 regulation 6, and the Australian NMRCWHS. This MSDS contains the information required by the above regulations and conforms to ANSI Z400.1-1993.

Section 16

Other Information

MSDS Prepared By: Director of Chemical Safety

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.



MATERIAL SAFETY DATA SHEET

Complies with OSHA Hazard Communication
And WHIMS Standard 29 CFR 1910-1200

Print Date: 05/01/10

Product Name: COPPER LOCK™

Product Number: 10-800

I - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Manufacturer: ComStar International Inc.

Tel: 718-445-7900, 800-328-0142

Address: 20-45 128th Street, College Point, NY 11356

Fax: 718-353-5998

Chemical Name: Blended Formula

Synonym(s): None

II - COMPOSITION/INFORMATION ON INGREDIENTS

<u>COMPONENTS</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>	<u>CAS NO.</u>
POLYGLYCOL DIMETHACRYLATE	N/A	60 - 100	25852-47-5
SACCHARIN	N/A	1-5	81-07-2
SILICA, AMORPHOUS, FUMED, CRYSTALLINE-FREE	10 mg/m ³ TWA	1-5	112945-52-5
CUMENE HYDROPEROXIDE	N/A	1-5	80-15-9

III - HAZARDS IDENTIFICATION

HMIS Hazard Ratings: Health – 1, Flammability – 1, Chemical Reactivity – 1

NFPA Hazard Ratings: Health – 1, Flammability – 0, Chemical Reactivity – 1

NOTE: HMIS and NFPA ratings involve data and interpretations that may vary from company to company. They are intended only for rapid, general identification of the magnitude of the specific hazard. To deal adequately with the safe handling of this material, all the information contained in this MSDS must be considered.

IV - FIRST-AID MEASURES

Inhalation: If symptomatic, move to fresh air. Get medical attention if symptoms persist.

Eyes: Immediately flush with plenty of water for at least 15 minutes. Get medical attention.

Skin: Remove contaminated clothing, wash affected skin with soap and water immediately. Get medical attention if symptoms occur.

Ingestion: Drink plenty of water. Get immediate medical attention.

V - FIRE FIGHTING MEASURES

Extinguishing Media: Dry chemical, water spray, fog, carbon dioxide (CO₂)

Special Fire Fighting Procedures: Wear self-contained breathing apparatus and protective clothing.

Hazardous Combustion Products: Oxides of carbon, sulfur and nitrogen. Irritating organic vapors.

Unusual Fire and Exposure Hazards: This product will not burn by itself.

VI - ACCIDENTAL RELEASE MEASURES

Absorb spill with vermiculite or other inert material, then place in a container for chemical waste.

For Large Spills: Flush spill area with water spray. Prevent run-off from entering drains, sewers, or streams, collect run-off.

VII - HANDLING AND STORAGE

Personal Precautionary Measures: Avoid contact with eyes and skin. Wash thoroughly after handling. Do not breathe vapors or fumes.

Prevention of Fire and Explosion: Keep from contact with oxidizing materials, alkalis and acids. Store away from heat, sunlight and moisture.

VIII - EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Limits:

ACGIH Threshold Limit Value (TLV): see section II

OSHA (USA) Permissible Exposure Limit (PEL): see section II

Ventilation: Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. Supplementary local exhaust ventilation, closed systems, or respiratory protection may be needed in special circumstances such as poorly ventilated spaces, evaporation from large surfaces, spraying, heating, etc.

Respiratory Protection: If engineering controls do not maintain airborne concentrations to an acceptable level, a NIOSH approved respirator must be worn.

Respirator Type: Organic vapor. If respirators are used, a program should be instituted to assure Compliance with OSHA Standard 29 CFR 1910.134.

Eye Protection: Wear safety glasses with side shields (or goggles) and a face shield.

Skin Protection: It is a good industrial hygiene practice to minimize skin contact.

Recommended Decontamination Facilities: Eye bath, washing facilities

IX - PHYSICAL AND CHEMICAL PROPERTIES

Color: red

Odor: mild

Odor Threshold: not available

Specific Gravity (H₂O = 1): N/A

Vapor Pressure at 70° F: < 5 mm Hg at 80° F

Vapor Density (Air = 1): N/A

Evaporation Rate (n-butyl acetate = 1): N/A

Volatile Fraction by Weight: N/A

Boiling Point: > 300° F

Melting Point: N/A

Viscosity at 25° C (77° F): N/A

Solubility in Water: Slight

Octanol/ Water Partition Coefficient: not available

Flash Point: > 200° F (CCC)

Lower Explosive Limit 135° C (275° F): N/A

Upper Explosive Limit 199°C (390° F): N/A

Auto Ignition Temperature (ASTM D 2155): N/A

X - STABILITY AND REACTIVITY

Stability: Product is considered stable.

Incompatibility: Strong oxidizers, strong reducing agents, alkalis and oxygen scavengers.

Hazardous Polymerization: will not occur

XI - TOXICOLOGICAL INFORMATION

Inhalation: Low hazard for usual industrial handling by trained personnel.

Eyes: Causes irritation.

Skin: Low hazard for usual industrial handling by trained personnel, see label warnings.

Ingestion: Not considered a carcinogen by NTP, IARC or OSHA

Acute Toxicity Data:

Oral LD-50 (rat): greater than 10,000 mg/kg.

Inhalation LC-50: not available

XII - ECOLOGICAL INFORMATION

Introduction: Leaks should be stopped. Spills should be contained and cleaned up immediately. Large liquid spills should be removed by using a vacuum truck. Solid spills should be scooped up and placed in approved containers for disposal. The spill area should then be flushed with water followed by liberal covering of sodium bicarbonate. All clean-up material should be removed and placed in approved containers, labeled and stored in a safe place to await proper treatment or disposal. Spills on areas other than pavement, e.g., dirt or sand, may be handled by removing the affected soils and placing in approved containers. Persons performing clean-up work should wear adequate personal protective equipment and clothing. Spills or releases should be reported, if required, to the appropriate local, state and federal regulatory agencies.

XIII - DISPOSAL CONSIDERATIONS

Discharge, treatment, or disposal may be subject to national, state, or local laws. Check with state and local officials before disposal.

XIV - TRANSPORT INFORMATION

DOT (USA) Status: not regulated

TDG (Canada) Status: not regulated

Air – International Civil Aviation Organization (ICAO)

ICAO Status: Check with air freight forwarder for ruling.

Sea – International Maritime Dangerous Goods (IMDG)

IMDG Status: not regulated

XV - REGULATORY INFORMATION

This document has been prepared in accordance with the MSDS requirements of the OSHA Hazard Communication Standard 29 CFR 910.1200.

OSHA hazardous chemical(s): trade secret (blended formula).

Material(s) known to the State of California to cause cancer: none

Material(s) known to the State of California to cause adverse reproductive effects: none

Massachusetts Substance List: none.

New Jersey Workplace Hazardous Substance List: none

Pennsylvania Hazardous Substance List: none

This document has been prepared in accordance with the MSDS requirements of the WHMIS Controlled Products Regulation.

WHMIS (Canada) Ingredient Disclosure List: trade secret (blended formula).

WHMIS (Canada) Status: not listed.

WHMIS (Canada) controlled material(s): not listed.

WHMIS (Canada) Hazard Classification: not classified.

Carcinogenicity Classification (components present at 0.1% or more): None

International Agency for Research on Cancer (IARC): Not listed

American Conference of Governmental Industrial Hygienist (ACGIH): Not listed

National Toxicology Program (NTP): not listed

Occupational Safety and Health Administration (OSHA): Not listed

Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund

Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372: None.

SARA (U.S.A.) Sections 311 and 312 hazard classification(s): Not listed.

NOTE: *The opinions expressed are those of qualified experts within ComStar International Inc. We believe that the information contained is current as of the date of the Material Safety Data Sheet. Since the use of this information and of these opinions and the conditions of the use of the product are not within the control of ComStar International Inc., it is the user's obligation to determine the conditions of safe use of the product.*

MATERIAL SAFETY DATA SHEET

H	F	R	P
0	0	0	B

HMIS CODES:

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 Administrator
(Non-Mandatory Form)
Form Approved OMB No. 1218-0072

IDENTITY (AS USED ON LABEL AND LIST):

FLOW-AIDE SYSTEM DESCALER (FLOW)

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's Name:
J.C. WHITLAM MANUFACTURING COMPANY

Emergency Telephone Number:
(330) 334 - 2524

Address (Number, Street, City, State, and ZIP Code):
200 WEST WALNUT STREET

Telephone Number for Information:
(330) 334 - 2524

P.O. BOX 380

Date Prepared: January 14, 2010

WADSWORTH, OHIO 44282-0380

Signature of Preparer (optional):

Section II - Hazardous Ingredients/Identity Information

HAZARDOUS COMPONENTS (SPECIFIC CHEMICAL IDENTITY: COMMON NAME(S))	OSHA PEL	ACGIH TLV	OTHER LIMITS Recommended	% (optional)
Hydrogen Chloride, Aqueous	5ppm	5ppm	N/A	<10

Section III - Physical/Chemical Characteristics

Boiling Point:	213°F (101°C)	Specific Gravity (H2O =1):	1.045
Vapor Pressure (mm Hg):	30 Torr.	Melting Point:	N/A
Vapor Density (AIR = 1):	>1	Evaporation Rate (Butyl Acetate = 1):	Slow

Solubility in Water: Miscible

Appearance and Odor: Dark Liquid; Roasted Almonds

Section IV - Fire and Explosion Hazard Data

Flash Point (Method Used): No flash point, extinguishes flame	Flammable Limits:	LEL: N/A	UEL: N/A
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Extinguishing Media: DOES NOT SUPPORT COMBUSTION.

Special Fire Fighting Procedures: WATER WILL CONTROL, OR CO2/DRY CHEMICALS.

Unusual Fire and Explosion Hazards: NON-COMBUSTIBLE OR EXPLOSIVE. BREATHING APPARATUS RECOMMENDED.

Section V - Reactivity Data		FLOW-AIDE SYSTEM DESCALER		FLOW
Stability:	Unstable:		X	Conditions to Avoid: EXCESSIVE HEATING
	Stable:			

Incompatibility (Materials to Avoid): STRONG CAUSTICS

Hazardous Decomposition or Byproducts: NONE

Hazardous Polymerization:	May Occur:		X	Conditions to Avoid: EXCESSIVE HEATING
	Will Not Occur:			

Section VI - Health Hazard Data

Route(s) of Entry:	Inhalation? YES	Skin? YES	Ingestion? YES
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Health Hazards (Acute and Chronic): NONE KNOWN

Carcinogenicity:	NTP? NO	IARC Monographs? NO	OSHA Regulated? NO
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Signs and Symptoms of Exposure: ADVERSE EFFECTS ON HUMAN HEALTH ARE NOT EXPECTED FROM THE FLOW-AIDE SOLUTION.

Medical Conditions Generally Aggravated by Exposure: N/A

Emergency and First Aid Procedures: INGESTION: DO NOT INDUCE VOMITING. DRINK MILK OR EGG WHITES AS DIRECTED BY PHYSICIAN. EYE CONTACT: RINSE EXCESSIVELY WITH WATER. CONTACT PHYSICIAN. SKIN CONTACT: RINSE EXCESSIVELY WITH WATER. CONTACT PHYSICIAN.

Section VII - Precautions for Safe Handling and Use

Steps to Be Taken in Case Material is Released or Spilled: RINSE WITH COPIOUS AMOUNTS OF WATER TO DILUTE. IF NECESSARY, SODIUM BICARBONATE MAY ALSO BE USED TO SOAK UP AND NEUTRALIZE LIQUID.

Waste Disposal Method: EXPENDED OR USED MATERIAL MAY BE DISPOSED OF DOWN SEWER WITH WATER FLUSH. MATERIAL IS BIODEGRADABLE.

Precautions to Be Taken in Handling and Storing: PRESERVE INTEGRITY OF CONTAINER. MAINTAIN TEMPERATURE BETWEEN 10°F-180°F.

Other Precautions: FLOW-AIDE IS DESIGNED TO BE USED BY ITSELF OR DILUTED WITH WATER AND WATER ONLY. SOME ADVERSE REACTIONS MAY OCCUR WITH SOME ALLOYS OF ALUMINUM, MAGNESIUM, AND/OR ZINC.

Section VIII - Control Measures

Respiratory Protection (Specify Type): NONE

Ventilation:	Local Exhaust: N/A	Special: N/A
	Mechanical (General): RECOMMENDED	Other: N/A
Protective Gloves: NEOPRENE GLOVES	Eye Protection: CHEMICAL OR SAFETY GOGGLES	

Other Protective Clothing or Equipment: AS RECOMMENDED BY PLANT SAFETY DEPARTMENT. TO PREVENT STAINING OF CLOTHES, WEAR AN APRON.

Work/Hygienic Practices: WASH HANDS BEFORE EATING OR USING TOILET FACILITIES.

MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Product Name: Free All

Product Code: RE 12 06-334-12

Product Type: Aerosol

Product Use: Lubricant

Manufacturer: Federal Process Corporation
Address: 4520 Richmond Road
Cleveland, Ohio 44128

Revision Date: 6/29/2011
Phone: 1-800-846-7325

NOTE: The information contained herein is accurate to the best of our knowledge. We do not suggest or guarantee that any hazards listed herein are the only ones which exist. Federal Process Corporation provides this information as guidance for providing personal protection to your employees. The user has the sole responsibility to determine the suitability of the materials for any use and the manner of use contemplated. The user must meet all applicable safety and health standards. Federal Process Corporation provides this information as guidance for providing personal protection to your employees.

2. Composition / Information on Ingredients

Ingredients	CAS #	Percent
Carbon Dioxide	124-38-9	.1-10 %
Petroleum Oil	64742-52-5	25-35%
Oleic Acid	112-80-1	25-35%
Methy Isobutyl Ketone	108-10-1	
25-35%		

3. Hazards Identification

CAUTION! CONTENTS UNDER PRESSURE EXTREMELY FLAMMABLE

Odor/Appearance: Clear to yellow amber mist as dispensed from aerosol can.

Potential health effects

Routes of exposure: Skin, eyes, inhalation, ingestion.

Eye Contact:

May cause immediate or delayed irritation. Irritation may show up as redness and/or swelling.
May cause corneal damage.

Skin Contact:

Repeated or prolonged contact with skin may produce redness, irritation and/or dryness. May cause or aggravate dermatitis or other existing skin condition.

Inhalation:

Inhalation of vapors or spray mist may cause headaches, and/or nose and throat irritation.

Ingestion:

Ingestion may cause irritation to the mouth, esophagus, and/or stomach.

Signs or Overexposure:

Irritation of eyes, nose, throat, digestive tract.

Pre-existing Conditions Aggravated:

Skin and respiratory disorders. Alcoholism, kidney, liver, cardiovascular and nervous system

4. First Aid Measures

Eye Contact:

Flush with warm water for 15 minutes. Seek medical attention.

Skin Contact:

Wash with soap and water. Remove any contaminated clothing and launder before reusing. If irritation persists, seek medical attention.

Inhalation:

Remove exposed individual to fresh air, protecting yourself. Restore breathing if necessary. Contact a physician.

Ingestion:

Immediately give the person two large glasses of water. Do not induce vomiting. Get medical attention immediately. **DO NOT GIVE AN UNCONCIOUS OR CONVULSING PERSON ANYTHING BY MOUTH!**

5. Fire Fighting Measures

Flash Point: Flash point 77 degrees F (closed cup)

Flammable limits in air, % by volume:

Upper: No Information

Lower: No Information

Extinguishing Media:

Dry chemical, carbon dioxide, halon, or foam is recommended. Water spray may be used to cool containers or structures. Halon may decompose into toxic materials and carbon dioxide will displace oxygen, take proper precautions when using these materials.

Unusual Fire & Explosion Hazards:

This material may be ignited by extreme heat, sparks, flames or other ignition sources (static electricity). Vapors are heavier than air and will collect in low areas (sewers) or travel considerable distances. If containers are not cooled in a fire, they may rupture and ignite.

Special Fire Fighting Procedures:

At elevated temperatures (over 130F) aerosol container may burst, vent or rupture; use equipment or shielding to protect personnel. Cooling exposed containers with streams of water may be helpful. Emergency responders should wear self-contained breathing apparatus. Wear other protective gear as conditions warrant. Keep unauthorized people out and try to contain spills or leaks if it can be done safely. Material will float on water, avoid spreading the fire.

6. Accidental Release Measures

Spill or Leak Instructions

Contain spill with dikes of soil or nonflammable absorbent to minimize contaminated area. Avoid run-off into storm sewers and ditches leading to waterways. If required, notify state and local authorities. Place leaking containers in well-ventilated area. Clean up small spills by using a nonflammable absorbent or flushing sparingly with water. Contain larger spills with nonflammable diking or absorbent. Clean up by vacuuming or sweeping.

Keep unnecessary people away; isolate hazard area and deny entry. Stay upwind; keep out of low areas. Assess the spill situation, as the spill may not evolve large amounts of hazardous airborne contaminants in many outdoor spill situations. It may be advisable in some cases to simply monitor the situation until spilled product is removed.

7. Handling and Storage

Handling:

Store below 120°F in cool, dry area, out of direct sunlight and away from strong oxidizers. Do not puncture or burst. Use in accordance with good work place practices. Use with adequate ventilation. Keep containers closed when not in use. Always open containers slowly to allow any excess pressure to vent. Avoid breathing vapor. Avoid contact with eyes, skin or clothing. Wash thoroughly with soap and water after handling. Decontaminate soiled clothing thoroughly before re-use. Destroy contaminated leather clothing.

Empty containers may contain residues from the product. Treat empty containers with the same precautions as the material last contained. Do not cut, weld or apply heat to empty containers Do not incinerate

Storage:

Store in a cool, dry area, away from heat or direct sunlight. Keep containers closed when not in use. Do not store with incompatible materials

8. Exposure Controls / Personal Protection

Protective Equipment:

Use synthetic gloves if necessary to prevent excessive skin contact. Do not wear contacts and always use ANSI approved safety glasses or splash shield.

Engineering Controls:

General or dilution ventilation is frequently sufficient as the sole means of controlling employee exposure. Local ventilation is usually preferred. Use a NIOSH approved respirator if ventilation is not adequate to maintain exposures below TLV levels.

Respiratory Protection:

Use adequate ventilation to maintain exposure limits. If the exposure limits of the products or any of its components is exceeded, an approved organic vapor mask should be used (consult your safety equipment supplier). Above 1000 ppm, an approved self-contained breathing apparatus or airline respirator with full face-piece is required

Other Suggested Equipment:

Eye wash station and emergency showers should be available. Spill containment equipment should be available.

Discretion Advised:

Federal Process Corporation. takes no responsibility for determining what measures are required for personal protection in any specific application. The general information should be used with discretion.

Exposure guidelines:

Ingredients	CAS #	Percent	Exposure Limits
Carbon Dioxide	124-38-9	.1-10 %	OSHA (PEL) 5000 ppm ACGIH TLV 5000
Petroleum Oil	64742-52-5	25-35%	TVL Oil Mist 5mg/m3
Oleic Acid	112-80-1	25-35 %	None established
Methy Isobutyl Ketone	108-10-1	25-35 %	OSHA (TWA) 50 ppm ACGIH (TLV) 50 ppm

9. Physical and Chemical Properties

Boiling Point: NA
Vapor Density: >1(Air=1)
Odor/Appearance: Clear to yellow/amber mist as dispensed from aerosol can.
Evaporation Rate: Ether = 1 Slower

Specific Gravity: <1
Water Solubility: Emulsifies

10. Stability and Reactivity

Stability: Stable
Conditions to Avoid: Heat, spark, and open flame
Incompatibility: Strong-Oxidizing Agents
Hazardous Decomposition: Combustion will produce Carbon Monoxide, Carbon Dioxide and nitrogen-oxygen compounds.
Hazardous Polymerization: Will not occur

11. Toxicological Information

Component Toxicological Information:

112-80-1

Oral Rat LD50: 25gm/kg
IrritationRabbit 500 mg open mild

108-10-1

Oral	Rat	LD50	2080 mg/kg
Inhalation	Rat	LC50	100g/m3
Acute dermal toxicity	Rabbit	LD50	1600 mg/kg
Skin irritation	rabbit		Mild Skin Irritation
Eye	Rabbit		Moderate eye irritation

No data

12. Ecological Information

N/A

13. Disposal Considerations

Do not puncture or burn containers. Give empty, leaking, or full containers to disposal service equipped to handle and dispose of aerosol (pressurized) containers. Dispose of spilled material in accordance with state and local regulations for waste that is non-hazardous by Federal definition. Note that this information applies to the material as manufactured; processing, use, or contamination may make this information inappropriate, inaccurate, or incomplete.

Note that this handling and disposal information may also apply to empty containers, liners and rinsate. State or local regulations or restrictions are complex and may differ from federal regulations. This information is intended as an aid to proper handling and disposal; the final responsibility for handling and disposal is with the owner of the waste. See Section 9 - Physical and Chemical Properties.

14. Transport Information

Ground (US DOT) Consumer Commodity
Class ORM-D, ERG 126
Or
Aerosols (limited quantity),
Class 2.1, ERG 126

AIR (IAIA)
Consumer Commodity, Class 9, UN/ID 8000, Packing 1900, Authorization: Limited Quantity
Vessel
Aerosol (Limited Quantity), class 2, UN No 1950

15. Regulatory Information

Environmental Regulations

SARA 311/312:

Immediate (x) Delayed () Fire (x) Reactive () Sudden Release of Pressure (x)

Section 313

This product contains:

Methy Isobutyl Ketone	108-10-1	25-35 %
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All the chemicals used in this product are TSCA listed.
Check with your local regulators to be sure all local regulations are met.

16. Other Information

Hazard ratings This information is intended solely for the use of individuals trained in the NFPA and/or HMIS systems.

NFPA Level 3 Aerosol

:

HMIS Health: 1 Flammability: 4 Reactivity: 0

:

RATING: 4-EXTREME 3-HIGH 2-MODERATE 1-SLIGHT 0-INSIGNIFICANT

Note:

For industrial use only. The information contained herein is accurate to the best of our knowledge. We do not suggest or guarantee that any hazards listed herein are the only ones which exist. Federal Process Corporation makes no warranty of any kind, express or implied, concerning the safe use of this material in your process or in combination with other substances. Effects can be aggravated by other materials and/or this material may aggravate or add to the effects of other materials. This material may be released from gas, liquid, or solid materials made directly or indirectly from it. User has the sole responsibility to determine the suitability of the materials for any use and the manner of use contemplated. User must meet all applicable safety and health standards. Possession of an MSDS does not indicate that the possessor of the MSDS was a purchaser or user of the subject product.

Material Safety Data Sheet

Section 1 Chemical Product and Company Identification

Manufacturer

Federal Process Corporation
4520 Richmond Rd
Cleveland OH 44128
1-800-846-7325

Emergency Telephone Number

Call Chemtrec at 1-800-424-9300

Product Identifier:

Gasoil® Soft Set

Product Description:

Complex Mixture

Product Use:

Pipe Thread Sealant

Section 2 Hazards Identification

HMIS HAZARD IDENTIFICATION

Health 1 Flammability 2 Reactivity 0

EMERGENCY OVERVIEW:

PHYSICAL HAZARDS:

May become slippery if spilled on floor.

ACUTE HEALTH EFFECTS:

May cause severe eye irritation but no lasting damage.
Transient irritation may result from extended skin contact.
If ingested may cause gastrointestinal discomfort.

CHRONIC HEALTH EFFECTS:

No chronic health effects are expected

Section 3 Composition/Information on Ingredients

Additional information is provided in the Regulatory section of this document for Sara 313, California Proposition 65, and various state right-to-know laws.

Contains:		OSHA PEL	ACGIH TLV	% by wt.
Polytetrafluorethylene	CAS # 9002-84-0	NA	NA	.5-2
Titanium Dioxide	CAS# 13463-67-7	15mg/m3	10mg/m3	1-6
Talc	CAS# 14807-96-6	2mg/m3	.1mg/m3	48-59
Isopropyl Alcohol	CAS # 67-63-0	400 ppm	400 ppm	5-12
Ethylene Glycol Butyl Ether	CAS # 111-76-2	50 ppm	25 ppm	5-10

Polytetrafluorethylene can emit toxic vapors at temperatures exceeding 700 F see Section 5 for additional information.

Section 4 First Aid Measures

INHALATION: Not expected to become a significant inhalation hazard under normal conditions of use.

INGESTION: If ingested this product is not expected to cause an acute reaction. Give two glasses of water to drink. Consult a physician. Never give anything by mouth to an unconscious person.

EYES: Flush eyes immediately with large quantities of water, lifting the lower and upper lids occasionally. If irritation persists consult a physician.

SKIN: Flush the contaminated skin and wash with soap and water. If irritation develops or persists seek medical advice. Contaminated clothing should be washed prior to re-use.

Section 5 Fire Fighting Measures

EXTINGUISHING MEDIA: Foam (Aqueous Film Forming Foam) , dry chemical, carbon dioxide.

SPECIAL PRECAUTIONS: Water fog may be used to cool the containers, however frothing may occur if water is sprayed directly into burning containers. Do not enter fire area without proper protection.

HAZARDOUS COMBUSTION PRODUCTS: The thermal decomposition products are highly dependant upon the combustion conditions. Noxious or toxic fumes may be generated, some of which may be toxic or irritating. Polytetrafluorethylene can emit toxic fumes when heated to temperatures exceeding 700 F. The maximum operating temperature for this compound is around 500 F. At these temperatures PTFE does not undergo any thermal degradation and is not hazardous.

FLASH POINT: 90 F

LOWER FLAMMABLE LIMIT: 1.1%

UPPER FLAMMABLE LIMIT: 10.6%

AUTOIGNITION TEMPERATURE: Not established

Section 6 Accidental Release Measures

Isolate the spill area, and keep unnecessary people away. Absorb spilled material with a suitable inert absorbent material. Collect and dispose of the contaminated absorbent in accordance with local state and federal laws.

Section 7 Handling and Storage

HANDLING: Avoid contact with the skin and eyes. Use good industrial hygiene practices. Provide adequate ventilation. Keep containers closed. No smoking or open flame in storage areas. Wash hands after using product and before eating, drinking, smoking or using toilet facilities.

STORAGE: Store in a dry place away from moisture, excessive heat and sources of ignition. Avoid storage near food to prevent food contamination. Avoid freezing.

Section 8 Exposure Controls/Personal Protection

VENTILATION REQUIREMENTS: In confined areas local and general ventilation should be provided to maintain airborne concentrations below permissible exposure limits. Ventilation systems must be designed according to approved engineering standards.

PERSONAL PROTECTION:

EYE: The wearing of protective glasses is recommended when handling any chemicals.

GLOVES: If prolonged or repeated skin contact is expected wear gloves as appropriate to prevent skin contact. Butyl and nitrile rubbers are recommended.

RESPIRATORY: Provide adequate ventilation in the workplace.

OTHER: Eating and smoking should be prohibited in areas where product is handled. Nothing replaces good personal hygiene. Coveralls or other full body clothing shall be worn and properly laundered after use. Workers should wash hands, face, neck, and arms before eating, drinking, or smoking.

Section 9 Physical and Chemical Properties

PHYSICAL STATE:	Light Blue Paste
ODOR AND APPEARANCE:	Slight Odor
LOWEST BOILING POINT:	180 F
VAPOR PRESSURE:	0.88 mm/hg
VAPOR DENSITY:	1
WATER SOLUBILITY:	Slight
% ORGANIC VOLATILES:	27.0% w/w (2.249 lbs/gallon)= (269.16 grams/liter)
pH	N.A.
SPECIFIC GRAVITY	1.53 (12.74 LBS/GALLON)

Section 10 Stability and Reactivity

STABILITY: Stable under normal conditions.
REACTIVITY: Unknown

Section 11 Toxicological Information

Exposure limits: The limits reported in Section 2 of this document refer to other physical forms of the ingredients present in this product. Limits for the formulated product have not been determined.

None of the components of this product have been reported as carcinogenic by NTP, OSHA or IARC.

Section 12 Ecological Information

General: No special Procedures

Section 13 Disposal Information

Waste materials must be disposed of in accordance with your municipal, state, provincial and federal regulations. Contact the proper authorities for specific instructions. Avoid incineration.

Section 14 Transportation Information

CONTAINERS UNDER 1 GALLON:

DOT HAZARD CLASS: Consumer Commodity ORM-D
PROPER SHIPPING NAME: Consumer Commodity ORM-D
IDENTIFICATION NUMBER: Not Listed
Refer to CFR 49 Section 173.150 for specific requirements.

CONTAINERS 1 GALLON AND OVER::

DOT HAZARD CLASS: FLAMMABLE LIQUIDS N.O.S. (contains Alcohol) 3
PROPER SHIPPING NAME: FLAMMABLE LIQUIDS N.O.S. (contains Alcohol) 3
IDENTIFICATION NUMBER: UN1993,III
DO NOT SHIP BY AIR

Section 15 Regulatory Information

Listed below are chemical substances subject to supplier notification requirements. The percentages, when present represent average values.

CAS Number	SARA	WHMIS	CA-65
111-76-2	X		X
Ethylene Glycol Butyl Ether			

CA-65 - Chemical substances identified under the California Proposition 65 column are known to the State of California to cause cancer and/or reproductive toxicity.

TSCA STATUS: All ingredients of this product comply with the requirements of the US EPA Toxic Substances Control Act.

Section 16 Other

Prepared by R. L.

The above information and recommendations are believed accurate and reliable. Because it is not possible to anticipate all conditions of use, additional safety precautions may be required. The Federal Process Company makes no warranty, either express or implied, including merchantability and fitness.

USER RESPONSIBILITY: Each user should read and understand this information and incorporate it into individual site safety programs in accordance with applicable hazard communication standards and regulations.

MATERIAL SAFETY DATA SHEET

HMIS CODES:

H	F	R	P
3	0	2	D

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 Administrator
(Non-Mandatory Form)
Form Approved OMB No. 1218-0072

IDENTITY (AS USED ON LABEL AND LIST):

GREEN-BLASTER DRAIN OPENER **GB**

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's Name:
J.C. WHITLAM MANUFACTURING COMPANY

Emergency Telephone Number:
CHEM-TEL (800) 255-3924

Address (Number, Street, City, State, and ZIP Code):
200 WEST WALNUT STREET

Telephone Number for Information:
(330) 334 - 2524

P.O. BOX 380

Date Prepared: January 26, 2012

WADSWORTH, OHIO 44282-0380

Signature of Preparer (optional):

Section II - Hazardous Ingredients/Identity Information

HAZARDOUS COMPONENTS (SPECIFIC CHEMICAL IDENTITY: COMMON NAME (S))	OSHA PEL	ACGIH TLV	OTHER LIMITS Recommended	% (optional)
SODIUM HYDROXIDE (CAUSTIC SODA) [CAS#1310-73-2]	2 mg/m ³	2 mg/m ³	N/A	
ALUMINUM* *ON TOXIC LIST (SECTION 313 OF SARA)	15 mg/m ³	15 mg/m ³		
SHIPPING INFORMATION FOR 1 AND 2 POUND CONTAINERS: DEPARTMENT OF TRANSPORTATION (DOT): CONSUMER COMMODITY ORM-D				
SHIPPING INFORMATION FOR 6 POUND CONTAINERS AND ALL FOREIGN SHIPMENTS: SODIUM HYDROXIDE SOLID 8,UN1823,PGII CORROSIVE SOLID				

Section III - Physical/Chemical Characteristics

Boiling Point:	2536° F (1391.11°C) @ 760 mm Hg	Specific Gravity (H2O =1):	2.130 @ 68°F (20°C)
Vapor Pressure (mm Hg):	N/A	Melting Point:	318°C
Vapor Density (AIR = 1):	N/A	Evaporation Rate (Butyl Acetate = 1):	N/A

Solubility in Water: 100%

Appearance and Odor: ODORLESS - GRAY-GREEN BEADS

Section IV - Fire and Explosion Hazard Data

Flash Point (Method Used): N/A	Flammable Limits:	LEL: N/A	UEL: N/A
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Extinguishing Media: THIS MATERIAL IS NOT COMBUSTIBLE. CONTACT WITH WATER MAY GENERATE ENOUGH HEAT TO IGNITE COMBUSTIBLE MATERIALS. FOAM, CARBON DIOXIDE, OR DRY CHEMICAL MAY BE USED.

Special Fire Fighting Procedures: WEAR FULL PROTECTIVE CLOTHING. AVOID DIRECT CONTACT OF THIS PRODUCT WITH WATER AS THIS CAN CAUSE VIOLENT EXOTHERMIC REACTION.

Unusual Fire and Explosion Hazards: THIS MATERIAL MELTS AT 318°C. MOLTEN MATERIAL WILL REACT VIOLENTLY WITH WATER. IT WILL REACT WITH METALS SUCH AS ALUMINUM, TIN AND ZINC TO PRODUCE FLAMMABLE HYDROGEN GAS.

Section V - Reactivity Data		GREEN-BLASTER DRAIN OPENER		GB
Stability:	Unstable:		Conditions to Avoid:	
	Stable:	X		
Incompatibility (Materials to Avoid): AVOID CONTACT WITH WATER. THIS WILL PRODUCE AN EXOTHERMIC REACTION. AVOID CONTACT WITH LEATHER, WOOL, ACIDS, ORGANIC HALOGEN AND ORGANIC NITRO COMPOUNDS.				
Hazardous Decomposition or Byproducts: NONE KNOWN				
Hazardous Polymerization:	May Occur:		Conditions to Avoid:	
	Will Not Occur:	X		
Section VI - Health Hazard Data				
Route(s) of Entry:	Inhalation? YES	Skin? YES	Ingestion? YES	
Health Hazards (Acute and Chronic): ACUTE: CORROSIVE TO ALL BODY TISSUES WITH WHICH IT COMES INTO CONTACT. MAY CAUSE SUPERFICIAL DISTINCTION OF SKIN. INHALATION OF DUST, SPRAY, OR MIST MAY DAMAGE RESPIRATORY TRACT TISSUES AND INCREASE SUSCEPTIBILITY TO RESPIRATORY ILLNESS. CHRONIC: NONE KNOWN.				
Carcinogenicity:	NTP? NO	IARC Monographs? NO	OSHA Regulated? NO	
Signs and Symptoms of Exposure: BURNING OF SKIN, EYES, MOUTH, ETC.				
Medical Conditions Generally Aggravated by Exposure: NONE KNOWN				
Emergency and First Aid Procedures: EYES: FLUSH WITH WATER FOR AT LEAST 15 MINUTES AND CALL PHYSICIAN. INHALED: REMOVE TO FRESH AIR. IF BREATHING IS DIFFICULT, HAVE TRAINED PERSON ADMINISTER OXYGEN. IF RESPIRATION STOPS, GIVE MOUTH-TO-MOUTH RESUSCITATION. SWALLOWED: DO NOT INDUCE VOMITING. DRINK LARGE QUANTITIES OF WATER FOLLOWED BY CITRUS FRUIT JUICE. SEEK MEDICAL ATTENTION IMMEDIATELY. SKIN: FLUSH WITH WATER FOR 15 MINUTES, THEN VINEGAR AND WATER SOLUTION. SEEK MEDICAL ATTENTION IMMEDIATELY.				
Section VII - Precautions for Safe Handling and Use				
Steps to Be Taken in Case Material is Released or Spilled: AVOID BREATHING FUMES. LEAKS SHOULD BE STOPPED. SPILLS SHOULD BE CONTAINED AND CLEANED UP IMMEDIATELY. LIQUID SPILLS SHOULD BE REMOVED WITH A VACUUM TRUCK. SOLID SPILLS SHOULD BE SCOOPED AND PLACED IN APPROVED CONTAINERS FOR DISPOSAL. THE SPILL AREA SHOULD THEN BE FLUSHED WITH LARGE AMOUNTS OF WATER.				
Waste Disposal Method: DISPOSE OF WASH WATER AND SPILL BY-PRODUCTS ACCORDING TO FEDERAL, STATE, AND LOCAL REGULATIONS.				
Precautions to Be Taken in Handling and Storing: AVOID CONTACT WITH SKIN, EYES, OR CLOTHING. STORE IN A COOL DRY PLACE. AVOID CONTACT WITH MOISTURE.				
Other Precautions: KEEP OUT OF REACH OF CHILDREN. PRODUCT IS CORROSIVE TO TIN, ALUMINUM, ZINC, AND ALLOYS CONTAINING THESE METALS AND WILL REACT VIOLENTLY WITH THESE METALS IN POWDER FORM.				
Section VIII - Control Measures				
Respiratory Protection (Specify Type): NIOSH/MSHA APPROVED RESPIRATOR WHERE DUST, MIST OR SPRAY MAY BE GENERATED.				
Ventilation:	Local Exhaust: PROVIDE SUFFICIENT MECHANICAL VENTILATION TO MAINTAIN LEVELS BELOW TLV(S).		Special: N/A	
	Mechanical (General): N/A		Other: N/A	
Protective Gloves: WEAR RESISTANT GLOVES SUCH AS: NEOPRENE, NITRILE RUBBER, POLYVINYL CHLORIDE, POLYETHYLENE.		Eye Protection: CHEMICAL SPLASH GOGGLES AND FACE SHIELD.		
Other Protective Clothing or Equipment: PROTECTIVE CLOTHING - RUBBER APRON WHEN HANDLING.				
Work/Hygienic Practices: WASH THOROUGHLY AFTER HANDLING OR CONTACT. EXPOSURE CAN CAUSE BURNS WHICH ARE NOT IMMEDIATELY PAINFUL OR VISIBLE. KEEP CONTAINER CLOSED.				

MATERIAL SAFETY DATA SHEET

SECTION 1 – PRODUCT INFORMATION

Supplier Name

The Mill-Rose Company
7310 Corporate Blvd.
Mentor, OH 44060

Emergency Telephone No.

(800) 321-3598

Date Prepared: April 1, 2012

Replaces: June, 2007

Product

Oxygen Thread Seal Tape

Trade Names and Synonyms

Green Full-Density Oxygen Tape

SECTION 2 – HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

Ingredients	OSHA PEL	CAS Number	ACGIH TLV
Polytetrafluoroethylene	N/A	9002-84-0	N/A
Petroleum Solvent	N/A	64742-47-8	N/A
Pigment	N/A	N/A	N/A

SECTION 3 – PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point: N/A

Vapor Pressure (mm Hg): N/A

Vapor Density (air=1): N/A

Solubility in Water: Insoluble

Specific Gravity (H₂O=1): 2.1

Melting Point: N/A

Evaporation Rate (Butyl Acetate=1): N/A

Appearance and Odor: Green polymeric film/odorless

SECTION 4 – FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method Used): N/A

Flammable Limits: N/A

Extinguishing Media: Any standard medium

Special Fire Fighting Procedures: Combustible solid. Will burn if in contact with flame.

Combustion ceases when flame is removed. Decomposition on heating above 260°C results in the emission of toxic fumes. Fire fighters to wear self contained breathing apparatus if there is a risk of exposure to products of combustion and decomposition.

Unusual Fire and Explosion Hazards: Toxic fumes given off above 260°C

SECTION 5 – REACTIVITY DATA

Conditions to Avoid: Temperatures above 260°C without adequate ventilation

Incompatibility (Materials to avoid): Alkali metals, extremely potent oxidizers (e.g. fluorine, chlorine tri- fluoride), 80% NaOH or KOH, metal hydrides such as boranes (e.g. B₂H₆), aluminum chloride, ammonia, certain amines (R-NH₂) imines (RH-NH) and 70% nitric acid at temperatures near 260°C.

SECTION 6 – HEALTH HAZARD DATA

Health Hazards (Acute):

Swallowed: No adverse effect known

Eye: See above

Skin: See above

Inhalation: The material is not normally an inhalation hazard at temperatures below 260°C as it remains an inert solid. However, exposure to thermal degradation products at temperatures above 260°C or fumes from tobacco contaminated with particles of the product may result in “Polymer Fume Fever” or influenza-like symptoms (chills, headaches, difficulty in breathing and fever). Symptoms may appear several hours after exposure but will disappear within 24-48 hours. There are exposure standards for decomposition products.

	TWA		STEL	
HF*	ppm	mg/m3	ppm	mg/m3
	3	2.6	Peak Limitation	

*Measured as an inspirable fraction

Carbonyl Fluoride is the main decomposition product formed when PTFE is subjected to extended exposure at normal sintering temperatures (400°C). Carbonyl fluoride is immediately converted to highly corrosive hydrogen fluoride in the presence of moist air.

Toxicity: No LD50 data is available on PTFE. No toxicity was observed in male/female rats when fed PTFE (up to 25%) for 90 days. Local sarcomas were induced in mice and rats implanted subcutaneously or intraperitoneally with PTFE. However, this is not considered relevant to normal industrial usage.

Carcinogenicity: PTFE has been classified by the International Agency for Research into Cancer as a group III agent. As such it is not classifiable as to its carcinogenicity to humans.

Emergency and First Aid Procedures: Remove victim from exposure - avoid becoming a casualty. Allow patient to assume most comfortable position and keep warm. Keep at rest until fully recovered. If breathing labored and patient cyanotic (blue) ensure that airways are clear and have a qualified person give oxygen through a facemask. If breathing has stopped apply artificial respiration at once. In event of cardiac arrest apply external cardiac massage. Seek medical advice.

SECTION 7 – PRECAUTIONS FOR SAFE HANDLING AND USE

Steps to be taken in case material is released or spilled: Sweep up

Waste Disposal Method: Burning is not recommended. Comply with local regulations

Precautions to be taken in Handling and Storage: Keep away from flames. Store below 260°C

SECTION 8 – CONTROL MEASURES

Respiratory Protection: No special controls are necessary if used within recommended operation temperatures (ie -260°C to +260°C).

Ventilation: See above

Protective Gloves: See above

Eye Protection: See above

Other Protective Clothing or Equipment: See above

Work/Hygienic Practices: See above

NOTICE FROM THE MILL-ROSE COMPANY

The information in this Material Safety Data Sheet (MSDS) relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process. We believe that the information contained herein is current as of the date of the MSDS. Since use of this information and these opinions and the conditions of use of the product are not within the control of The Mill-Rose Company, it is the user's obligation to determine the conditions of safe use of the product.

MATERIAL SAFETY DATA SHEET

HMIS CODES:

H	F	R	P
0	2	0	A

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 Administrator
(Non-Mandatory Form)
Form Approved OMB No. 1218-0072

IDENTITY (AS USED ON LABEL AND LIST):
"BLUE MAGIC" IG
INDUSTRIAL GRADE PIPE THREAD COMPOUND

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's Name:
J.C. WHITLAM MANUFACTURING COMPANY

Emergency Telephone Number:
(330) 334 - 2524

Address (Number, Street, City, State, and ZIP Code):
200 WEST WALNUT STREET

Telephone Number for Information:
(330) 334 - 2524

P.O. BOX 380

Date Prepared: January 26, 2012

WADSWORTH, OHIO 44282-0380

Signature of Preparer (optional):

Section II - Hazardous Ingredients/Identity Information

HAZARDOUS COMPONENTS (SPECIFIC CHEMICAL IDENTITY: COMMON NAME(S))	OSHA PEL	ACGIH TLV	OTHER LIMITS Recommended	% (optional)
ISOPROPYL ALCOHOL [CAS#67-63-0]	400	400	N/A	5 - 10
ETHYLENE GLYCOL [CAS#111-76-2]	50	25	N/A	13 - 18

Section III - Physical/Chemical Characteristics

Boiling Point:	N/A	Specific Gravity (H ₂ O =1):	1.41
Vapor Pressure (mm Hg):	.88	Melting Point:	N/A
Vapor Density (AIR = 1):	> 1	Evaporation Rate (Butyl Acetate = 1):	.6
Solubility in Water:	SLIGHT	VOC Content:	310 g/l

Appearance and Odor: BLUE PASTE - MILD ODOR

Section IV - Fire and Explosion Hazard Data

Flash Point (Method Used): 82°F (28°C) ASTM METHOD D93-80	Flammable Limits: 921°F (494°C) IGNITION TEMPERATURE	LEL: 0.9%	UEL: 6.0%
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Extinguishing Media: CARBON DIOXIDE OR DRY CHEMICAL OR WATER.

Special Fire Fighting Procedures: NONE

Unusual Fire and Explosion Hazards: CONTACT WITH STRONG OXIDIZERS MAY CAUSE FIRES OR EXPLOSIONS. CARBON MONOXIDE MAY BE RELEASED.

Section V - Reactivity Data	“BLUE MAGIC” INDUSTRIAL GRADE PIPE THREAD COMPOUND	IG
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Stability:	Unstable:		Conditions to Avoid: N/A
	Stable:	X	

Incompatibility (Materials to Avoid):
LIQUID OXYGEN SYSTEMS, LIQUID SODIUM, GASEOUS FLUORINE, STRONG OXIDIZERS.

Hazardous Decomposition or Byproducts:

Hazardous Polymerization:	May Occur:		Conditions to Avoid: N/A
	Will Not Occur:	X	

Section VI - Health Hazard Data

Route(s) of Entry:	Inhalation? YES	Skin? YES	Ingestion? YES
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Health Hazards (Acute and Chronic): N/A

Carcinogenicity:	NTP? NO	IARC Monographs? NO	OSHA Regulated? NO
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Signs and Symptoms of Exposure:
INHALATION: POSSIBLE DIZZINESS IF USED IN CONFINED AREA. SKIN: MAY CAUSE MILD IRRITATION TO SENSITIVE SKIN.

Medical Conditions Generally Aggravated by Exposure: NONE KNOWN

Emergency and First Aid Procedures:
EYE CONTACT: FLUSH EYES WITH WATER. SKIN CONTACT: WASH SKIN WITH SOAP AND WATER. WASH CLOTHING BEFORE REUSE. INHALATION: MOVE TO WELL VENTILATED AREA. INGESTION: CALL PHYSICIAN.

Section VII - Precautions for Safe Handling and Use

Steps to Be Taken in Case Material is Released or Spilled:
NORMAL GOOD HOUSEKEEPING PROCEDURES.

Waste Disposal Method:
DISPOSE OF ACCORDING TO FEDERAL, STATE, AND LOCAL REGULATIONS.

Precautions to Be Taken in Handling and Storing:
STORE AWAY FROM HEAT OR OPEN FLAME. CLOSE CONTAINER AFTER USE.

Other Precautions:
WEAR PROTECTIVE GLOVES TO PREVENT POSSIBLE SKIN ABSORPTION AND DERMATITIS. KEEP OUT OF REACH OF CHILDREN.

Section VIII - Control Measures

Respiratory Protection (Specify Type):
AVOID BREATHING OF FUMES. IF USED IN A CONFINED AREA, A RESPIRATOR MAY BE NECESSARY.

Ventilation:	Local Exhaust: NORMAL VENTILATION IS ADEQUATE.	Special: N/A
	Mechanical (General): N/A.	Other: N/A

Protective Gloves: MAY BE NECESSARY FOR SENSITIVE SKIN.	Eye Protection: KEEP OUT OF EYES. WEAR PROTECTIVE GOGGLES WHERE NECESSARY.
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Other Protective Clothing or Equipment: N/A

Work/Hygienic Practices: WASH UP WITH SOAP AND WATER AFTER USE.

MATERIAL SAFETY DATA SHEET

SECTION 1: IDENTIFICATION

Product identifier : **LIQUID WRENCH LUBRICANT**

Product Use : Lubricant

Chemical Family : Mixture.

Manufacturer part no. : L212C

Supplier's name and address:
Radiator Specialty Co., of Canada
 1711 Aimco Blvd.
 Mississauga, ON, Canada
 L4W 1H7

Manufacturer's name and address:
 Refer to Supplier

Information Telephone # : (905) 625-9117 (Monday - Friday, 9AM - 5PM)

24 Hr. Emergency Tel # : 613-996-6666 (CANUTEC)

SECTION 2 - HAZARDS IDENTIFICATION

Classification : WHMIS information: This product is a WHMIS Controlled Product. It meets one or more of the criteria for a controlled product provided in Part IV of the Canadian Controlled Products Regulations (CPR).
 WHMIS classification:
 Class A (Pressurized containers);
 Class B5 (Flammable Aerosols);
 Class D1A (Materials Causing Immediate and Serious Toxic Effects, Very Toxic Material);
 Class D2A (Materials Causing Other Toxic Effects, Very Toxic Material);
 Class D2B (Materials Causing Other Toxic Effects, Toxic Material).

Labelling: Phrases recommended to appear on a supplier label, can be found in Section 15. WHMIS symbols required on a supplier label:



Emergency Overview : Light yellow to brown liquid. Aerosol spray. Vanilla odour. **WARNING!** Flammable aerosol. Contents under pressure. Container may explode if heated. **POISON!** May be fatal if inhaled. Harmful or fatal if absorbed through the skin. May cause nausea, vomiting, headache and other central nervous system effects. May be harmful if swallowed. May be an aspiration hazard. Can enter the lungs and cause damage. May cause respiratory irritation. Causes skin and eye irritation. Contains material which can cause damage to the blood system, the liver and the kidneys. Possible birth defect hazard - contains material that may cause birth defects, based on animal data. Possible cancer hazard - contains material which may cause cancer.

POTENTIAL HEALTH EFFECTS:

Signs and symptoms of short-term (acute) exposure

- Inhalation** : May cause irritation to the nose, throat and upper respiratory tract. Symptoms may include pain, headache, nausea, vomiting, dizziness, drowsiness and other central nervous system effects. Inhalation in very high concentrations may result in blood system effects, such as red blood cell fragility. Liver and kidney injuries may occur. May result in unconsciousness and possibly death.
- Skin** : May cause moderate to severe skin irritation. May be absorbed and cause symptoms similar to those for inhalation. If product is sprayed directly on skin, symptoms of frostbite may be experienced including numbness, prickling and itching.
- Eyes** : May cause moderate to severe irritation. If product is sprayed directly into the eyes, could cause freezing of the eye.
- Ingestion** : Not an expected route of entry under normal conditions of use. However, if the product is sprayed directly into mouth and large amounts of the liquid concentrate are swallowed, it may cause irritation to the mouth, throat and stomach. Symptoms may include pain, headache, nausea, vomiting, dizziness, drowsiness and other central nervous system effects. Ingestion may cause symptoms similar to inhalation. May be an aspiration hazard. Aspiration into the lungs during swallowing or subsequent vomiting may cause chemical pneumonitis, which can be fatal.

Effects of long-term (chronic) exposure

: Prolonged skin contact may cause dermatitis (rash), characterized by red, dry, itching skin. Repeated absorption may cause disorder of central nervous system, liver, kidneys and blood.

Carcinogenic status

: Possible cancer hazard. See TOXICOLOGICAL INFORMATION, Section 11.

Additional health hazards

: May cause birth defects. See TOXICOLOGICAL INFORMATION, Section 11.

Potential environmental effects

: See ECOLOGICAL INFORMATION, Section 12.

SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

<u>Ingredients</u>	<u>CAS #</u>	<u>Wt.%</u>
Hydrotreated heavy naphthenic distillate	64742-52-5	30.00 - 60.00
Petroleum hydrocarbon	8052-41-3	30.00 - 60.00
1,2,4-Trimethylbenzene	95-63-6	1.00 - 5.00
2-butoxyethanol	111-76-2	1.00 - 5.00
Carbon dioxide	124-38-9	1.00 - 5.00
1,3,5-Trimethylbenzene	108-67-8	1.00 - 5.00
Xylene	1330-20-7	1.00 - 5.00

SECTION 4 - FIRST AID MEASURES**Inhalation**

: Immediately remove person to fresh air. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen by qualified medical personnel only. Seek immediate medical attention/advice.

Skin contact

: Remove/Take off immediately all contaminated clothing. Wash exposed area thoroughly with soap and water for at least 15 minutes. Obtain medical attention immediately.

Eye contact

: Immediately flush eyes with plenty of water for at least 15 minutes. Seek immediate medical attention/advice.

Ingestion

: Seek immediate medical attention/advice. Do not induce vomiting. If vomiting occurs spontaneously, keep victim's head lowered (forward) to reduce the risk of aspiration. Never give anything by mouth to an unconscious person.

Notes For Physician

: Treat symptomatically. This product is a CNS depressant.

SECTION 5 - FIRE FIGHTING MEASURES**Fire hazards/conditions of flammability**

: Flammable aerosol. Will ignite when exposed to heat, flame and other sources of ignition. Closed containers are contained under pressure and may explode if exposed to excess heat for a prolonged period of time. Product may float, and be re-ignited at the water's surface.

Oxidizing properties

: None known.

Explosion data: Sensitivity to mechanical impact / static discharge

: Aerosols are sensitive to mechanical impact. Contents under pressure. May be sensitive to static discharge.

Suitable extinguishing media

: Dry chemical, foam, carbon dioxide and water fog.

Special fire-fighting procedures/equipment

: Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face piece operated in positive pressure mode. Move containers from fire area if safe to do so. Shield personnel to protect from venting or rupturing containers. Water spray may be useful in cooling equipment exposed to heat and flame.

Hazardous combustion products

: Carbon oxides; nitrogen oxides (NOx); Sulphur oxides; Phosphorus compounds; Polycyclic aromatic hydrocarbons; other unidentified organic compounds.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

- Personal precautions** : All persons dealing with clean-up should wear the appropriate protective equipment including self-contained breathing apparatus. Keep all other personnel upwind and away from the spill/release. Restrict access to area until completion of clean-up.
- Environmental precautions** : Ensure spilled product does not enter drains, sewers, waterways, or confined spaces.
- Spill response/cleanup** : Ventilate area of release. Remove all sources of ignition. Use only non-sparking tools and equipment in the clean-up process. Contain and absorb spilled liquid with non-combustible, inert absorbent material (e.g. sand), then place absorbent material into a container for later disposal (see Section 13). Notify the appropriate authorities as required.
- Prohibited materials** : Do not use combustible absorbents, such as sawdust.

SECTION 7 - HANDLING AND STORAGE

- Safe Handling procedures** : Use in a well-ventilated area. Wear suitable protective equipment during handling. Do not breathe vapours or spray mist. Avoid contact with skin, eyes and clothing. Keep away from heat, sparks, and open flames. No sparking tools should be used. Avoid contact with incompatible materials. Do not puncture or incinerate. Wash thoroughly after handling.
- Storage requirements** : Store in a cool, dry, well-ventilated area. Keep away from direct sunlight. Storage area should be clearly identified, clear of obstruction and accessible only to trained and authorized personnel. Inspect periodically for damage or leaks. No smoking in the area. No smoking in the area.
- Incompatible materials** : Strong oxidizing agents; Acids; Bases; Reactive metals.
- Special packaging materials** : Always keep in containers made of the same materials as the supply container.

SECTION 8 - EXPOSURE CONTROLS AND PERSONAL PROTECTION

Exposure Limits

<u>Ingredients</u>	<u>ACGIH TLV</u>		<u>OSHA PEL</u>	
	<u>TWA</u>	<u>STEL</u>	<u>PEL</u>	<u>STEL</u>
Hydrotreated heavy naphthenic distillate	5 mg/m ³ (As 'Oil mist, mineral')	N/Av	5 mg/m ³ (As 'Oil mist, mineral')	N/Av
Petroleum hydrocarbon	100 ppm	N/Av	500 ppm	N/Av
1,2,4-Trimethylbenzene	*25 ppm	N/Av	*25 ppm (final rule limit)	N/Av
2-butoxyethanol	20 ppm	N/Av	50 ppm (skin)	N/Av
Carbon dioxide	5000 ppm	30,000 ppm	5000 ppm	N/Av
1,3,5-Trimethylbenzene	*25ppm	N/Av	*25ppm (final rule limit)	N/Av
Xylene	100 ppm	150 ppm	100 ppm	N/Av

*Note: The OSHA PEL's and ACGIH TLV's listed above for 1,2,4-Trimethylbenzene and 1,3,5-Trimethylbenzene are for 'Trimethylbenzene (mixed isomers)'.

- Ventilation and engineering measures** : Use in a well-ventilated area. Use general or local exhaust ventilation to maintain air concentrations below recommended exposure limits.
- Respiratory protection** : If the TLV is exceeded, a NIOSH/MSHA-approved respirator is advised. Advice should be sought from respiratory protection specialists.
- Skin protection** : Impervious gloves must be worn when using this product. Advice should be sought from glove suppliers.
- Eye / face protection** : Chemical splash goggles are recommended.
- Other protective equipment** : Depending on conditions of use, an impervious apron should be worn. An eyewash station and safety shower should be made available in the immediate working area.
- General hygiene considerations** : Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink, smoke or use cosmetics while working with this product. Remove and wash contaminated clothing before re-use. Wash with soap and water after handling.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

- Physical state** : Liquid aerosol. **Appearance** : Light yellow to brown liquid.

Odour	: Vanilla odour.	Odour threshold	: N/Av
pH	: N/Av		
Boiling point	: > 149°C (concentrate)	Specific gravity	: 0.85 @ 20°C
Melting/Freezing point	: N/Av	Coefficient of water/oil distribution	: N/Av
Vapour pressure (mmHg @ 20° C / 68° F)	: N/Av	Solubility in water	: Insoluble.
Vapour density (Air = 1)	: N/Av	Evaporation rate (n-Butyl acetate = 1)	: N/Av
Volatile organic Compounds (VOC's)	: N/Av	Volatiles (% by weight)	: < 50%
Flash point	: 39°C (concentrate)		
Flash point Method	: TCC	Auto-ignition temperature	: Not available.
Lower flammable limit (% by vol.)	: N/Av	Upper flammable limit (% by vol.)	: N/Av
Flame Projection Length	: 15 - 100 cm	Flashback observed	: N/Av
Absolute pressure of container	: N/Av	Viscosity	: N/Av
General Information	: No additional information.		

Section 10: STABILITY AND REACTIVITY

Stability and reactivity	: Stable under the recommended storage and handling conditions prescribed.
Hazardous polymerization	: Hazardous polymerisation does not occur.
Conditions to avoid	: Avoid heat and open flame. Keep away from direct sunlight. Ensure adequate ventilation, especially in confined areas.
Materials To Avoid And Incompatibility	: See Section 7 (Handling and Storage) for further details.
Hazardous decomposition products	: None known, refer to hazardous combustion products in Section 5.

SECTION 11 - TOXICOLOGICAL INFORMATION

Target organs	: Eyes, skin, respiratory system, central nervous system, blood system, liver, brain and kidneys.
Routes of exposure	: <i>Inhalation</i> : YES <i>Skin Absorption</i> : YES <i>Skin & Eyes</i> : YES <i>Ingestion</i> : YES
Irritancy	: May cause moderate to severe skin and eye irritation.
Toxicological data	: There is no available data for the product itself, only for the ingredients. See below for individual ingredient acute toxicity data.

Ingredients	LC₅₀(4hr)	LD₅₀	
	inh, rat	(Oral, rat)	(Rabbit, dermal)
Hydrotreated heavy naphthenic distillate	2180mg/m ³ (mist)	> 5000 mg/kg	> 2000 mg/kg
Petroleum hydrocarbon	> 5500 mg/m ³	> 5000 mg/kg	> 3000 mg/kg
1,2,4-Trimethylbenzene	18,000 mg/m ³	5000 mg/kg	> 3160 mg/kg
2-butoxyethanol	450 ppm	530 mg/kg	400 - 500 mg/kg
Carbon dioxide	N/Av	N/Av (gas)	N/Av (gas)
1,3,5-Trimethylbenzene	24,000mg/m ³	23,000 mg/kg	N/Av
Xylene	6350 ppm	4300 mg/kg	> 5 mL/kg

Carcinogenic status	: Contains 2-Butoxyethanol. 2-Butoxyethanol is classified as a confirmed animal carcinogen by ACGIH (Group A3). No other components are classified as carcinogenic by IARC, ACGIH, OSHA or NTP.
Reproductive effects	: Not expected to cause reproductive effects.
Teratogenicity	: This product contains Xylene. Xylene may cause fetotoxic effects at doses which are not maternally toxic, based on animal data.
Mutagenicity	: Not expected to be mutagenic in humans.
Epidemiology	: None known or reported by the manufacturer.

- Sensitization to material** : Not expected to be a skin or respiratory sensitizer.
- Synergistic materials** : None known or reported by the manufacturer.
- other important hazards** : CNS depression may result from extreme exposures.
- Conditions aggravated by overexposure** : None known or reported by the manufacturer.


SECTION 12 - ECOLOGICAL INFORMATION

- Ecotoxicity** : The ecological characteristics of this product have not been fully investigated. The product should not be allowed to enter drains or water courses, or be deposited where it can affect ground or surface waters.
- Mobility** : No data is available on the product itself.
- Persistence** : No data is available on the product itself.
- Bioaccumulation potential** : No data is available on the product itself.
- Other Adverse Environmental effects** : No data is available on the product itself.

SECTION 13 - DISPOSAL CONSIDERATIONS

- Handling for Disposal** : Handle waste according to recommendations in Section 7. Do not puncture or incinerate containers.
- Methods of Disposal** : Dispose of in accordance with federal, provincial and local hazardous waste laws.

SECTION 14: TRANSPORT INFORMATION

Regulatory Information	UN Number	Shipping Name	Class	Packing Group	Label
TDG	UN1950	AEROSOLS	2.1	none	
TDG Additional information	May be shipped as LIMITED QUANTITY when transported in containers no larger than 1.0 Litre, in packages not exceeding 30 kg gross mass. Under the TDGR, refer to Section 1.17 for additional exemption information, if shipping under this exemption.				

SECTION 15 - REGULATORY INFORMATION

Labelling:

WARNING! Flammable aerosol. Contents under pressure. Container may explode if heated.
 POISON! May be fatal if inhaled. Harmful or fatal if absorbed through the skin. May be harmful or fatal if swallowed in large amounts. May cause respiratory irritation. May cause nausea, vomiting, headache and other central nervous system effects. Material is an aspiration hazard. Can enter the lungs and cause damage. Causes skin and eye irritation. Contains material which can cause damage to the blood system, the liver and the kidneys. Possible birth defect hazard - contains material that may cause birth defects, based on animal data. Possible cancer hazard - contains material which may cause cancer.

PRECAUTIONS: Use in a well-ventilated area. Wear suitable protective equipment during handling. Do not breathe vapours or spray mist. Avoid contact with skin, eyes and clothing. Keep away from heat, sparks, and open flames. No sparking tools should be used. Avoid contact with incompatible materials. Do not puncture or incinerate containers. Wash thoroughly after handling. Store in a cool, dry, well-ventilated area away from sources of heat, ignition and sunlight

FIRST AID: If inhaled, move to fresh air. If breathing stopped, begin artificial respiration. If breathing is difficult, give oxygen by qualified medical personnel only. For skin contact, immediately remove contaminated clothing then wash thoroughly with soap and water for at least 15 minutes. For eye contact, flush with running water for at least 15 minutes. If ingested, do not induce vomiting. If vomiting occurs spontaneously, keep victim's head lowered (forward) to reduce the risk of aspiration. Never give anything by mouth to an unconscious person. For all cases, obtain medical attention immediately.

Refer To Material Safety Data Sheet for further information.

Canadian Information:

Canadian Environmental Protection Act (CEPA) information: All ingredients listed appear on the Domestic Substances List (DSL).

WHMIS information: Refer to Section 2 for a WHMIS Classification for this product.

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.

US Federal Information:

TSCA: All listed ingredients appear on the Toxic Substances Control Act (TSCA) inventory.

SECTION 16 - OTHER INFORMATION

- Legend** :
- ACGIH: American Conference of Governmental Industrial Hygienists
 - CAS: Chemical Abstract Services
 - CNS: Central Nervous System
 - HSDB: Hazardous Substances Data Bank
 - IARC: International Agency for Research on Cancer
 - Inh: Inhalation
 - LC: Lethal Concentration
 - LD: Lethal Dose
 - MSHA: Mine Safety and Health Administration
 - N/Ap: Not Applicable
 - N/Av: Not Available
 - NIOSH: National Institute of Occupational Safety and Health
 - NTP: National Toxicology Program
 - OSHA: Occupational Safety and Health Administration
 - PEL: Permissible exposure limit
 - RTECS: Registry of Toxic Effects of Chemical Substances
 - STEL: Short Term Exposure Limit
 - TCC: Tagliabue Closed Cup
 - TDG: Canadian Transportation of Dangerous Goods Act & Regulations
 - TLV: Threshold Limit Values
 - TWA: Time Weighted Average
 - WHMIS: Workplace Hazardous Materials Identification System
- References** :
1. ACGIH, Threshold Limit Values for Chemical Substances and Physical Agents & Biological Exposure Indices for 2010.
 2. International Agency for Research on Cancer Monographs, searched 2010.
 3. Canadian Centre for Occupational Health and Safety, CCInfoWeb databases, 2010 (Chempendium, HSDB and RTECs).
 4. Material Safety Data Sheets from manufacturer.

<p><u>Prepared for:</u> Radiator Specialty Co. of Canada 1711 Aimco Blvd. Mississauga, ON, Canada, L4W 1H7 Telephone: 905-625-9117 (Mon. - Fri., 9 AM - 5 PM) Please direct all enquiries to Radiator Specialty.</p>	
<p><u>Prepared by:</u> ICC The Compliance Center Inc. http://www.thecompliancecenter.com</p>	 <p>The Compliance Center Inc. HAZARDOUS MATERIALS REGULATIONS SPECIALISTS</p>

DISCLAIMER OF LIABILITY

This Material Safety Data Sheet was prepared by ICC The Compliance Center Inc. using information provided by Radiator Specialty Co. of Canada and CCOHS' Web Information Service. The information in the Material Safety Data Sheet is offered for your consideration and guidance when exposed to this product. ICC The Compliance Center Inc and Radiator Specialty Co. of Canada expressly disclaim all expressed or implied warranties and assume no responsibilities for the accuracy or completeness of the data contained herein. The data in this MSDS does not apply to use with any other product or in any other process.

This Material Safety Data Sheet may not be changed, or altered in any way without the expressed knowledge and permission of ICC The Compliance Center Inc. and Radiator Specialty Co. of Canada.

LIQUID WRENCH LUBRICANT

L212C

MSDS Revision Date (mm/dd/yyyy): 08/04/2010

Page 7 of 7

MSDS Preparation Date (mm/dd/yyyy)

: 08/01/2007

MSDS Revision Date (mm/dd/yyyy)

: 08/04/2010

Revision No.

: 2

Revision Information

: Sections 2 and 3, switched.

(M)SDS sections updated:

- 2. HAZARDS IDENTIFICATION;
- 3. COMPOSITION/INFORMATION ON INGREDIENTS;
- 5. FIRE-FIGHTING MEASURES;
- 8. EXPOSURE CONTROLS / PERSONAL PROTECTION;
- 9. PHYSICAL AND CHEMICAL PROPERTIES;
- 11. TOXICOLOGICAL INFORMATION;
- 12. ECOLOGICAL INFORMATION;
- 15. REGULATORY INFORMATION.

END OF DOCUMENT

MATERIAL SAFETY DATA SHEET

HMIS CODES:

H	F	R	P
0	1	0	A

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 Administrator
(Non-Mandatory Form)
Form Approved OMB No. 1218-0072

IDENTITY (AS USED ON LABEL AND LIST):

REACH LUBE OIL

LO

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's Name:
J.C. WHITLAM MANUFACTURING COMPANY

Emergency Telephone Number:
(330) 334 - 2524

Address (Number, Street, City, State, and ZIP Code):
200 WEST WALNUT STREET

Telephone Number for Information:
(330) 334 - 2524

P.O. BOX 380

Date Prepared: January 26, 2012

WADSWORTH, OHIO 44282-0380

Signature of Preparer (optional):

Section II - Hazardous Ingredients/Identity Information

HAZARDOUS COMPONENTS (SPECIFIC CHEMICAL IDENTITY: COMMON NAME(S))	OSHA PEL	ACGIH TLV	OTHER LIMITS Recommended	% (optional)
HYDROTREATED LIGHT PARAFFINIC PETROLEUM BASE STOCK [CAS#64742-54-7]	5 mg/m ³	N/A	N/A	N/A

Section III - Physical/Chemical Characteristics

Boiling Point:	650°F (343°)	Specific Gravity (H ₂ O =1):	0.8827
Vapor Pressure (mm Hg):	NIL	Melting Point:	N/A
Vapor Density (AIR = 1):	HEAVIER	Evaporation Rate (Butyl Acetate = 1):	NIL

Solubility in Water: INSOLUBLE

Appearance and Odor: PALE YELLOW TO LIGHT ORANGE, PETROLEUM ODOR

Section IV - Fire and Explosion Hazard Data

Flash Point (Method Used): 450°F (COC)	Flammable Limits:	LEL: N/A	UEL: N/A
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Extinguishing Media: FOAM, WATER SPRAY, DRY CHEMICAL.

Special Fire Fighting Procedures:
DO NOT AIM WATER DIRECTLY IN FLAME TO AVOID FOAMING AND SPREADING. AVOID BREATHING FUMES.

Unusual Fire and Explosion Hazards:
NO EXPLOSION HAZARDS. SMALL TRACES OF PHOSPHORUS IN ADDITIVE MAY RESULT IN THE FORMATION OF TRACES OF ACID GAS IN SMOKE.

Section V - Reactivity Data		REACH LUBE OIL		LO
Stability:	Unstable:		Conditions to Avoid: N/A	
	Stable:	X		

Incompatibility (Materials to Avoid): STRONG OXIDIZERS.

Hazardous Decomposition or Byproducts: UNDER HEAT OR COMBUSTION - TOXIC LEVELS OF CO, CO₂, ALDEHYDES AND KETONES. CARBON MONOXIDE FROM INCOMPLETE COMBUSTION.

Hazardous Polymerization:	May Occur:		Conditions to Avoid: N/A	
	Will Not Occur:	X		

Section VI - Health Hazard Data

Route(s) of Entry:	Inhalation? YES	Skin? YES	Ingestion? N/A
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Health Hazards (Acute and Chronic): EYES: MAY CAUSE MINIMAL IRRITATION. SKIN: PROLONGED CONTACT MAY CAUSE REDNESS OR IRRITATION. INHALATION: VAPORS OR MIST MAY CAUSE IRRITATION OF THE NOSE AND THROAT, HEADACHE, NAUSEA AND DROWSINESS.

Carcinogenicity:	NTP? NO	IARC Monographs? NO	OSHA Regulated? NO
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Signs and Symptoms of Exposure: SEE HEALTH HAZARDS ABOVE.

Medical Conditions Generally Aggravated by Exposure:
SKIN CONTACT MAY AGGRAVATE AN EXISTING DERMATITIS (SKIN CONDITION).

Emergency and First Aid Procedures:
EYES: FLUSH EYES FOR SEVERAL MINUTES. GET MEDICAL ATTENTION IF IRRITATION PERSISTS. SKIN: WASH WITH SOAP AND WATER. INGESTION: GIVE 2 - 16 oz. GLASSES OF WATER. SEEK MEDICAL ATTENTION.

Section VII - Precautions for Safe Handling and Use

Steps to Be Taken in Case Material is Released or Spilled:
VENTILATE AREA. CONTAIN SPILL IF POSSIBLE. WIPE UP OR ABSORB WITH SUITABLE MATERIAL AND SHOVEL UP. DISPOSE OF ACCORDING TO LOCAL, STATE, AND FEDERAL REGULATIONS.

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.

Precautions to Be Taken in Handling and Storing:
PERIODS OF EXPOSURE TO HIGH TEMPERATURES SHOULD BE MINIMIZED. WATER CONTAMINATION SHOULD BE AVOIDED.

Other Precautions: NONE

Section VIII - Control Measures

Respiratory Protection (Specify Type): MSHA OR NIOSH IF VAPOR OR MIST IS GENERATED.

Ventilation:	Local Exhaust: NORMAL VENTILATION	Special: N/A
	Mechanical (General): N/A	Other: N/A

Protective Gloves: OIL IMPERVIOUS IF PROLONGED SKIN CONTACT.	Eye Protection: GOGGLES IF SPLASHING IS ANTICIPATED.
---	---

Other Protective Clothing or Equipment: NOT NEEDED IN NORMAL USE.

Work/Hygienic Practices: AVOID BREATHING OIL MIST IF PRESENT. DO NOT CONTINUE TO WEAR OIL CONTAMINATED CLOTHING.

MATERIAL SAFETY DATA SHEET

SECTION 1: IDENTIFICATION

Product identifier : **SILICONE SPRAY**

Product Use : Lubricant.

Chemical Family : Mixture.

Manufacturer part no. : M914C, M914/6C

Supplier's name and address:
Radiator Specialty Co., of Canada
 1711 Aimco Blvd.
 Mississauga, ON, Canada
 L4W 1H7

Manufacturer's name and address:
 Refer to Supplier

Information Telephone # : (905) 625-9117 (Monday - Friday, 9AM - 5PM)

24 Hr. Emergency Tel # : (613) 996-6666 (CANUTEC)

SECTION 2 - HAZARDS IDENTIFICATION

Classification : WHMIS information: This product is a WHMIS Controlled Product. It meets one or more of the criteria for a controlled product provided in Part IV of the Canadian Controlled Products Regulations (CPR).

WHMIS classification:

- Class A (Pressurized containers);
- Class B5 (Flammable Aerosols);
- Class D2A (Materials Causing Other Toxic Effects, Very Toxic Material);
- Class D2B (Materials Causing Other Toxic Effects, Toxic Material).

Labelling: Phrases recommended to appear on a supplier label, can be found in Section 15.

WHMIS symbols required on a supplier label:



Emergency Overview : Clear to yellow liquid, contained in a pressurized aerosol can. Petroleum odour. DANGER! Flammable aerosol. Contents under pressure. Container may explode if heated. Harmful if inhaled. May be harmful if absorbed through the skin. May be harmful or fatal if swallowed. May cause nausea, vomiting, headache and other central nervous system effects. May cause respiratory irritation. May be an aspiration hazard. May cause skin irritation. Contains material which may cause cancer, based on animal data. Possible birth defect hazard - contains material that may cause birth defects, based on animal data.

POTENTIAL HEALTH EFFECTS:

Signs and symptoms of short-term (acute) exposure

- Inhalation** : May cause irritation to the nose, throat and upper respiratory tract. Symptoms may include pain, headache, nausea, vomiting, dizziness, drowsiness and other central nervous system effects. Could result in pulmonary edema (fluid accumulation). Symptoms of pulmonary edema (chest pain, shortness of breath) may be delayed.
- Skin** : May cause moderate skin irritation. May be absorbed and cause symptoms similar to those for inhalation. If product is sprayed directly on skin, symptoms of frostbite may be experienced including numbness, prickling and itching.
- Eyes** : May cause mild eye irritation. If product is sprayed directly into the eyes, could cause freezing of the eye.
- Ingestion** : May cause irritation of mouth, throat, and stomach. Symptoms may include pain, headache, nausea, vomiting, dizziness, drowsiness and other central nervous system effects. Material is an aspiration hazard. Aspiration into the lungs during swallowing or subsequent vomiting may cause chemical pneumonitis, which can be fatal.

Effects of long-term (chronic) exposure

- Carcinogenic status** : Prolonged or repeated contact may cause drying, cracking and defatting of the skin.
 : Possible cancer hazard. See TOXICOLOGICAL INFORMATION, Section 11.

Additional health hazards : May cause birth defects. See TOXICOLOGICAL INFORMATION, Section 11.

Potential environmental effects : See ECOLOGICAL INFORMATION, Section 12.

SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

<u>Ingredients</u>	<u>CAS #</u>	<u>Wt.%</u>
stoddard solvent	8052-41-3	40.00 - 70.00
Petroleum distillate	64742-47-8	10.00 - 30.00
1,2,4-Trimethylbenzene	95-63-6	3.00 - 7.00
1,3,5-Trimethylbenzene	108-67-8	3.00 - 7.00
Distillates (petroleum), hydrotreated heavy naphthenic	64742-52-5	3.00 - 7.00
Dimethylpolysiloxane	63148-62-9	3.00 - 7.00
Carbon dioxide	124-38-9	3.00 - 4.00
Xylene	1330-20-7	1.00 - 5.00
Ethylbenzene	100-41-4	0.10 - 1.00

SECTION 4 - FIRST AID MEASURES

- Inhalation** : Immediately remove person to fresh air. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen by qualified medical personnel only. Get medical attention.
- Skin contact** : Remove/Take off immediately all contaminated clothing. Wash off immediately with soap and plenty of water. Get medical attention.
- Eye contact** : Immediately flush eyes with plenty of water for at least 15 minutes. If irritation persists, seek prompt medical attention.
- Ingestion** : Seek immediate medical attention/advice. Do not induce vomiting. Never give anything by mouth to an unconscious person.
- Notes For Physician** : Treat symptomatically.

SECTION 5 - FIRE FIGHTING MEASURES

- Fire hazards/conditions of flammability** : Flammable aerosol. Closed containers are contained under pressure and may explode if exposed to excess heat for a prolonged period of time. Vapours may be heavier than air and may collect in confined and low-lying areas. Material will float on water and can be re-ignited at the water's surface.
- Oxidizing properties** : None known.
- Explosion data: Sensitivity to mechanical impact / static discharge** : May be sensitive to static discharge. Aerosols are sensitive to mechanical impact. Contents under pressure.
- Suitable extinguishing media** : Dry chemical, foam, carbon dioxide and water fog. Do not use water jet, as this may spread burning material.
- Special fire-fighting procedures/equipment** : Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face piece operated in positive pressure mode. Move containers from fire area if safe to do so. Water spray may be useful in cooling equipment exposed to heat and flame. Shield personnel to protect from venting or rupturing containers.
- Hazardous combustion products** : Carbon oxides; Aldehydes; Hydrocarbons; nitrogen oxides (NOx); Sulphur oxides; Phosphorus compounds; silicon oxides; Polycyclic aromatic hydrocarbons; other unidentified organic compounds.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

- Personal precautions** : All persons dealing with clean-up should wear the appropriate protective equipment including self-contained breathing apparatus. Keep all other personnel upwind and away from the spill/release. Restrict access to area until completion of clean-up.
- Environmental precautions** : Ensure spilled product does not enter drains, sewers, waterways, or confined spaces. For large spills, dike the area to prevent spreading.

- Spill response/cleanup** : Ventilate area of release. Remove all sources of ignition. Use only non-sparking tools and equipment in the clean-up process. Contain and absorb spilled liquid with non-combustible, inert absorbent material (e.g. sand), then place absorbent material into a container for later disposal (see Section 13). Notify the appropriate authorities as required.
- Prohibited materials** : Do not use combustible absorbents, such as sawdust.

SECTION 7 - HANDLING AND STORAGE

- Safe Handling procedures** : Use in a well-ventilated area. Wear suitable protective equipment during handling. Do not breathe vapours or spray mist. Avoid contact with skin, eyes and clothing. Keep away from heat, sparks, and open flames. Do not puncture or incinerate containers. Avoid contact with incompatible materials. Wash thoroughly after handling.
- Storage requirements** : Store in a cool, dry, well-ventilated area. Store away from incompatibles and out of direct sunlight. Storage area should be clearly identified, clear of obstruction and accessible only to trained and authorized personnel. Inspect periodically for damage or leaks. Do not eat or smoke in areas of use or storage.
- Incompatible materials** : Strong oxidizing agents; Acids; Bases.
- Special packaging materials** : Always keep in containers made of the same materials as the supply container.

SECTION 8 - EXPOSURE CONTROLS AND PERSONAL PROTECTION

<u>Exposure Limits</u>				
<u>Ingredients</u>	<u>ACGIH TLV</u>		<u>OSHA PEL</u>	
	<u>TWA</u>	<u>STEL</u>	<u>PEL</u>	<u>STEL</u>
stoddard solvent	100 ppm	N/Av	500 ppm	N/Av
Petroleum distillate	200 mg/m ³	N/Av	N/Av	N/Av
1,2,4-Trimethylbenzene	*25 ppm	N/Av	*25 ppm (final rule limit)	N/Av
1,3,5-Trimethylbenzene	*25 ppm	N/Av	*25 ppm (final rule limit)	N/Av
Distillates (petroleum), hydrotreated heavy naphthenic	5 mg/m ³ (As 'Oil mist, mineral')	N/Av	5 mg/m ³ (As 'Oil mist, mineral')	N/Av
Dimethylpolysiloxane	N/Av	N/Av	N/Av	N/Av
Carbon dioxide	5000 ppm	30,000 ppm	5000 ppm	N/Av
Xylene	100 ppm	150 ppm	100 ppm	N/Av
Ethylbenzene	100 ppm	125 ppm	100 ppm	N/Av

*Note:: The OSHA PEL's and ACGIH TLV's listed above for 1,2,4-Trimethylbenzene and 1,3,5-Trimethylbenzene are for 'Trimethylbenzene (mixed isomers)'.

- Ventilation and engineering measures** : Use general or local exhaust ventilation to maintain air concentrations below recommended exposure limits.
- Respiratory protection** : If the TLV is exceeded, a NIOSH/MSHA-approved respirator is advised. Advice should be sought from respiratory protection specialists.
- Skin protection** : Impervious gloves must be worn when using this product. Advice should be sought from glove suppliers.
- Eye / face protection** : Chemical splash goggles are recommended.
- Other protective equipment** : Depending on conditions of use, an impervious apron should be worn. An eyewash station and safety shower should be made available in the immediate working area.
- General hygiene considerations** : Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink, smoke or use cosmetics while working with this product. Wash thoroughly after handling. Remove and wash contaminated clothing before re-use.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

- Physical state** : Liquid aerosol. **Appearance** : Clear to yellow liquid.
- Odour** : Petroleum odour. **Odour threshold** : N/Av
- pH** : N/Av
- Boiling point** : 154.4°C **Specific gravity** : 0.81

- Melting/Freezing point** : N/Av
- Vapour pressure (mmHg @ 20° C / 68° F)** : N/Av
- Vapour density (Air = 1)** : N/Av
- Volatile organic Compounds (VOC's)** : N/Av
- Flash point** : 53.33°C (concentrate)
- Flash point Method** : TCC
- Lower flammable limit (% by vol.)** : N/Av
- Flame Projection Length** : 35.56 cm
- Absolute pressure of container** : N/Av
- General Information** : No additional information.
- Coefficient of water/oil distribution** : N/Av
- Solubility in water** : insoluble
- Evaporation rate (n-Butyl acetate = 1)** : N/Av
- Volatiles (% by weight)** : 58.17%
- Auto-ignition temperature** : N/Av
- Upper flammable limit (% by vol.)** : N/Av
- Flashback observed** : NO
- Viscosity** : 16 cp @ 21.1°C (concentrate)

Section 10: STABILITY AND REACTIVITY

- Stability and reactivity** : Stable under the recommended storage and handling conditions prescribed.
- Hazardous polymerization** : Hazardous polymerisation does not occur.
- Conditions to avoid** : Avoid heat and open flame. Ensure adequate ventilation, especially in confined areas. Keep out of direct sunlight.
- Materials To Avoid And Incompatibility** : See Section 7 (Handling and Storage) for further details.
- Hazardous decomposition products** : None known, refer to hazardous combustion products in Section 5.

SECTION 11 - TOXICOLOGICAL INFORMATION

- Target organs** : Eyes, skin, respiratory system, digestive system, central nervous system.
- Routes of exposure** : *Inhalation:* YES *Skin Absorption:* YES *Skin & Eyes:* YES *Ingestion:* YES
- Irritancy** : Moderate skin irritant. Mild eye irritant.
- Toxicological data** : There is no available data for the product itself, only for the ingredients. See below for individual ingredient acute toxicity data.

Ingredients	LC₅₀(4hr)	LD₅₀	
	inh, rat	(Oral, rat)	(Rabbit, dermal)
stoddard solvent	> 5500 mg/m ³	> 5000 mg/kg	> 3000 mg/kg
Petroleum distillate	N/Av	N/Av	N/Av
1,2,4-Trimethylbenzene	18,000 mg/m ³	5000 mg/kg	> 3160 mg/kg
1,3,5-Trimethylbenzene	24,000 mg/m ³	23,000 mg/kg	N/Av
Distillates (petroleum), hydrotreated heavy naphthenic	2180 mg/m ³ (mist)	> 5000 mg/kg	> 2000 mg/kg
Dimethylpolysiloxane	N/Av	> 2000 mg/kg	> 19,400 mg/kg
Carbon dioxide	N/Av	N/Av (gas)	N/Av (gas)
Xylene	6350 ppm	4300 mg/kg	> 5 mL/kg
Ethylbenzene	4000 ppm	3500 mg/kg	15,380 mg/kg

- Carcinogenic status** : Contains Ethylbenzene. Ethylbenzene is classified as carcinogenic by IARC (Group 2B) and ACGIH (Category A3). Contains the following chemicals listed as confirmed animal carcinogens (A3) by ACGIH: Petroleum distillates.
- Reproductive effects** : Not expected to cause reproductive effects.
- Teratogenicity** : This product contains Xylene. Xylene may cause fetotoxic effects at doses which are not maternally toxic, based on animal data.
- Mutagenicity** : Not expected to be mutagenic in humans.
- Epidemiology** : None known or reported by the manufacturer.

- Sensitization to material** : Not expected to be a skin or respiratory sensitizer.
Synergistic materials : None known or reported by the manufacturer.
other important hazards : CNS depression may result from extreme exposures.
Conditions aggravated by overexposure
: Pre-existing skin, eye and respiratory disorders.


SECTION 12 - ECOLOGICAL INFORMATION

- Ecotoxicity** : The ecological characteristics of this product have not been fully investigated. The product should not be allowed to enter drains or water courses, or be deposited where it can affect ground or surface waters.
Mobility : No data is available on the product itself.
Persistence : No data is available on the product itself.
Bioaccumulation potential : No data is available on the product itself.
Other Adverse Environmental effects
: No data is available on the product itself.

SECTION 13 - DISPOSAL CONSIDERATIONS

- Handling for Disposal** : Handle waste according to recommendations in Section 7. Do not puncture or incinerate containers.
Methods of Disposal : Dispose of in accordance with federal, provincial and local hazardous waste laws.

SECTION 14: TRANSPORT INFORMATION

Regulatory Information	UN Number	Shipping Name	Class	Packing Group	Label
TDG	UN1950	AEROSOLS	2.1	none	
TDG Additional information	May be shipped as LIMITED QUANTITY when transported in containers no larger than 1.0 Litre, in packages not exceeding 30 kg gross mass. Under the TDGR, refer to Section 1.17 for additional exemption information, if shipping under this exemption.				

SECTION 15 - REGULATORY INFORMATION

Labelling:

DANGER! Flammable aerosol. Contents under pressure. Container may explode if heated. Harmful if inhaled. May be harmful if absorbed through the skin. May be harmful or fatal if swallowed. May cause nausea, vomiting, headache and other central nervous system effects. May cause respiratory irritation. May be an aspiration hazard. May cause skin irritation. Contains material which may cause cancer, based on animal data. Possible birth defect hazard - contains material that may cause birth defects, based on animal data.

Precautions: Use in a well-ventilated area. Wear suitable protective equipment during handling. Do not breathe vapours or spray mist. Avoid contact with skin, eyes and clothing. Keep away from heat, sparks, and open flames. Do not puncture or incinerate containers. Avoid contact with incompatible materials. Wash thoroughly after handling. Store in a cool, dry, well-ventilated area away from sources of heat, ignition and sunlight

FIRST AID: If inhaled, move to fresh air. If breathing stopped, begin artificial respiration. If breathing is difficult, give oxygen by qualified medical personnel only. Get medical attention. For skin contact, wash with soap and water while removing contaminated clothing. Get medical attention. For eye contact, flush with running water for at least 15 minutes. If irritation persists, seek prompt medical attention. If ingested, do not induce vomiting. Never give anything by mouth to an unconscious person. Seek immediate medical attention/advice.

Refer To Material Safety Data Sheet for further information.

Canadian Information:

Canadian Environmental Protection Act (CEPA) information: All ingredients listed appear on the Domestic Substances List (DSL).

Canadian WHMIS Classification: Refer to Section 2 for a WHMIS Classification for this product.

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.


US Federal Information:

TSCA: All listed ingredients appear on the Toxic Substances Control Act (TSCA) inventory.

SECTION 16 - OTHER INFORMATION

Legend : ACGIH: American Conference of Governmental Industrial Hygienists
 CAS: Chemical Abstract Services
 CNS: Central Nervous System
 HSDB: Hazardous Substances Data Bank
 IARC: International Agency for Research on Cancer
 Inh: Inhalation
 LC: Lethal Concentration
 LD: Lethal Dose
 MSHA: Mine Safety and Health Administration
 N/Ap: Not Applicable
 N/Av: Not Available
 NIOSH: National Institute of Occupational Safety and Health
 NTP: National Toxicology Program
 OSHA: Occupational Safety and Health Administration
 PEL: Permissible exposure limit
 RTECS: Registry of Toxic Effects of Chemical Substances
 STEL: Short Term Exposure Limit
 TCC: Tagliabue Closed Cup
 TDG: Canadian Transportation of Dangerous Goods Act & Regulations
 TLV: Threshold Limit Values
 TWA: Time Weighted Average
 WHMIS: Workplace Hazardous Materials Identification System

References : 1. ACGIH, Threshold Limit Values for Chemical Substances and Physical Agents & Biological Exposure Indices for 2010.
 2. International Agency for Research on Cancer Monographs, searched 2010.
 3. Canadian Centre for Occupational Health and Safety, CCInfoWeb databases, 2010 (Chempendium, HSDB and RTECs).
 4. Material Safety Data Sheets from manufacturer.

<p><u>Prepared for:</u> Radiator Specialty Co. of Canada 1711 Aimco Blvd. Mississauga, ON, Canada, L4W 1H7 Telephone: 905-625-9117 (Mon. - Fri., 9 AM - 5 PM) Please direct all enquiries to Radiator Specialty.</p>	
<p><u>Prepared by:</u> ICC The Compliance Center Inc. http://www.thecompliancecenter.com</p>	

DISCLAIMER OF LIABILITY

This Material Safety Data Sheet was prepared by ICC The Compliance Center Inc. using information provided by Radiator Specialty Co. of Canada and CCOHS' Web Information Service. The information in the Material Safety Data Sheet is offered for your consideration and guidance when exposed to this product. ICC The Compliance Center Inc and Radiator Specialty Co. of Canada expressly disclaim all expressed or implied warranties and assume no responsibilities for the accuracy or completeness of the data contained herein. The data in this MSDS does not apply to use with any other product or in any other process.

This Material Safety Data Sheet may not be changed, or altered in any way without the expressed knowledge and permission of ICC The Compliance Center Inc. and Radiator Specialty Co. of Canada.

MSDS Preparation Date (mm/dd/yyyy)

: 07/30/2007

MSDS Revision Date (mm/dd/yyyy)

: 07/15/2010

Revision No. : 2a

Revision Information : Sections 2 and 3, switched.
(M)SDS sections updated:
2. HAZARDS IDENTIFICATION;
3. COMPOSITION/INFORMATION ON INGREDIENTS;
4. FIRST AID MEASURES;
5. FIRE-FIGHTING MEASURES;
8. EXPOSURE CONTROLS / PERSONAL PROTECTION;
9. PHYSICAL AND CHEMICAL PROPERTIES;
11. TOXICOLOGICAL INFORMATION;
12. ECOLOGICAL INFORMATION;
15. REGULATORY INFORMATION.

END OF DOCUMENT

MATERIAL SAFETY DATA SHEET

MSDS 0169

Section 1 -- PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME	Metacaulk 1000	HMIS CODES	
		Health	1
		Flammability	0
		Reactivity	0
PRODUCT CODES	66640, 66242, 66302, 66303, 66305, 66307, 66309, 66312	PPI	B
CHEMICAL FAMILY	Organic/Inorganic		
USE	Firestopping Sealant		
MANUFACTURER'S NAME	The RectorSeal Corporation	EMERGENCY TELEPHONE NO.	
	2601 Spenwick Drive	Chemtrec 24 Hours	
	Houston, Texas 77055 USA	(800)424-9300 USA	
		001-527-3887 International	
DATE OF VALIDATION	May 22, 2012	TECHNICAL SERVICE TELEPHONE NO.	
DATE OF PREPARATION	May 22, 2012	(800)231-3345 or (713)263-8001	

Section 2 -- HAZARDS IDENTIFICATION

GHS CLASSIFICATION

PHYSICAL HAZARDS: None

HEALTH HAZARDS

Acute Toxicity:

Oral: Not Classified

Dermal: Not Classified

Inhalation: Not Classified

Skin Corrosion/Irritation: Not Classified

Serious Eye Damage/Eye Irritation: Not Classified

Respiratory or Skin Sensitization: Not Classified

Germ Cell Mutagenicity: Not Classified

Carcinogenicity: Not Classified

Reproductive Toxicology: Not Classified

Target Organ Systemic Toxicity - Single Exposure: Not Classified

Target Organ Systemic Toxicity - Repeated Exposure: Not Classified

Aspiration Toxicity: Not Classified

ENVIRONMENTAL HAZARDS

Hazardous to the Aquatic Environment: Not Classified

Acute aquatic toxicity: Not Classified

Chronic aquatic toxicity: Not Classified

Bioaccumulation potential: Not Classified

Rapid degradability: Not Classified

GHS Label elements, including precautionary statements

Pictogram: None

Signal Word: None

Hazard Statements: None

Precautionary Statements:

P102 - Keep out of reach of children.

P264 - Wash hands thoroughly after handling.

Classification according to EU Directives 67/548/EEC or 1999/45/EC

LABELING SYMBOLS: None

RISK R-PHRASES: None

SAFETY S-PHRASES:

S2 : Keep out of the reach of children.

SUMMARY OF ACUTE HAZARDS

May cause skin irritation.

ROUTE OF EXPOSURE, SIGNS AND SYMPTOMS

INHALATION

Not a respiratory irritant.

EYE CONTACT

Contact may cause eye irritation.

SKIN CONTACT

Contact may cause skin irritation.

INGESTION

Possible irritation to mucous membranes of the mouth, throat, and stomach.

SUMMARY OF CHRONIC HAZARDS

None known.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

HAZARDOUS POLYMERIZATION: Will not occur.

=====
Section 11 -- TOXICOLOGY INFORMATION

CHRONIC HEALTH HAZARDS

No ingredient in this product is an IARC, NTP or OSHA listed carcinogen.

TOXICOLOGY DATA

Ingredient Name

None
=====

Section 12 -- Ecological Information

ECOLOGICAL DATA

Ingredient Name

None

Food Chain Concentration Potential	N/A
WATERFOWL TOXICITY	N/A
BOD	N/A
AQUATIC TOXICITY	N/A

=====
Section 13 -- DISPOSAL CONSIDERATIONS

Waste Classification: Non-regulated solid waste

Disposal Method: Approved landfill

Waste from this product is not considered hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261. Dispose of in accordance with Federal, State, and Local regulation regarding pollution.

=====
Section 14 -- TRANSPORTATION INFORMATION

DOT: Non-Regulated
OCEAN (IMDG): Non-Regulated
AIR (IATA): Non-Regulated
WHMIS (CANADA): Non-Regulated
=====

Section 15 -- REGULATORY INFORMATION

REGULATORY DATA

Ingredient Name

None

SARA 313	N/A
TSCA Inventory	All components listed
CERCLA RQ	N/A
RCRA Code	N/A

=====
Section 16 -- OTHER INFORMATION

LABELING SYMBOLS: None

RISK R-PHRASES: None

SAFETY S-PHRASES:

S2 : Keep out of the reach of children.

This document is prepared pursuant to 91/155/EEC ISO 11014-1. The information herein is given in good faith, but no warranty, expressed or implied is made. Consult RectorSeal for further information: (713) 263-8001

MATERIAL SAFETY DATA SHEET

MSDS 0463

Section 1 -- PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME	Metacaulk 835+	HMIS CODES	Health	1
			Flammability	0
			Reactivity	0
			PPI	B
PRODUCT CODES	66012, 66019			
CHEMICAL FAMILY:	Organic/Inorganic			
USE	Firestopping Sealant			
MANUFACTURER'S NAME	The RectorSeal Corporation	EMERGENCY TELEPHONE NO.	Chemtrec 24 Hours	
	2601 Spenwick Drive		(800) 424-9300	
	Houston, Texas 77055 USA			
VALIDATION DATE	April 6, 2010	TECHNICAL SERVICE TELEPHONE NO.	(800) 231-3345	
REVISION DATE	April 6, 2010			

Section 2 -- COMPOSITION/INFORMATION ON INGREDIENTS

% by WT	CAS No.	INGREDIENT	UNITS
3-7	7631-86-9	Amorphous Silica	
		ACGIH TLV	N/D ppm
		OSHA PEL	N/D ppm
3-7	22984-54-9	Ketoxime Silane	
		ACGIH TLV	N/D ppm
		OSHA PEL	N/D ppm
15-40	1317-65-3	Calcium Carbonate	
		ACGIH TLV	10 mg/m3
		OSHA PEL	15 mg/m3

Section 3 -- HAZARDS IDENTIFICATION

SUMMARY OF ACUTE HAZARDS
 May cause skin irritation.

ROUTE OF EXPOSURE, SIGNS AND SYMPTOMS

INHALATION
 Not a respiratory irritant.

EYE CONTACT
 Contact may cause eye irritation.

SKIN CONTACT
 Contact may cause skin irritation.

INGESTION
 Possible irritation to mucous membranes of the mouth, throat, and stomach.

SUMMARY OF CHRONIC HAZARDS
 None known.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE
 Persons with pre-existing skin conditions or chemical allergies may be more susceptible to contact effects of the cured elastomer.

Section 4 -- FIRST AID MEASURES

If INHALED: Not a respiratory irritant.

If on SKIN: Wash with soap and water. If irritation occurs, seek medical attention.

If in EYES: Immediately flush with large amounts of water. If irritation occurs, seek medical attention.

If SWALLOWED: If swallowed, call a physician immediately. Only induce vomiting at the instruction of a physician. Never give anything by mouth to an unconscious person.

Section 5 -- FIRE FIGHTING MEASURES

FLASH POINT	LEL	UEL
None	N/D	N/D

EXTINGUISHING MEDIA
 Foam, dry chemical, carbon dioxide or water fog.

SPECIAL FIRE FIGHTING PROCEDURES: Wear self-contained breathing apparatus (SCBA) and other protective clothing. Hazardous decomposition products possible (see Section 10).

UNUSUAL FIRE AND EXPLOSION HAZARDS: Heat may build up and rupture closed containers.

Section 6 -- ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Wipe up spills to prevent footing hazard. Avoid flushing into sewers, drains, waterways and soil. Wear protective clothing during clean up.

Section 7 -- HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Keep container closed and upright when not in use. To prevent freezing and possible rupture of container, do not store below 40 F.

OTHER PRECAUTIONS: Avoid prolonged or repeated contact with skin or clothing. Empty containers may contain residues and vapors; treat as if full and observe all product precautions. Do not reuse empty containers. KEEP OUT OF REACH OF CHILDREN.

Section 8 -- EXPOSURE CONTROLS/PERSONAL PROTECTION

RESPIRATORY PROTECTION (SPECIFY TYPE): None required.

VENTILATION - LOCAL EXHAUST: Acceptable

SPECIAL: N/A

MECHANICAL (GENERAL): Preferable

OTHER: N/A

PROTECTIVE GLOVES: Wear rubber gloves.

EYE PROTECTION: Safety glasses (ANSI Z-87.1 or equivalent)

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Coveralls recommended.

WORK/HYGIENIC PRACTICES: Where use can result in skin contact, wash exposed areas thoroughly before eating, drinking, smoking, or leaving work area. Launder contaminated clothing before reuse.

Section 9 -- PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT: 212 F (100 C) @ 760mm Hg

SPECIFIC GRAVITY (H2O = 1): 1.3

VAPOR PRESSURE (mm Hg): 17 @ 68 F (20 C)

MELTING POINT: N/A

VAPOR DENSITY (AIR = 1): N/A

EVAPORATION RATE (ETHYL ACETATE = 1): >1

APPEARANCE/ODOR: Gray Paste/Mild Odor

SOLUBILITY IN WATER: Soluble

VOLATILE ORGANIC COMPOUNDS(VOC)Content (Theoretical Percentage By Weight): <1% or <10 g/L

Section 10 -- STABILITY AND REACTIVITY

STABILITY: Stable

CONDITIONS TO AVOID: None

INCOMPATIBILITY (MATERIALS TO AVOID): None known.

HAZARDOUS DECOMPOSITION PRODUCTS: CO, CO2 and fragmented hydrocarbons.

HAZARDOUS POLYMERIZATION: Will not occur.

Section 11 -- TOXICOLOGY INFORMATION

CHRONIC HEALTH HAZARDS

No ingredient in this product is an IARC, NTP or OSHA listed carcinogen.

TOXICOLOGY DATA

Ingredient Name

Amorphous Silica

Oral-Rat LD50: 22,500 mg/kg

Inhalation-Rat LC50: N/D

Ketoxime Silane

Oral-Rat LD50: N/D

Inhalation-Rat LC50: N/D

Calcium Carbonate

Oral-Rat LD50: N/D

Inhalation-Rat LC50: N/D

Section 12 -- Ecological Information

ECOLOGICAL DATA

Ingredient Name

Amorphous Silica

Food Chain Concentration Potential N/D

WATERFOWL TOXICITY N/D

BOD N/D

AQUATIC TOXICITY N/D

Ketoxime Silane

Food Chain Concentration Potential N/D

WATERFOWL TOXICITY N/D
BOD N/D
AQUATIC TOXICITY N/D

Calcium Carbonate

Food Chain Concentration Potential N/D
WATERFOWL TOXICITY N/D
BOD N/D
AQUATIC TOXICITY N/D

=====
Section 13 -- DISPOSAL CONSIDERATIONS
=====

Waste Classification: Non-regulated solid waste
Disposal Method: Approved landfill
Waste from this product is not considered hazardous as defined under the
Resource Conservation and Recovery Act (RCRA) 40 CFR 261. Dispose of in
accordance with Federal, State, and Local regulation regarding pollution.
=====

Section 14 -- TRANSPORTATION INFORMATION
=====

DOT: Non-Regulated
OCEAN (IMDG): Non-Regulated
AIR (IATA): Non-Regulated
WHMIS (CANADA): Non-Regulated
=====

Section 15 -- REGULATORY INFORMATION
=====

REGULATORY DATA

Ingredient Name

Amorphous Silica
SARA 313 N/A
TSCA Inventory Yes
CERCLA RQ N/A
RCRA Code N/A
Ketoxime Silane
SARA 313 N/A
TSCA Inventory Yes
CERCLA RQ N/A
RCRA Code N/A
Calcium Carbonate
SARA 313 N/A
TSCA Inventory Yes
CERCLA RQ N/A
RCRA Code N/A
=====

Section 16 -- OTHER INFORMATION
=====

This document is prepared pursuant to the OSHA Hazard Communication
Standard (29 CFR 1910.1200). The information herein is given in good faith,
but no warranty, expressed or implied is made. Consult RectorSeal for further
information: (713) 263-8001

MATERIAL SAFETY DATA SHEET

May be used to comply with OSHA's Hazard Communication Standard. 29CFR. 1910. 1200. Standard must be committed for specific requirements.

69403-1

QUICK IDENTIFIER
Common Name (Used on label & list):

SANIGUARD

SECTION 1 -

Manufacturer

Name: **DEM TECHNOLOGY, LLC**

Address **755 ALBANY STREET** Emergency Phone # **(937) 223-1317**

City, State and Zip **Dayton, OH 45408** Other Information: fax **(937) 223-1380**

Signature of Person
Responsible for Preparation (Optional):

Date:

H		
HEALTH		0
F		
FLAMMABILITY		2
R		
REACTIVITY		1
PERSONAL PROTECTION		A

SECTION 2 - HAZARDOUS INGREDIENTS / IDENTITY

Hazardous Components (chemical & common names)	OSHA PEL	ACGIH TLV	Other Exposure % Limits	CAS NO.
Didecyl Dimethyl Ammonium Chloride			0.096%	7173-51-5

SECTION 3 - PHYSICAL & CHEMICAL CHARACTERISTICS

Boiling Point: **130 °F** Specific Gravity (H₂O=1): **1** Vapor Pressure / mmHg: **40 @ RT**

Vapor Density (Air = 1): **1**

Solubility in Water: **Partially Soluble** Reactivity in Water: **None**

Appearance: **Clear - Slight** Melting Point: **N/A**

SECTION 4 – FIRE & EXPLOSION DATA

Flash Point:	130 °F	Method Used:	TCC	Flammable Limits in Air % by Volume:	LEL Lower: N. D.	UEL Upper: N. D.
Auto-Ignition Temperature:	N. D.	Extinguisher Media:	Foam, CO2, Water, Fog			

Special Fire Fighting Procedures: **Exclude Air, Smother, CO2**

Unusual Fire and Explosion Hazards: **Containers may burst explosively if overheated in fire. This information is based on available scientific evidence known to DEM Technology, LLC. It is provided solely for compliance to the Hazard Communication Standard. This information is furnished without warranty, expressed or implied.**

SECTION 5 – PHYSICAL HAZARDS (REACTIVITY DATA)

Stability:	Unstable	Conditions to Avoid:	N. A. – Not Applicable
	Stable		N. D. – Not Determined

Incompatibility (Materials to Avoid): **N. D.**

Hazardous Decomposition Products: **When heated to decomposition – will ignite**

Hazardous Polymerization:	May Occur	Conditions to Avoid:	N. A.
	Will Not Occur		

SECTION 6 – HEALTH HAZARDS

1. Acute: **N. A.** 2. Chronic **N. A.**

Signs and
Symptoms of Exposure: **Minor irritation eyes**

Medical Conditions Generally
Aggravated by Exposure **N. D.**

Chemical Listed as Carcinogen Or Potential Carcinogen:	National Toxicology Program	Yes No x	L.A.R.C. Monographs	Yes No x	OSHA Yes No x
---	--------------------------------	--------------------	------------------------	--------------------	-------------------------

Emergency and
First Aid Procedures: **Obtain medical help if symptoms persist**

ROUTES OF ENTRY	1. Inhalation:	No Toxicity or Move to Fresh Air
	2. Eyes:	Wash with Cold Water
	3. Skin:	No Toxicity or Wash with Cold Water
	4. Ingestion:	Drink three to four glasses of Milk or Water Do not induce vomiting

SECTION 7 – SPECIAL PRECAUTIONS AND SPILL / LEAK PROCEDURES

Precautions to be taken
in handling and storage: **Do not puncture or incinerate. Exposure to temperatures above
130 °F may cause bursting of container**

Other Precautions: **Keep away from heat, sparks and open flame**

Steps to be Taken in Case
Material is released or spilled: **Contain spill and use absorbents**

Waste Disposal
Methods
(Consult Federal, State and
Local regulations): **Incinerate or dispose of in accordance with Federal, State &
Local regulations**

SECTION 8 – SPECIAL PROTECTION INFORMATION / CONTROL MEASURES

Respiratory Protection
(Specify Type) **N. A.**

Ventilation:	Local Exhaust	Mechanical General XX	Special	Other
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Protective Gloves:	N. A.	Eye Protection:	USE AS DIRECTED
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Other Protective
Clothing or Equipment: **N. A.**

Work / Hygienic Practices: **N. A.**

IMPORTANT:
DO NOT LEAVE ANY BLANK SPACES. If required information is unavailable, unknown or does not apply so indicate.

OSHA-Required Health And Safety Information!

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Section 1

MATERIAL SAFETY DATA SHEET # 105
Hercules furnace cement – clean 'n friendly formulation



Hercules Chemical Company Inc.
 111 South Street
 Passaic NJ 07055
 Phone (800) 221-9330
 Fax (800) 333-3456

Date Prepared: 2/7/2001 Last Reviewed: 4/12/2011

Meets OSHA 29 CFR 1910.1200

Section 2 - Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity; Common Name(s), CAS Numbers)	OSHA PEL	ACGIH TLV	Other Limits	Upper Bound Limit if SARA Reportable
Sodium silicate (1344-09-8)	N/E	N/E	N/A	--

HMIS Hazard Rating: Health: 2 Flammability: 0 Reactivity: 0 Personal Protection: A

Section 3 - Physical/Chemical Characteristics

Boiling Point (°F):	Specific Gravity (H2O = 1):	Vapor Density (Air = 1):	Vapor Pressure (mm Hg):
N/A	1.95 +/- .03	N/A	N/A
Melting Point (° F)	Evaporation Rate: (Butyl Acetate = 1)	Solubility in Water:	VOC Level g/l :
N/A	N/A	Slightly soluble in water and water miscible	0.0
Appearance And Color:	Tan colored paste		Odor: No odor

Section 4 - Fire And Explosion Hazard Data

Flash Point:	Flammable Limits:	LEL:	UEL:
N/A	N/A		

Extinguishing Media: Non-flammable

Special Firefighting Procedures:
 None

Unusual Fire And Explosion Hazards:
 None

Continued on Next Page

Section 5 - Reactivity Data

Stability: Stable **Conditions To Avoid:** None

Incompatibility (Materials To Avoid): Product is alkaline. Avoid contact with acidic materials

Hazardous Decomposition: None

Hazardous Polymerization: Will Not Occur

Section 6 - Health Hazard Data

Routes of Entry: Inhalation N/A **Skin** YES/Primary **Ingestion** Yes/Secondary

Health Hazards:

Prolonged contact with skin can cause irritation. Contact with eyes or open abraded skin can cause severe irritation with superficial destruction of skin tissue.

Carcinogenicity: **NTP** NO **IARC** NO **OSHA Regulated** NO

Signs And Symptoms of Exposure:

Will cause skin irritation on continued contact

Medical Conditions Generally Aggravated By Exposure:

None known

Emergency And First Aid Procedures:

Ingestion: Do not induce vomiting, dilute with water or milk, get medical attention. **Skin:** Wash thoroughly with water. **Eyes:** Flush the material out immediately with plenty of water for at least 15 minutes holding eyelids apart to ensure complete irrigation of all eye and lid tissue. Get medical attention.

Continued on Next Page

Section 7 - Precautions For Safe Handling And Use:**Steps To Be Taken In Case Material Is Released Or Spilled:**

This material is in the form of a paste. Use absorbent material and sweep up.

Waste Disposal Method:

Non-Hazardous landfill.

Precautions To Be Taken In Handling And Storing:

None

Other Precautions:

None

Section 8 - Control Measures:**Respiratory Protection:**

None required

Ventilation: Local Exhaust Adequate
Mechanical N/A

Special N/A

Other: N/A

Gloves: Rubber gloves

Eye Protection: Goggles or safety glasses

Other Protective
Clothing: Standard work clothing.

Work/Hygienic Practices Wash thoroughly after handling.



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OSHA-Required Health And Safety Information!

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Section 1

MATERIAL SAFETY DATA SHEET # 107 Silicone Caulk - White/Clear



MATERIAL SAFETY INFORMATION SERVICE

Hercules Chemical Company Inc.
 111 South Street
 Passaic NJ 07055
 Phone (800) 221-9330
 Fax (800) 333-3456

Date Prepared: 5/28/2004 Last Reviewed: 2/6/2009

Meets OSHA 29 CFR 1910.1200

Section 2 - Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity; Common Name(s), CAS Numbers)	OSHA PEL	ACGIH TLV	Other Limits	Upper Bound Limit if SARA Reportable
Distillates petroleum, hydrotreated CAS # 64742-47-8	N/A	N/A		N/A
Methyltriacetoxysilane CAS # 4253-34-3	N/A	N/A		

HMIS Hazard Rating: Health: 1 Flammability: 1 Reactivity: 0 Personal Protection A

Section 3 - Physical/Chemical Characteristics

Boiling Point (°F):	Specific Gravity (H2O = 1):	Vapor Density (Air = 1):	Vapor Pressure (mm Hg):
N/A	1.05	N/A	Unknown
Melting Point (° F):	Evaporation Rate: (Butyl Acetate = 1)	Solubility in Water:	VOC Level (gpl):
N/A	<1	Insoluble	36
Appearance And Color:	Creamy white/clear paste		Odor: Acetic acid odor

Section 4 - Fire And Explosion Hazard Data

Flash Point:	Flammable Limits:	LEL:	UEL:
>93.3°C, 200°F		N/A	N/A

Extinguishing Media: Large fires use dry chemical, foam or water spray. Small fires use carbon dioxide (CO2), dry chemical or water spray. Water can be used to cool containers exposed to fire.

Special Firefighting Procedures:

Firefighters must wear NIOSH/MSHA approved positive pressure self-contained breathing apparatus with full face mask and full protective clothing.

Unusual Fire And Explosion Hazards:

N/A

Continued on Next Page

Section 5 - Reactivity Data

Stability: Stable **Conditions To Avoid:** None known

Incompatibility (Materials To Avoid): None Known

Hazardous Decomposition: Carbon dioxide (CO₂); Carbon monoxide; Silicon dioxide; Acetic acid; This product contains methylpolysiloxanes which can generate formaldehyde at approximately 300°F (150°C) and above, in atmospheres which contain oxygen.

Hazardous Polymerization: Will Not Occur

Section 6 - Health Hazard Data

Routes of Entry: **Inhalation** Yes **Skin** Yes **Ingestion** Yes

Health Hazards:

Eye: Direct contact moderately irritating with redness and swelling. Exposure to acetic acid may cause chemical conjunctivitis. **Inhalation:** Concentrated vapor may irritate respiratory system or eyes. **Oral:** Incidental transfer of small amounts not considered harmful. Ingestion of large amounts may cause gastrointestinal discomfort. **Skin:** A single short exposure to uncured material (less than 24 hours) may irritate. Repeated prolonged exposure (24 to 48 hours) may irritate moderately. Acetic acid may cause skin irritation.

Carcinogenicity: **NTP** NO **IARC** NO **OSHA Regulated** NO

Signs And Symptoms of Exposure:

Eye: Moderate irritation with redness and swelling. Exposure to acetic acid may cause chemical conjunctivitis. **Inhalation:** Concentrated vapor may irritate respiratory system or eyes. **Oral:** Ingestion of large amounts may cause gastrointestinal discomfort. **Skin:** exposure to uncured material (less than 24 hours) may irritate. Repeated prolonged exposure (24 to 48 hours) may irritate moderately. Acetic acid may cause skin irritation.

Medical Conditions Generally Aggravated By Exposure:

None known.

Emergency And First Aid Procedures:

Ingestion: Do not induce vomiting. If victim is conscious, give 1-3 glasses of water to drink. Never give anything by mouth to an unconscious person. Get medical attention if irritation persists. **Skin:** Wash with soap and water. Get medical attention if irritation or symptoms from Section 3 develop. **Inhalation:** If inhaled, remove to fresh air. If not breathing give artificial respiration using a barrier device. If breathing is difficult give oxygen. Get medical attention. **Eyes:** In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention if irritation persists. Note to physician: Treatment is symptomatic and supportive

Continued on Next Page

Section 7 - Precautions For Safe Handling And Use:**Steps To Be Taken In Case Material Is Released Or Spilled:**

Wipe or scrap up spilled material and dispose in trash. Clean floor surfaces thoroughly or allow product to cure before allowing passage. Even small amounts of uncured product can present a slipping hazard.

Waste Disposal Method:

Disposal should be made in accordance with federal, state and local regulations.

Precautions To Be Taken In Handling And Storing:

Use with adequate ventilation due to the evolution of acetic acid vapors in moist or humid conditions. Avoid eye and skin contact. Store at room temperature for best shelf life. Keep away from oxidizing materials. Keep container closed and stored away from excess moisture or humidity.

Other Precautions:

None

Section 8 - Control Measures:**Respiratory Protection:**

If working with large amounts in confined area, provide adequate ventilation or use organic vapor respirator.

Ventilation: Local Exhaust None
Mechanical N/A

Special N/A

Other: N/A

Gloves: Rubber gloves

Eye Protection: Safety glasses as a minimum.

Other Protective Clothing: Wear suitable protective clothing and eye/face protection.

Work/Hygienic Practices: Wash hands after handling. Do not eat, drink or smoke during handling or working with product.



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OSHA-Required Health And Safety Information!

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Section 1

MATERIAL SAFETY DATA SHEET # 108
Sta Put® Ultra



MATERIAL SAFETY INFORMATION SERVICE

Hercules Chemical Company Inc.
 111 South Street
 Passaic NJ 07055
 Phone (800) 221-9330
 Fax (800) 333-3456

Date Prepared: 8/29/2005 Last Reviewed: 8/10/2006

Meets OSHA 29 CFR 1910.1200

Section 2 - Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity; Common Name(s), CAS Numbers)	OSHA PEL	ACGIH TLV	Other Limits	Upper Bound Limit if SARA Reportable
This product is not classified as hazardous in accordance with OSHA 1910.1200				N/A

HMIS Hazard Rating: Health: 1 Flammability: 0 Reactivity: 0 Personal Protection A

Section 3 - Physical/Chemical Characteristics

Boiling Point (°F):	Specific Gravity (H ₂ O = 1):	Vapor Density (Air = 1):	Vapor Pressure (mm Hg):
N/A	1.95	N/A	N/A
Melting Point (° F):	Evaporation Rate: (Butyl Acetate = 1)	Solubility in Water:	
N/A	N/A	Insoluble	
Appearance And Color:	Off white malleable putty	Odor:	Odorless

Section 4 - Fire And Explosion Hazard Data

Flash Point:	Flammable Limits:	LEL:	UEL:
N/A	N/A	N/A	N/A

Extinguishing Media: Dry chemical or carbon dioxide or water.

Special Firefighting Procedures:

Fire fighters must Wear MSHA/NIOSH approved positive pressure self-contained breathing apparatus with full face mask.

Unusual Fire And Explosion Hazards:

None, product non-flammable

Continued on Next Page

Section 5 - Reactivity Data

Stability: Stable **Conditions To Avoid:** None known

Incompatibility (Materials To Avoid): Strong oxidizers

Hazardous Decomposition: Carbon dioxide and carbon monoxide may be released on burning. May generate formaldehyde at temperatures greater than 150°C (300°F)

Hazardous Polymerization: Will Not Occur

Section 6 - Health Hazard Data

Routes of Entry: Inhalation N/A **Skin** Yes/Primary **Ingestion** Yes/Primary

Health Hazards:

Prolonged contact with skin or eyes may cause irritation. May cause stomach discomfort if ingested.

Carcinogenicity: NTP NO IARC NO OSHA Regulated NO

Signs And Symptoms of Exposure:

None

Medical Conditions Generally Aggravated By Exposure:

None known.

Emergency And First Aid Procedures:

EYES: Irrigate or flush eyes with water for 15 minutes, get medical attention if necessary. **SKIN:** Wash with soap and water. Seek medical attention if irritation develops. **INGESTION:** Not considered toxic but consuming large amounts may cause stomach discomfort or intestinal blockage.

Continued on Next Page

Section 7 - Precautions For Safe Handling And Use:**Steps To Be Taken In Case Material Is Released Or Spilled:**

Sweep Up

Waste Disposal Method:

Non-hazardous landfill

Precautions To Be Taken In Handling And Storing:

None normally required

Other Precautions:

None

Section 8 - Control Measures:**Respiratory Protection:**

None required for putty. If putty dries and dust is created dust-type respirator required.

Ventilation: Local Exhaust Adequate
Mechanical N/A**Special** N/A**Other:** N/A**Gloves:** Not normally required.**Eye Protection:** Advisable to wear safety glasses but none required.**Other Protective Clothing:** None**Work/Hygienic Practices** Always practice good hygiene by washing thoroughly after handling.**FACTS**
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OSHA-Required Health And Safety Information!

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Section 1

MATERIAL SAFETY DATA SHEET # 11
Real Tuff



MATERIAL SAFETY INFORMATION SERVICE

Hercules Chemical Company Inc.
111 South Street
Passaic NJ 07055
Phone (800) 221-9330
Fax (800) 333-3456

Date Prepared: 3/3/1994 Last Reviewed: 1/25/2010

Meets OSHA 29 CFR 1910.1200

Section 2 - Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity; Common Name(s), CAS Numbers)

OSHA PEL

ACGIH TLV

Other Limits

Upper Bound Limit if SARA Reportable

This product is not classified as hazardous in accordance with OSHA 1910.1200. For product at ambient conditions no known hazards exist. See parts 4 & 5 below for information about polytetrafluoroethylene (9002-84-0) at high temperature conditions.

HMIS Hazard Rating: Health: 0 Flammability: 0 Reactivity: 0 Personal Protection: A

Section 3 - Physical/Chemical Characteristics

Boiling Point (°F):	Specific Gravity (H ₂ O = 1):	Vapor Density (Air = 1):	Vapor Pressure (mm Hg):
N/A	1.56	N/A	N/A
Melting Point (° F):	Evaporation Rate: (Butyl Acetate = 1)	Solubility in Water:	VOC Level (g/l):
620		Insoluble	6
Appearance And Color:	White thixotropic paste		Odor: None

Section 4 - Fire And Explosion Hazard Data

Flash Point:	Flammable Limits:	LEL:	UEL:
N/A	N/A		

Extinguishing Media: Dry chemical, foam, carbon dioxide

Special Firefighting Procedures:

Use water to cool fire exposed containers. If a leak or spill has not ignited, use water spray to disperse the vapors to provide protection for personnel.

Unusual Fire And Explosion Hazards:

Toxic fumes given off above 600° F (315° C)

Continued on Next Page

Section 5 - Reactivity Data

Stability: Stable Conditions To Avoid: None.

Incompatibility (Materials To Avoid): Polytetrafluoroethylene not compatible with molten alkali metals.

Hazardous Decomposition: CO₂ and CO form on burning

Hazardous Polymerization: Will not occur

Section 6 - Health Hazard Data

Routes of Entry: Inhalation N/A Skin YES/Primary Ingestion YES/Secondary

Health Hazards:
None

Carcinogenicity: NTP NO IARC NO OSHA Regulated NO

Signs And Symptoms of Exposure:

None: Could be mildly irritating to certain persons on prolonged contact.

Medical Conditions Generally Aggravated By Exposure:

None known

Emergency And First Aid Procedures:

SKIN: Wash with soap & water. EYES: As with most foreign materials should eye contact occur, flush eyes with plenty of water & get medical attention. INGESTION: Do not induce vomiting, get medical attention.

Continued on Next Page

Section 7 - Precautions For Safe Handling And Use:**Steps To Be Taken In Case Material Is Released Or Spilled:**

Use absorbent material and sweep up.

Waste Disposal Method:

Non Hazardous Landfill

Precautions To Be Taken In Handling And Storing:

None

Other Precautions:

Keep away from direct contact with open flame or sparks.

Section 8 - Control Measures:**Respiratory Protection:**

N/A

Ventilation: Local Exhaust Normal ventilation
Mechanical N/A

Special N/A

Other: N/A

Gloves: Rubber gloves

Eye Protection: Goggles or safety glasses

Other Protective Clothing: None required

Work/Hygienic Practices Wash up after handling the material.



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For Hercules Material Safety Data Sheets by fax anytime, day or night, just call 1-800-942-INFO (1-800-942-4636) from any Touch-Tone phone. Have your fax number ready. Checking the product label for the correct MSDS # will save time.

OSHA-Required Health And Safety Information!

This Material Safety Data Sheet (MSDS) was requested moments ago from Hercules Automated Fax Information System. Please forward it immediately to the person in charge of MSDS's, or retain it at the machine until claimed.

Section 1**MATERIAL SAFETY DATA SHEET # 12**
Pro Dope®**MATERIAL SAFETY INFORMATION SERVICE**

Hercules Chemical Company Inc.
111 South Street
Passaic NJ 07055
Phone (800) 221-9330
Fax (800) 333-3456

Date Prepared: 9/14/1989 Last Reviewed: 1/25/2010

Meets OSHA 29 CFR 1910.1200

Section 2 - Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity;
Common Name(s), CAS Numbers)

OSHA PEL

ACGIH TLV

Other Limits

Upper Bound
Limit if SARA
Reportable

This product is not classified as hazardous in accordance with OSHA 1910.1200

HMIS Hazard Rating: Health: 0 Flammability: 0 Reactivity: 0 Personal Protection: A

Section 3 - Physical/Chemical Characteristics

Boiling Point (°F):	Specific Gravity (H ₂ O = 1):	Vapor Density (Air = 1):	Vapor Pressure (mm Hg):
N/A	1.61	N/A	N/A
Melting Point (° F):	Evaporation Rate: (Butyl Acetate = 1)	Solubility in Water:	VOC Level (g/l):
N/A	N/A	Insoluble	10-11
Appearance And Color:	Gray Paste	Odor:	None

Section 4 - Fire And Explosion Hazard Data

Flash Point:	Flammable Limits:	LEL:	UEL:
N/A	N/A		

Extinguishing Media: Dry chemical, foam, carbon dioxide

Special Firefighting Procedures:

Use water to cool fire-exposed containers. If a leak or spill has not ignited, use water spray to disperse the vapors to provide protection for personnel

Unusual Fire And Explosion Hazards:

None

Continued on Next Page

Section 5 - Reactivity Data

Stability: Stable **Conditions To Avoid:** Direct contact with open flame

Incompatibility (Materials To Avoid): None known

Hazardous Decomposition: CO₂ and CO may form on burning

Hazardous Polymerization: Will not occur

Section 6 - Health Hazard Data

Routes of Entry: Inhalation N/A **Skin** YES/Primary **Ingestion** YES/Secondary

Health Hazards:

None

Carcinogenicity: NTP NO IARC NO OSHA Regulated NO

Signs And Symptoms of Exposure:

None. Could be mildly irritating to certain persons on prolonged contact.

Medical Conditions Generally Aggravated By Exposure:

None known

Emergency And First Aid Procedures:

SKIN: Wash with soap & water. **EYES:** As with most foreign materials should eye contact occur, flush eyes with plenty of water and get medical attention if irritation occurs. **INGESTION:** Do not induce vomiting, get medical attention.

Continued on Next Page

Section 7 - Precautions For Safe Handling And Use:

Steps To Be Taken In Case Material Is Released Or Spilled:

Use absorbent material and sweep up.

Waste Disposal Method:

Non-Hazardous landfill

Precautions To Be Taken In Handling And Storing:

None

Other Precautions:

Keep away from direct contact with open flame or sparks.

Section 8 - Control Measures:

Respiratory Protection:

N/A

Ventilation: Local Exhaust Normal ventilation
 Mechanical N/A

Special N/A
Other: N/A

Gloves: Rubber gloves

Eye Protection: Safety glasses with side shield

Other Protective

Clothing: None required

Work/Hygienic Practices: Wash up after handling the material.



For Hercules Material Safety Data Sheets by fax anytime, day or night, just call 1-800-942-INFO (1-800-942-4636) from any Touch-Tone phone. Have your fax number ready. Checking the product label for the correct MSDS # will save time.



OSHA-Required Health And Safety Information!

This Material Safety Data Sheet (MSDS) was requested moments ago from Hercules Automated Fax Information System. Please forward it immediately to the person in charge of MSDS's, or retain it at the machine until claimed.

Section 1

MATERIAL SAFETY DATA SHEET # 120 Hercules PVC Cement, Heavy Body - Tan, "LOW VOC"



**MATERIAL
SAFETY
INFORMATION
SERVICE**

Hercules Chemical Company Inc.
111 South Street
Passaic NJ 07055
Phone (800) 221-9330
Fax (800) 333-3456

Date Prepared: 11/4/1996 Last Reviewed: 11/12/2008

Meets OSHA 29 CFR 1910.1200

Section 2 - Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity;
Common Name(s), CAS Numbers)

OSHA PEL

ACGIH TLV

Other Limits

Upper Bound
Limit if SARA
Reportable

This MSDS is for LOW VOC Product (As shown on label) ONLY. For regular product see MSDS #50.

Tetrahydrofuran (109-99-9)	200 PPM	200 PPM	N/A	--
Methyl Ethyl Ketone (78-93-3)	200 PPM	200 PPM	N/A	--
Cyclohexanone (108-94-1)	50 PPM	20 PPM	N/A	--
Acetone (67-64-1)	1000 PPM	500 PPM	N/A	--

HMIS Hazard Rating: Health: 3 Flammability: 4 Reactivity: 1 Personal Protection: G

Section 3 - Physical/Chemical Characteristics

Boiling Point (°F):	Specific Gravity (H ₂ O = 1):	Vapor Density (Air = 1):	Vapor Pressure (mm Hg):
133 Based on first boiling component-Acetone	0.920 ± 0.03	2.0 to 2.5	190 Based on first boiling component-Acetone

Melting Point (° F):	Evaporation Rate: (Butyl Acetate = 1)	Solubility in Water:	VOC Level:
N/A	7-11	55% to 75%	510 gpl

Appearance And Color: Tan Viscous Liquid Odor: Ethereal & Acetone-like

Section 4 - Fire And Explosion Hazard Data

Flash Point:	Flammable Limits:	LEL:	UEL:
0-6° F (T.C.C.) (Based on Acetone)		2%	13%

Extinguishing Media: Dry chemical. Foam. Carbon dioxide

Special Firefighting Procedures:

Handle as flammable liquid. Wear self-contained breathing apparatus & chemical goggles. Water may be ineffective, but should be used to keep fire-exposed containers cool.

Unusual Fire And Explosion Hazards:

Vapor is heavier than air and travels considerable distance to source of ignition and flashback. On long standing may form peroxides which may cause violent reaction especially upon evaporation to dryness.

Continued on Next Page

Section 5 - Reactivity Data

Stability: Stable **Conditions To Avoid:** Keep in closed containers away from sparks and open flame.

Incompatibility (Materials To Avoid): Strong oxidizing materials, Lithium Aluminum Hydride, Sodium Aluminum Hydroxide, Sodium and Potassium Hydroxides.

Hazardous Decomposition: CO₂ and CO are formed. Irritating peroxide fumes form when heated to decomposition.

Hazardous Polymerization: Avoid excessive exposure to air and cationic initiators like Lewis Acids.

Section 6 - Health Hazard Data

Routes of Entry: **Inhalation** Yes/Primary **Skin** Yes/Primary **Ingestion** Yes/Secondary

Health Hazards:

Corrosive to eyes and skin irritant. Severe overexposure can cause headache, dizziness and narcosis. May cause dermatosis with prolonged repeated contact.

Carcinogenicity: **NTP** NO **IARC** NO **OSHA Regulated** NO

Signs And Symptoms of Exposure:

INGESTION: No effects of exposure expected. **INHALATION:** Will cause irritation of mucous membranes, nose, eyes & throat, coughing, difficulty of breathing. Exposure to high vapor concentration may cause headache, dizziness, nausea, narcosis. **SKIN CONTACT:** Prolonged contact causes common solvent defatting effect. **EYE CONTACT:** Vapors slightly uncomfortable, splashes irritating. Will cause painful burning or stinging of eyes and lids, watering of eyes and inflammation of conjunctiva.

Medical Conditions Generally Aggravated By Exposure:**Emergency And First Aid Procedures:**

INGESTION: Do not induce vomiting. If conscious, dilute by giving 2 glasses of water. Call a physician immediately. **INHALATION:** Remove to fresh air. If not breathing give artificial respiration preferably mouth-to-mouth. If breathing is difficult, give oxygen. Call a physician. **SKIN CONTACT:** Wash affected areas with soapy water. Remove contaminated clothing. **EYE CONTACT:** Immediately flush eyes with plenty of water for 15 minutes. Consult a physician.

Continued on Next Page

Section 7 - Precautions For Safe Handling And Use:**Steps To Be Taken In Case Material Is Released Or Spilled:**

Eliminate sources of ignition. Absorb with sand or inert absorbing material and dispose of with solid waste according to Federal, State and local regulations. Flush spill area with water, avoid flushing into confined areas.

Waste Disposal Method:

Incinerate in accordance with Federal, State and local regulations.

Precautions To Be Taken In Handling And Storing:

Store in cool place, well-ventilated area. Keep away from open flame and sources of ignition.

Other Precautions:

Use normal good personal hygiene.

Section 8 - Control Measures:**Respiratory Protection:**

In confined spaces or other circumstances where adequate ventilation cannot be assured use NIOSH-approved respirator, positive pressure airline mask, or self contained breathing apparatus.

Ventilation: Local Exhaust As required.

Mechanical All ventilating devices must be located so they do not provide a source of ignition.

Special When using cements in an area of limited ventilation, use a ventilation device such as a fan or air mover to maintain a safe air concentration.

Gloves: PVA gloves.

Other: N/A

Eye Protection: Chemical safety goggles.

Other Protective

Clothing: Apron, boots, eye bath, safety shower.

Work/Hygienic Practices: Wash thoroughly after handling. Avoid ingestion of the cements. Do not eat or drink when using cements or in the vicinity where such cements are being used.



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For Hercules Material Safety Data Sheets by fax anytime, day or night, just call 1-800-942-INFO (1-800-942-4636) from any Touch-Tone phone. Have your fax number ready. Checking the product label for the correct MSDS # will save time.

OSHA-Required Health And Safety Information!

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Section 1

MATERIAL SAFETY DATA SHEET # 122
Hercules PVC Cement, "Below Zero"
"LOW VOC"

Date Prepared: 12/8/2008 Last Reviewed: 12/8/2008

Meets OSHA 29 CFR 1910.1200



MATERIAL SAFETY INFORMATION SERVICE

Hercules Chemical Company Inc.
 111 South Street
 Passaic NJ 07055
 Phone (800) 221-9330
 Fax (800) 333-3456

Section 2 - Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity; Common Name(s), CAS Numbers)

OSHA PEL	ACGIH TLV	Other Limits	Upper Bound Limit if SARA Reportable	
This MSDS is for LOW VOC Product (As shown on label) ONLY. For regular product see MSDS #76.				
Tetrahydrofuran (109-99-9)	200 PPM	200 PPM	N/A	--
Methyl Ethyl Ketone (78-93-3)	200 PPM	200 PPM	N/A	--
Cyclohexanone (108-94-1)	50 PPM	20 PPM	N/A	--
Acetone (67-64-1)	1000 PPM	500 PPM	N/A	--

HMIS Hazard Rating: Health: 3 Flammability: 4 Reactivity: 1 Personal Protection: G

Section 3 - Physical/Chemical Characteristics

Boiling Point (°F):	Specific Gravity (H2O = 1):	Vapor Density (Air = 1):	Vapor Pressure (mm Hg):
133 Based on first boiling component-Acetone	0.910 ± 0.03	2.0 to 2.5	190 Based on first boiling component-Acetone
Melting Point (° F):	Evaporation Rate: (Butyl Acetate = 1)	Solubility in Water:	VOC Level:
N/A	7-11	55% to 75%	510 gpl
Appearance And Color:	Clear Viscous Liquid	Odor:	Ethereal & Acetone-like

Section 4 - Fire And Explosion Hazard Data

Flash Point:	Flammable Limits:	LEL:	UEL:
0-6° F (T.C.C.) (Based on Acetone)		2%	13%

Extinguishing Media: Dry chemical. Foam. Carbon dioxide

Special Firefighting Procedures:

Handle as flammable liquid. Wear self-contained breathing apparatus & chemical goggles. Water may be ineffective, but should be used to keep fire-exposed containers cool.

Unusual Fire And Explosion Hazards:

Vapor is heavier than air and travels considerable distance to source of ignition and flashback. On long standing may form peroxides which may cause violent reaction especially upon evaporation to dryness.

Continued on Next Page

Section 5 - Reactivity Data

Stability: Stable **Conditions To Avoid:** Keep in closed containers away from sparks and open flame.
Incompatibility (Materials To Avoid): Strong oxidizing materials, Lithium Aluminum Hydride, Sodium Aluminum Hydroxide, Sodium and Potassium Hydroxides.
Hazardous Decomposition: CO₂ and CO are formed. Irritating peroxide fumes form when heated to decomposition.
Hazardous Polymerization: Avoid excessive exposure to air and cationic initiators like Lewis Acids.

Section 6 - Health Hazard Data

Routes of Entry: **Inhalation** Yes/Primary **Skin** Yes/Primary **Ingestion** Yes/Secondary

Health Hazards:

Corrosive to eyes and skin irritant. Severe overexposure can cause headache, dizziness and narcosis. May cause dermatosis with prolonged repeated contact.

Carcinogenicity: **NTP** NO **IARC** NO **OSHA Regulated** NO

Signs And Symptoms of Exposure:

INGESTION: No effects of exposure expected. **INHALATION:** Will cause irritation of mucous membranes, nose, eyes & throat, coughing, difficulty of breathing. Exposure to high vapor concentration may cause headache, dizziness, nausea, narcosis. **SKIN CONTACT:** Prolonged contact causes common solvent defatting effect. **EYE CONTACT:** Vapors slightly uncomfortable, splashes irritating. Will cause painful burning or stinging of eyes and lids, watering of eyes and inflammation of conjunctiva.

Medical Conditions Generally Aggravated By Exposure:

Emergency And First Aid Procedures:

INGESTION: Do not induce vomiting. If conscious, dilute by giving 2 glasses of water. Call a physician immediately. **INHALATION:** Remove to fresh air. If not breathing give artificial respiration preferably mouth-to-mouth. If breathing is difficult, give oxygen. Call a physician. **SKIN CONTACT:** Wash affected areas with soapy water. Remove contaminated clothing. **EYE CONTACT:** Immediately flush eyes with plenty of water for 15 minutes. Consult a physician.

Continued on Next Page

Section 7 - Precautions For Safe Handling And Use:

Steps To Be Taken In Case Material Is Released Or Spilled:

Eliminate sources of ignition. Absorb with sand or inert absorbing material and dispose of with solid waste according to Federal, State and local regulations. Flush spill area with water, avoid flushing into confined areas.

Waste Disposal Method:

Incinerate in accordance with Federal, State and local regulations.

Precautions To Be Taken In Handling And Storing:

Store in cool place, well-ventilated area. Keep away from open flame and sources of ignition.

Other Precautions:

Use normal good personal hygiene.

Section 8 - Control Measures:

Respiratory Protection:

In confined spaces or other circumstances where adequate ventilation cannot be assured use NIOSH-approved respirator, positive pressure airline mask, or self contained breathing apparatus.

Ventilation: Local Exhaust As required.

Mechanical All ventilating devices must be located so they do not provide a source of ignition.

Special When using cements in an area of limited ventilation, use a ventilation device such as a fan or air mover to maintain a safe air concentration.

Gloves: PVA gloves.

Other: N/A

Eye Protection: Chemical safety goggles.

Other Protective Clothing: Apron, boots, eye bath, safety shower.

Work/Hygienic Practices Wash thoroughly after handling. Avoid ingestion of the cements. Do not eat or drink when using cements or in the vicinity where such cements are being used.



For Hercules Material Safety Data Sheets by fax anytime, day or night, just call 1-800-942-INFO (1-800-942-4636) from any Touch-Tone phone. Have your fax number ready. Checking the product label for the correct MSDS # will save time.

OSHA-Required Health And Safety Information!

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Section 1

MATERIAL SAFETY DATA SHEET # 14
Grrip



MATERIAL SAFETY INFORMATION SERVICE

Hercules Chemical Company Inc.
 111 South Street
 Passaic NJ 07055
 Phone (800) 221-9330
 Fax (800) 333-3456

Date Prepared: 6/18/1986 Last Reviewed: 1/4/2011

Meets OSHA 29 CFR 1910.1200

Section 2 - Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity; Common Name(s), CAS Numbers)	OSHA PEL	ACGIH TLV (TWA)	Other Limits	Upper Bound Limit if SARA Reportable
Isopropanol (67-63-0)	400ppm	200ppm	N/A	--

HMIS Hazard Rating: Health: 1 Flammability: 2 Reactivity: 0 Personal Protection: G

Section 3 - Physical/Chemical Characteristics

Boiling Point (°F): 180 (For Isopropanol)	Specific Gravity (H2O = 1): 1.29	Vapor Density (Air = 1): 2.07	Vapor Pressure (mm Hg): At 20° C 33 (For Isopropanol)
Melting Point (° F) N/A	Evaporation Rate: (Butyl Acetate = 1) 2.88	Solubility in Water: Insoluble	VOC Level (g/L): 186
Appearance And Color: Dark brownish black paste	Odor: Alcohol odor		

Section 4 - Fire And Explosion Hazard Data

Flash Point: 175° F T.C.C.	Flammable Limits: n/a	LEL: 2%	UEL: 12.0% Based on Isopropanol)
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Extinguishing Media: Use dry chemical or alcohol type foam or water spray or carbon dioxide.

Special Firefighting Procedures:

Caution: Combustible mixture. Use self-contained breathing apparatus when handling fires in confined spaces. Use water spray to cool fire exposed surfaces.

Unusual Fire And Explosion Hazards:

Vapors from the product, being heavier than air, may travel to pilot lights and other sources of ignition. Extinguish all such sources of ignition.

Continued on Next Page

Section 5 - Reactivity Data

Stability: Stable **Conditions To Avoid:** Heat, sparks and open flame

Incompatibility (Materials To Avoid): Avoid concentrated nitric and sulfuric acid, strong oxidizers, aldehydes and halogens.

Hazardous Decomposition: Burning may produce carbon monoxide and carbon dioxide.

Hazardous Polymerization: Will not occur

Section 6 - Health Hazard Data

Routes of Entry: **Inhalation** YES/Primary **Skin** YES/Primary **Ingestion** YES/Secondary

Health Hazards:

Ingestion of large quantity may cause drowsiness and loss of consciousness

Carcinogenicity: **NTP** NO **IARC** NO **OSHA Regulated** NO

Signs And Symptoms of Exposure:

INGESTION: Slightly toxic. Ingestion of a large quantity may cause drowsiness and loss of consciousness. Stomach cramps, pain, nausea, vomiting and diarrhea may also occur. **INHALATION:** Concentration may cause mild irritation of eyes, nose and throat. Concentration above the TLV may result in headache and drowsiness. **SKIN CONTACT:** No evidence of adverse effects from available information on skin absorption, but prolonged contact may cause drying and cracking of skin. **EYE CONTACT:** May cause slight to moderate irritation with possible corneal injury.

Medical Conditions Generally Aggravated By Exposure:

N/A

Emergency And First Aid Procedures:

INGESTION: DO NOT induce vomiting. If conscious, dilute by giving large quantities of water or milk. Call a physician immediately. **INHALATION:** Remove to fresh air. If not breathing, give artificial respiration preferably mouth to mouth. If breathing is difficult, give oxygen. Call a physician. **SKIN CONTACT:** Wash the affected area with soap & water. Remove contaminated clothing. **EYE CONTACT:** Immediately flush eyes with plenty of water for 15 minutes. Get medical attention.

Continued on Next Page

Section 7 - Precautions For Safe Handling And Use:**Steps To Be Taken In Case Material Is Released Or Spilled:**

Use absorbent material to pick up small spills. Large spills: Extinguish any ignition source & pick up with absorbent material.

Waste Disposal Method:

Small spills: Non-hazardous landfill. Large spills: Conform with federal, state and local regulations.

Precautions To Be Taken In Handling And Storing:

Keep away from heat, sparks and flame. Avoid contact with eyes. Keep container closed. Use with adequate ventilation.

Other Precautions:

None

Section 8 - Control Measures:**Respiratory Protection:**

None normally required. When handling large quantities use self-contained breathing apparatus if concentration of vapor exceeds 400 ppm.

Ventilation: Local Exhaust N/A

Mechanical Acceptable

Special N/A

Other: N/A

Gloves: Butyl rubber gloves

Eye Protection: Chemical splash goggles.

Other Protective Clothing: None

Work/Hygienic Practices Wash thoroughly after handling.



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For Hercules Material Safety Data Sheets by fax anytime, day or night, just call 1-800-942-INFO (1-800-942-4636) from any Touch-Tone phone. Have your fax number ready. Checking the product label for the correct MSDS # will save time.

OSHA-Required Health And Safety Information!

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Section 1

MATERIAL SAFETY DATA SHEET # 15
Wham®



Hercules Chemical Company Inc.
 111 South Street
 Passaic NJ 07055
 Phone (800) 221-9330
 Fax (800) 333-3456

Date Prepared: 2/1/1993 **Last Reviewed:** 7/28/2010

Meets OSHA 29 CFR 1910.1200

Section 2 - Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity; Common Name(s), CAS Numbers)	OSHA PEL	ACGIH TLV	Other Limits	Upper Bound Limit if SARA Reportable
Methyl Benzoate (93-58-3)	N/D	N/D	N/A	--

HMIS Hazard Rating: Health: 1 Flammability: 1 Reactivity: 0 Personal Protection: G

Section 3 - Physical/Chemical Characteristics

Boiling Point (°F): (198-203° C) 388-399° F	Specific Gravity (H2O = 1): 1.09	Vapor Density (Air = 1): @ 102° F = 4.7	Vapor Pressure (mm Hg): 1.0
Melting Point (° F): N/A	Evaporation Rate: (Butyl Acetate = 1) 1	Solubility in Water: Slightly miscible with water	VOC Level (gpl): 1008
Appearance And Color: Colorless liquid	Odor: Strong fragrant odor		

Section 4 - Fire And Explosion Hazard Data

Flash Point: (82° C) 180° F T.C.C.	Flammable Limits: N/D	LEL: N/A	UEL: N/A
--	---------------------------------	--------------------	--------------------

Extinguishing Media: Water spray, dry chemical, foam, or carbon dioxide.

Special Firefighting Procedures:

Closed containers (drums) exposed to fire should be cooled by water spray to avoid pressure build-up.

Unusual Fire And Explosion Hazards:

None

Continued on Next Page

Section 5 - Reactivity Data

Stability: Stable **Conditions To Avoid:** Heat and open flame

Incompatibility (Materials To Avoid): Strong oxidizing agents

Hazardous Decomposition: Methanol upon hydrolysis; carbon dioxide and monoxide on combustion.

Hazardous Polymerization: Will Not Occur

Section 6 - Health Hazard Data

Routes of Entry: **Inhalation** YES/Primary **Skin** YES/Primary **Ingestion** YES/Secondary

Health Hazards:

None; evaluated as a skin sensitizing chemical and found to be negative.

Carcinogenicity: **NTP** NO **IARC** NO **OSHA Regulated** NO

Signs And Symptoms of Exposure:

EYE: May cause mild eye irritation.

SKIN: May cause mild skin irritation.

INHALATION: May cause headache and / or nausea in some individuals.

INGESTION: Ingestion of large amount may produce temporary mild discomfort.

Medical Conditions Generally Aggravated By Exposure:

None known.

Emergency And First Aid Procedures:

EYES: In case of contact, immediately flush with plenty of low pressure water for at least 15 minutes. Remove any contact lenses to assure thorough flushing. Call a physician. **SKIN:** Promptly flush with soap and water. Remove contaminated clothing. Wash clothing before reuse. **INHALATION:** Remove to fresh air if odor causes headache and/ or nausea. **INGESTION:** Get medical attention immediately. If conscious, the person should immediately drink large quantities of liquid to dilute this product. Never give liquids to an unconscious person. **DO NOT** induce vomiting. Call a physician immediately. **NOTE TO PHYSICIAN:** Remove from stomach by gastric lavage. Aspiration may cause hydrocarbon pneumonia.

Continued on Next Page

Section 7 - Precautions For Safe Handling And Use:**Steps To Be Taken In Case Material Is Released Or Spilled:**

Extinguish sources of ignition. Dike to contain. Pump into clean, covered steel drums for disposal. Small spill: Absorb with vermiculite or absorb material and pick up for disposal.

Waste Disposal Method:

Small spill: Non-hazardous landfill. Large spills: Not listed in federal regulations, but check applicable state & local waste regulations.

Precautions To Be Taken In Handling And Storing:

Keep away from ignition sources such as sparks and open flame.

Other Precautions:

None

Section 8 - Control Measures:**Respiratory Protection:**

In confined spaces or other circumstances where adequate ventilation cannot be assured use NIOSH-approved respirator, positive pressure airline mask, or self contained breathing apparatus.

Ventilation:	Local Exhaust	Adequate	Special	N/A
	Mechanical	N/A	Other:	N/A

Gloves: Neoprene or Buna-N

Eye Protection: Chemical safety goggles.

Other Protective Clothing: N/A

Work/Hygienic Practices Use good personal hygiene practices. Wash after handling.

Additional Information:

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For Hercules Material Safety Data Sheets by fax anytime, day or night, just call 1-800-942-INFO (1-800-942-4636) from any Touch-Tone phone. Have your fax number ready. Checking the product label for the correct MSDS # will save time.

OSHA-Required Health And Safety Information!

This Material Safety Data Sheet (MSDS) was requested moments ago from Hercules Automated Fax Information System. Please forward it immediately to the person in charge of MSDS's, or retain it at the machine until claimed.

Section 1

MATERIAL SAFETY DATA SHEET # 16 Clobber®

Date Prepared: 6/4/1991 Last Reviewed: 8/25/2011

Meets OSHA 29 CFR 1910.1200



MATERIAL SAFETY INFORMATION SERVICE

Hercules Chemical Company Inc.
 111 South Street
 Passaic NJ 07055
 Phone (800) 221-9330
 Fax (800) 333-3456

Section 2 - Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity; Common Name(s), CAS Numbers)

	OSHA PEL	ACGIH TLV	Other Limits	% Upper Bound Limit if SARA Reportable
This product is not for consumer use or sale. For professional use only. Always replace cap after use.				
Sulfuric Acid (7664-93-9)	1 mg/m ³	1 mg/m ³ (Mist)	N/A	93%

HMIS Hazard Rating: Health: 3 Flammability: 0 Reactivity: 2 Personal Protection: H

Section 3 - Physical/Chemical Characteristics

Boiling Point (°C):	Specific Gravity (H₂O =1):	Vapor Density (Air =1):	Vapor Pressure (mm Hg):
279 (535°F)	1.84	N/A	<1
Melting Point (° F)	Evaporation Rate:	Solubility in Water:	
N/A	N/A	Completely Soluble	
Appearance And Color:	Brown oily liquid.		Odor: Sulphur dioxide (Rotten Egg) odor

Section 4 - Fire And Explosion Hazard Data

Flash Point:	Flammable Limits:	LEL:	UEL:
Not Flammable	N/A		

Extinguishing Media: For fires in the area, use approved extinguishing media such as water, CO² or dry chemical. Use water spray or fog to knock down corrosive vapor cloud.

Special Firefighting Procedures:

Wear approved positive pressure self contained breathing apparatus and full acid protective clothing when possibility of acid contact exists. Addition of water to the acid causes violent generation of heat, possible splattering, violent eruption and increased corrosion.

Unusual Fire And Explosion Hazards:

Non-flammable, but may cause ignition by contact with combustible material. Dilute acid reacts with most metals giving off flammable hydrogen gas.

Continued on Next Page

Section 5 - Reactivity Data

Stability: Stable **Conditions To Avoid:** Avoid temperatures greater than 300°C. Yields toxic and corrosive sulfur trioxide gas.

Incompatibility (Materials To Avoid): Strong reducing agents, powdered metals organic and combustible materials, carbides, chlorates, nitrates, fulminates, picrates.

Hazardous Decomposition: Sulfur trioxide gas, sulfuric acid mist, sulfur dioxide at elevated temperatures.

Hazardous Polymerization: Will not occur

Section 6 - Health Hazard Data

Routes of Entry: **Inhalation?** YES/Primary **Skin?** YES/Primary **Ingestion?** YES/Secondary

Health Hazards:

Rapidly causes severe burns to skin, eyes and all body tissue. Ingestion may cause burns to mouth, esophagus and stomach. Inhalation of vapors/mist may cause respiratory irrit:NO i overexposure to vapors/mist may result in damage to teeth.

Carcinogenicity: **NTP?** NO **IARC?** NO **OSHA Regulated?**

NOTE: Sulfuric acid mist is listed as a known carcinogen by both the NTP and IARC.

Signs And Symptoms of Exposure:

INHALATION: Acid mist or vapors may cause damage to the upper respiratory tract and even to the lung tissue proper which could produce delayed pulmonary reaction, depending upon severity of exposure. **SKIN CONTACT:** Sulfuric acid is destructive to tissues contacted and produces severe burns. **EYE CONTACT:** Will cause severe burns that result in eye damage and even blindness. **INGESTION:** Sulfuric acid, if swallowed, can cause severe burns and complete tissue perforation of mucous membranes of the mouth, throat, esophagus and stomach. **ACUTE OVEREXPOSURE:** Corrosive to all body tissues with which it comes into contact. **CHRONIC OVEREXPOSURE:** The chronic local effect may consist of multiple areas of superficial destruction of the skin or of primary irritant dermatitis. Similarly, inhalation of vapors or mist may result in varying degrees of irritation to the respiratory tract and increased susceptibility to respiratory illness.

Medical Conditions Generally Aggravated By Exposure:

See "Signs & Symptoms of Exposure", above.

Emergency And First Aid Procedures:

EYES: Object is to flush material out immediately then seek medical attention. Immediately flush eyes with large amounts of water for at least 15 minutes, holding lids apart to ensure flushing of the entire surface. Washing eyes within 1 minute is essential to achieve maximum effectiveness. Seek medical attention immediately. **SKIN:** The most important first aid measure for sulfuric acid burns is the immediate application of a large quantity of running water. Wash contaminated areas with plenty of water. Remove contaminated clothing and footwear and wash clothing before reuse. Discard footwear which cannot be decontaminated. Seek medical attention immediately. **INHALATION:** Get person out of contaminated area into fresh air. If breathing has stopped, resuscitate and administer oxygen if readily available. Seek medical attention immediately. **INGESTION:** Never give anything by mouth to an unconscious person. If swallowed, do not induce vomiting. Give large quantities of water. If vomiting occurs spontaneously, keep airway clear. Seek medical attention immediately.

Continued on Next Page

Section 7 - Precautions For Safe Handling And Use:**Steps To Be Taken In Case Material Is Released Or Spilled:**

Spill area should be isolated to avoid employee exposure. Dike large spills. Flush away by flooding with water applied quickly to entire area. Use soda ash or lime to neutralize any remaining acidity.

Waste Disposal Method:

Comply with federal, state and local regulations concerning disposal to streams, treatment plants or impounding basins.

Precautions To Be Taken In Handling And Storing:

Avoid contact with skin, eyes and clothing. Wear full acid protective clothing. Remove sources of ignition. Before removing the outer container, be sure the closure is securely fastened.

Other Precautions:

Store in cool dry place. Keep separate from alkalis, metal explosives and easily ignitable materials.

Section 8 - Control Measures:**Respiratory Protection:**

Self-contained breathing apparatus or mask with canister for sulfur dioxide.

Ventilation: Local Exhaust? As required to control mist or vapors. **Special?** N/A

Mechanical: N/A **Other:** N/A

Gloves: Use rubber or plastic gloves.

Eye Protection: Chemical safety goggles.

Other Protective Clothing: Rubber gauntlets, rubber aprons, hard hat or rubber hood, full rubber acid suit & rubber shoes.

Work/Hygienic Practices: Wash thoroughly after handling.



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OSHA-Required Health And Safety Information!

This Material Safety Data Sheet (MSDS) was requested moments ago from Hercules Automated Fax Information System. Please forward it immediately to the person in charge of MSDS's, or retain it at the machine until claimed.

Section 1

MATERIAL SAFETY DATA SHEET # 17
Sizzle®



MATERIAL SAFETY INFORMATION SERVICE

Hercules Chemical Company Inc.
 111 South Street
 Passaic NJ 07055
 Phone (800) 221-9330
 Fax (800) 333-3456

Date Prepared: 1/31/1990 Last Reviewed: 10/10/2005

Meets OSHA 29 CFR 1910.1200

Section 2 - Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity; Common Name(s), CAS Numbers)	OSHA PEL	ACGIH TLV	Other Limits	Upper Bound Limit if SARA Reportable
This product is not for consumer use or sale. For professional use only. Replace cap after use.				
Hydrochloric Acid (7647-01-0)	5ppm (7mg/m ³)	5ppm (7mg/m ³)	N/A IDLH: 50 ppm	31%

HMIS Hazard Rating: Health: 3 Flammability: 0 Reactivity: 2 Personal Protection: H

Section 3 - Physical/Chemical Characteristics

Boiling Point (°F):	Specific Gravity (H₂O = 1):	Vapor Density (Air = 1):	Vapor Pressur (mm Hg):
181	1.14 to 1.16	1.27	35
Melting Point (° F)	Evaporation Rate: (Butyl Acetate = 1)	Solubility in Water:	
N/A	>1	Completely soluble	
Appearance And Color:	Light yellow liquid	Odor: Pungent, acid odor	

Section 4 - Fire And Explosion Hazard Data

Flash Point:	Flammable Limits	LEL:	UEL:
Not flammable	N/A		

Extinguishing Media: For fires in the area use water, foam, dry chemical or CO₂.

Special Firefighting Procedures:

Neutralize with chemically alkaline substances, such as soda ash or slaked lime to avoid formation of potentially explosive hydrogen gas. . Cool the containers with water if exposed to fire. Wear full protective clothing.

Unusual Fire And Explosion Hazards:

Contact with common metals may produce flammable, potentially explosive hydrogen gas.

Continued on Next Page

Section 5 - Reactivity Data

Stability: Stable **Conditions To Avoid:** Do not store near or mix with strong alkalis such as sodium or potassium hydroxide.

Incompatibility (Materials To Avoid): Corrosive to most metals with evolution of hydrogen gas. May react with cyanides, sulfides or formaldehyde releasing toxic gases.

Hazardous Decomposition: Hydrogen Chloride gas and Hydrogen

Hazardous Polymerization: Will not occur

Section 6 - Health Hazard Data

Routes of Entry **Inhalation** YES/Primary **Skin** Yes/Primary **Ingestion** Yes/Secondary

Health Hazards

Excessive contact can cause eye and skin burns. Ingestion causes severe burns to mouth, esophagus and stomach. Vapor extremely irritating.

Carcinogenicity **NTP** NO **IARC** NO **OSHA Regulated** NO

Signs And Symptoms of Exposure:

Irritation of eyes and skin. Inhalation of fumes may result in coughing and choking sensation.

Medical Conditions Generally Aggravated By Exposure:

INGESTION: Severe damage to internal organs (esophagus & pylorus) will occur if swallowed in large quantities.

INHALATION: Fumes from product can cause injury to respiratory tract. Severe exposure can cause lung damage.

SKIN CONTACT: Prolonged contact causes burns, skin irritation with discomfort and rash. **EYE CONTACT:** Will cause eye burn and irritation with discomfort, tearing or blurring of vision.

Emergency And First Aid Procedures:

INGESTION: Do not induce vomiting. If conscious, dilute by giving large quantities of water or milk. Do not give carbonates. Call a physician immediately. **INHALATION:** If excess fumes from the product are inhaled remove to fresh air. If not breathing give artificial respiration preferably mouth to mouth. If breathing is difficult give oxygen. Call a physician. **SKIN CONTACT:** Wash affected skin area with soapy water. Remove contaminated clothing. If burn/rash appears consult a physician immediately. **EYE CONTACT:** Immediately flush eyes with plenty of water for 15 minutes. Consult a physician immediately.

Continued on Next Page

Section 7 - Precautions For Safe Handling And Use:**Steps To Be Taken In Case Material Is Released Or Spilled:**

Evacuate area; keep upwind until gas has dispersed. If necessary to enter spill area, wear self-contained breathing apparatus & full protective clothing including boots. Dike large spills, dilute and neutralize washing with Lime or Soda Ash. Comply with federal, state & local regulations.

Waste Disposal Method:

Flush thoroughly with water applied to entire spill. Large spill: Washing should be neutralized with lime/soda ash before discharging to sewer.

Precautions To Be Taken In Handling And Storing:

Keep container tightly closed, away from heat, sparks & flame. Keep in cool place. Do not mix cyanides, sulfides or formaldehydes. Protect containers from damage.

Other Precautions:

Store container out of sun and away from heat. Never use pressure to empty containers.

Section 8 - Control Measures:**Respiratory Protection:**

Self-contained breathing apparatus or mask with canister for HCL fumes.

Ventilation: Local Exhaust Maintain adequate ventilation.

Special N/A

Mechanical N/A

Other: N/A

Gloves: Long rubber or plastic gloves.

Eye Protection: Chemical safety goggles and face shield.

Other Protective Clothing: Rubber apron, rubber boots, long sleeve shirts.

Work/Hygienic Practice: Wash after use. Wash contacted clothing before re-use.

Additional Information:

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For Hercules Material Safety Data Sheets by fax anytime, day or night, just call 1-800-942-INFO (1-800-942-4636) from any Touch-Tone phone. Have your fax number ready. Checking the product label for the correct MSDS # will save time.

OSHA-Required Health And Safety Information!

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Section 1

MATERIAL SAFETY DATA SHEET # 19 R-D Root Destroyer



MATERIAL SAFETY INFORMATION SERVICE

Hercules Chemical Company Inc.
111 South Street
Passaic NJ 07055
Phone (800) 221-9330
Fax (800) 333-3456

Date Prepared: 1/31/1990 Last Reviewed: 9/13/2011

Meets OSHA 29 CFR 1910.1200

Section 2 - Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity; Common Name(s), CAS Numbers)	OSHA PEL	ACGIH TLV	Other Limits	Upper Bound Limit if SARA Reportable
Copper Sulphate Pentahydrate (7758-99-8)	1.0mg/M ³	1.0mg/M ³ (Dust/Mist)	N/A	98%

HMIS Hazard Rating: Health: 2 Flammability: 0 Reactivity: 1 Personal Protection: E

Section 3 - Physical/Chemical Characteristics

Boiling Point (°F): N/A	pH: 3.7-4.2 (10% solution)	Specific Gravity (H ₂ O = 1): 2.284	Vapor Density (Air = 1): 8.6	Vapor Pressure (mm Hg): N/A	VOC Level (g/l): 0
Melting Point (° F): 230°F (110°C)	Evaporation Rate: (Butyl Acetate = 1) N/A	Solubility in Water: Dissolves in water 22.7% @0°C, 117.95 @100°C			
Appearance And Color: Blue granular crystals.	Odor: Odorless				

Section 4 - Fire And Explosion Hazard Data

Flash Point: N/A	Flammable Limits: N/A	LEL:	UEL:
---------------------	--------------------------	------	------

Extinguishing Media: Dry chemical, Carbon Dioxide, Water spray, alcohol foam

Special Firefighting Procedures:

Use extinguishing media as appropriate for surrounding fire. Use CO₂, dry chemical, or water. Avoid direct water stream on molten material, splattering may occur. Firefighters should wear self-contained breathing apparatus and full protective clothing.

Unusual Fire And Explosion Hazards:

Heated above 110° C will melt and flow. Sealed containers may rupture when heated due to release of water from crystals. Material is acidic when dissolved in water. Contact with magnesium metal may evolve hydrogen gas. Anhydrous cupric sulfate formed on water loss (white color). Anhydrous salt will ignite hydroxylamine if present. At temperature greater than 600° C decomposes to cupric oxide and sulfur dioxide.

Continued on Next Page

Section 5 - Reactivity Data

Stability: Stable **Conditions To Avoid:** High heat and reducing agents
Incompatibility (Materials To Avoid): Contact with magnesium metal may generate dangerous level of hydrogen gas.
Hazardous Decomposition: Above 600° C SO₂ may evolve; none at normal process temperature and pressure.
Hazardous Polymerization: Will Not Occur

Section 6 - Health Hazard Data

Routes of Entry: Inhalation YES/Primary **Skin** YES/Primary **Ingestion** YES/Secondary

Health Hazards:

May cause nose irritation. Chronic hazard is very rare except in individuals with Wilson's Disease.

Carcinogenicity: **NTP** NO **IARC** NO **OSHA Regulated** NO

Signs And Symptoms of Exposure:

Localized skin discoloration, itching, eye irritation, ulceration of nasal septum may occur. Repeated or prolonged skin contact may cause dermatitis.

Medical Conditions Generally Aggravated By Exposure:

Wilson's Disease (Individual absorbs, retains and stores copper excessively).

Emergency And First Aid Procedures:

Treat most urgent symptoms first. Cessation of breathing, eye injury, skin contact, shock. In all cases seek medical attention. **INHALATION:** Move to fresh air, administer CPR if required. **EYES:** Flush with large amounts of water at least 15 minutes. Hold lids open during flushing. **SKIN:** Flush with large amounts of water at least 15 minutes. Remove contaminated clothing. **INGESTION:** May cause severe GI tract irritation. Give conscious victim 2-3 glasses of milk and water to drink. Induce vomiting in conscious person. Get medical attention.

Continued on Next Page

Section 7 - Precautions For Safe Handling And Use:**Steps To Be Taken In Case Material Is Released Or Spilled:**

Sweep up crystals or powder, vacuum is preferred. Prevent accidental entry of solution into streams and other bodies of water.

Waste Disposal Method:

For disposal of large quantities of waste, consult appropriate federal, state and local officials.

Precautions To Be Taken In Handling And Storing:

Store in closed containers in cool, dry and well ventilated area away from heat sources and reducing agents. Use good housekeeping practice to prevent dust accumulation.

Other Precautions:

Avoid breathing dust or solution mist.

Section 8 - Control Measures:**Respiratory Protection:**

Where the possibility of dust exists, use NIOSH/MSHA approved dust mask.

Ventilation: Local Exhaust Adequate
Mechanical N/A

Special N/A
Other: N/A

Gloves: Rubber

Eye Protection: Chemical goggles where splashing possible.

Other Protective Clothing: Wear protective clothing when necessary.

Work/Hygienic Practices Use good personal hygiene. Wash hands before eating. Avoid inhalation or ingestion.

Additional Information:

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OSHA-Required Health And Safety Information!

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Section 1**MATERIAL SAFETY DATA SHEET # 22**
Sta Put®**MATERIAL SAFETY INFORMATION SERVICE**

Hercules Chemical Company Inc.
111 South Street
Passaic NJ 07055
Phone (800) 221-9330
Fax (800) 333-3456

Date Prepared: 12/17/1986 Last Reviewed: 1/25/2010

Meets OSHA 29 CFR 1910.1200

Section 2 - Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity;
Common Name(s), CAS Numbers)

OSHA PEL

ACGIH TLV

Other Limits

Upper Bound
Limit if SARA
Reportable

This product is not classified as hazardous in accordance with OSHA 1910.1200

HMIS Hazard Rating: Health: 0 Flammability: 0 Reactivity: 0 Personal Protection: A

Section 3 - Physical/Chemical Characteristics

Boiling Point (°F):	Specific Gravity (H ₂ O = 1):	Vapor Density (Air = 1):	Vapor Pressure (mm Hg):
N/A	1.89	N/A	N/A

Melting Point (° F):	Evaporation Rate: (Butyl Acetate = 1)	Solubility in Water:	VOC Level (g/l):
N/A		Insoluble	10

Appearance And Color: Beige color mastic **Odor:** Very mild vegetable oil odor.

Section 4 - Fire And Explosion Hazard Data

Flash Point:	Flammable Limits:	LEL:	UEL:
N/A			

Extinguishing Media: Dry chemical or carbon dioxide or water.

Special Firefighting Procedures:
As appropriate for surrounding fire.

Unusual Fire And Explosion Hazards:
None

Continued on Next Page

Section 5 - Reactivity Data

Stability: Stable Conditions To Avoid: None

Incompatibility Strong oxidizers
(Materials To Avoid):

Hazardous Decomposition: Carbon dioxide and carbon monoxide may be released on burning.

Hazardous Polymerization: Will Not Occur

Section 6 - Health Hazard Data

Routes of Entry: Inhalation N/A Skin YES/Primary Ingestion YES/Primary

Health Hazards:
None known

Carcinogenicity: NTP NO IARC NO OSHA Regulated NO

Signs And Symptoms of Exposure:

None

Medical Conditions Generally Aggravated By Exposure:

None known

Emergency And First Aid Procedures:

EYES: As with most foreign materials should eye contact occur, flush eyes with plenty of water and get medical attention. SKIN: Wash with soap and water. INGESTION: Do not induce vomiting. Call a physician if there is any discomfort.

Continued on Next Page

Section 7 - Precautions For Safe Handling And Use:**Steps To Be Taken In Case Material Is Released Or Spilled:**

Sweep up

Waste Disposal Method:

Non-hazardous landfill

Precautions To Be Taken In Handling And Storing:

None normally required

Other Precautions:

None

Section 8 - Control Measures:**Respiratory Protection:**

None required for putty. If putty dries and dust is created dust-type respirator required.

Ventilation: Local Exhaust Adequate
Mechanical N/A

Special N/A

Other: N/A

Gloves: Not normally required.**Eye Protection:** None required**Other Protective
Clothing:** None**Work/Hygienic Practices** Wash thoroughly after handling.**Additional Information:****F**ACTS
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OSHA-Required Health And Safety Information!

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Section 1

MATERIAL SAFETY DATA SHEET # 24
Pro Poxy 20



Hercules Chemical Company Inc.
 111 South Street
 Passaic NJ 07055
 Phone (800) 221-9330
 Fax (800) 333-3456

Date Prepared: 1/28/1987 Last Reviewed: 8/18/2009

Meets OSHA 29 CFR 1910.1200

Section 2 - Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity; Common Name(s), CAS Numbers)	OSHA PEL	ACGIH TLV	Other Limits	Upper Bound Limit if SARA Reportable
Diglycidyl ethers of bisphenol A CAS # 25036-25-3	N/A	N/A		--
2,4,6, Tri (Dimethylaminomethyl) Phenol (90-72-2)	N/A	5PPM	N/A	--
Epoxy Resin (Diglycidyl Ether of Bisphenol A) (25068-38-6)	N/A	N/A	N/A	
Zinc Sulfide CAS 1314-98-3	5mg/m3	5mg/m3		

HMIS Hazard Rating: Health: 1 Flammability: 0 Reactivity: 0 Personal Protection: B

Section 3 - Physical/Chemical Characteristics

Boiling Point (°F):	Specific Gravity (H2O = 1):	Vapor Density (Air = 1):	Vapor Pressure (mm Hg):
N/A	1.97	N/A	N/A
Melting Point (° F):	Evaporation Rate: (Butyl Acetate = 1)	Solubility in Water:	VOC Level:
N/A		Not soluble	<0.1%
Appearance And Color:	2 components in mastic form: Off-white gray/black		Odor: Mercaptan odor

Section 4 - Fire And Explosion Hazard Data

Flash Point:	Flammable Limits:	LEL:	UEL:
>140°F Method: N/A		N/A	N/A

Extinguishing Media: Water fog, foam, CO2, and dry chemical.

Special Firefighting Procedures:

Fire fighters and others who may be exposed to the products of combustion should be equipped with NIOSH approved, positive pressure self contained breathing apparatus (SCBA) and full protective clothing.

Unusual Fire And Explosion Hazards:

None

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Section 5 - Reactivity Data

Stability: Stable Conditions To Avoid: None

Incompatibility None
(Materials To Avoid):

Hazardous Decomposition: Carbon monoxide, aldehydes, acids, oxides of sulfur and nitrogen may be formed.

Hazardous Polymerization: Will Not Occur

Section 6 - Health Hazard Data

Routes of Entry: Inhalation N/A Skin YES/Secondary Ingestion YES/Secondary

Health Hazards:
None known

Carcinogenicity: NTP NO IARC NO OSHA Regulated NO

Signs And Symptoms of Exposure:

EYE: May cause moderate eye irritation.

SKIN: Prolonged and repeated contact may cause skin irritation with local redness.

INGESTION: Very low toxicity if swallowed.

INHALATION: N/A

Medical Conditions Generally Aggravated By Exposure:

None

Emergency And First Aid Procedures:

SKIN CONTACT: After using, wash hands with soap and water. EYE CONTACT: Flush with water for 15 minutes. Get medical attention. INGESTION: No emergency medical treatment necessary.

Continued on Next Page

Section 7 - Precautions For Safe Handling And Use:**Steps To Be Taken In Case Material Is Released Or Spilled:**

Sweep up in normal manner

Waste Disposal Method:

Non-hazardous landfill

Precautions To Be Taken In Handling And Storing:

None

Other Precautions:

Store in cool, dry, well-ventilated area.

Section 8 - Control Measures:**Respiratory Protection:**

N/A

Ventilation: Local Exhaust Adequate
Mechanical N/A

Special N/A
Other N/A

Gloves: Polyethylene gloves for prolonged use.

Eye Protection: Safety glasses or goggles

Other Protective
Clothing: None required

Work/Hygienic Practices Wash thoroughly with warm water and soap after handling.

Additional Information:**F**ACTS
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OSHA-Required Health And Safety Information!

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Section 1

MATERIAL SAFETY DATA SHEET # 26 Roof & Flashing Sealant



**MATERIAL
 SAFETY
 INFORMATION
 SERVICE**

Hercules Chemical Company Inc.
 111 South Street
 Passaic NJ 07055
 Phone (800) 221-9330
 Fax (800) 333-3456

Date Prepared: 12/19/1989 Last Reviewed: 1/20/2011

Meets OSHA 29 CFR 1910.1200

Section 2 - Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity;
 Common Name(s), CAS Numbers)

OSHA PEL

ACGIH TLV

Other Limits

Upper Bound
 Limit if SARA
 Reportable

*These components are totally encapsulated in paste.

Asphalt (8052-42-4)	N.E.	5 mg/m ³	5 mg/m ³ (NIOS	--
Aliphatic hydrocarbons (8052-41-3)	100PPM	100PPM	350 mg/m ³ (NIOSH	--
Amorphous Alumina Silicates (93763-70-3)	15 mg/m ³	10 mg/m ³	N/A	--
Attapulgite Clay (12174-11-7)*	N/A	5 mg/m ³	N/A	--
Cellulosic Fibers (9004-34-6)*	5 mg/m ³	5 mg/m ³	N/A	--
Polymers (9003-55-8)	N/A	N/A	N/A	--
Cationic Salts (28701-67-9)*	N/A	N/A	N/A	--

HMIS Hazard Rating: Health: 2 Flammability: 2 Reactivity: 0 Personal Protection: C

Section 3 - Physical/Chemical Characteristics

Boiling Point (°F):

Specific Gravity
 (H₂O = 1):

Vapor Density
 (Air = 1):

Vapor Pressure
 (mm Hg):

315 1.1 3.9 @20° C 1

Melting Point (° F)

Evaporation Rate:
 (Butyl Acetate = 1)

Solubility in Water:

N/A

0.1

Negligible

VOC Level (g/l) : 300

Appearance And Color:

Black paste

Odor: Mild solvent odor

Section 4 - Fire And Explosion Hazard Data

Flash Point:

Flammable Limits:

LEL:

UEL:

100° F TCC

1.0% 7.0%

Extinguishing Media: Foam, Carbon Dioxide, Water Fog

Special Firefighting Procedures:

Do not use water as liquid

Unusual Fire And Explosion Hazards:

None

Continued on Next Page

Section 5 - Reactivity Data

Stability: Stable Conditions To Avoid: None

Incompatibility None known
(Materials To Avoid):

Hazardous Decomposition: Carbon monoxide and carbon dioxide

Hazardous Polymerization: None known

Section 6 - Health Hazard Data

Routes of Entry: Inhalation YES/Primary Skin YES/Primary Ingestion YES/Secondary

Health Hazards:

Inhalation of high vapor concentrations can cause dizziness and headaches. Prolonged skin contact can lead to dry and irritated skin possibly causing dermatitis.

Carcinogenicity: NTP NO IARC NO OSHA Regulated NO

Signs And Symptoms of Exposure:

Dizziness, nausea

Medical Conditions Generally Aggravated By Exposure:

N/A

Emergency And First Aid Procedures:

Remove to fresh air and call physician as soon as possible. If unconscious, give artificial respiration. If splashed in eyes, flush thoroughly with water.

Continued on Next Page

Section 7 - Precautions For Safe Handling And Use:**Steps To Be Taken In Case Material Is Released Or Spilled:**

Remove all sources of ignition (Flames, hot surfaces and electrical, static or frictional sparks). Avoid breathing vapors. Ventilate area. Remove with inert absorbent and non-sparking tools.

Waste Disposal Method:

Dispose in accordance with local, state and federal regulations. Incinerate in approved facility. Do not incinerate in closed containers.

Precautions To Be Taken In Handling And Storing:

Do not store above 120° F. Store large quantities in buildings designed and protected for storage of NFPA combustible liquids.

Other Precautions:

None

Section 8 - Control Measures:**Respiratory Protection:**

In confined spaces or other circumstances where adequate ventilation cannot be assured use NIOSH-approved respirator, positive pressure airline mask, or self contained breathing apparatus.

Ventilation: Local Exhaust Adequate
Mechanical N/A

Special N/A

Other: N/A

Gloves: Regular working gloves.

Eye Protection: Use safety eyewear.

Other Protective Clothing: Clothing that prevents skin contact with material.

Work/Hygienic Practices Prevent prolonged skin contact with contaminated clothing.

Additional Information:

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OSHA-Required Health And Safety Information!

This Material Safety Data Sheet (MSDS) was requested moments ago from Hercules Automated Fax Information System. Please forward it immediately to the person in charge of MSDS's, or retain it at the machine until claimed.

Section 1

MATERIAL SAFETY DATA SHEET # 28 Hercules Plumber's Caulk - White/Linen



MATERIAL SAFETY INFORMATION SERVICE

Hercules Chemical Company Inc.
111 South Street
Passaic NJ 07055
Phone (800) 221-9330
Fax (800) 333-3456

Date Prepared: 9/14/1989 Last Reviewed: 2/23/2011

Meets OSHA 29 CFR 1910.1200

Section 2 - Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity; Common Name(s), CAS Numbers)	OSHA PEL	ACGIH TLV	Other Limits	Upper Bound Limit if SARA Reportable
Butyl benzyl phthalate (Cas # 85-68-7)	N/A	N/A		
Distillates (Petroleum) Hydrotreated Middle (Cas # 64742-46-7)	5 mg/m ³	5 mg/m ³		

HMIS Hazard Rating: Health: 1 Flammability: 0 Reactivity: 0 Personal Protection: A

Section 3 - Physical/Chemical Characteristics

Boiling Point (°F):	Specific Gravity (H ₂ O = 1):	Vapor Density (Air = 1):	Vapor Pressure (mm Hg):
N/A	1.50	N/A	N/A
Melting Point (° F):	Evaporation Rate: (Butyl Acetate = 1)	Solubility in Water:	VOC Level: 35.04 g/L
N/A	N/A	unknown	
Appearance And Color:	White/linen paste	Odor:	Ammonia odor

Section 4 - Fire And Explosion Hazard Data

Flash Point:	Flammable Limits:	LEL:	UEL:
> 93.3C; 200F	N/A		

Extinguishing Media: As appropriate for surrounding fire. Non-combustible.

Special Firefighting Procedures:

Firefighters must wear NIOSH/MSHA approved positive pressure self-contained breathing apparatus with full face mask and full protective clothing.

Unusual Fire And Explosion Hazards:

None

Continued on Next Page

Section 5 - Reactivity Data**Stability:** Stable **Conditions To Avoid:** Unknown**Incompatibility (Materials To Avoid):** None Known**Hazardous Decomposition:** CO, CO2 and nitrogen oxides (NOx), Toxic monomer fumes.**Hazardous Polymerization:** Will Not Occur**Section 6 - Health Hazard Data****Routes of Entry:** Inhalation YES Skin YES Ingestion NO EYES: YES**Health Hazards:**

Chronic Hazards:

Carcinogenicity: NTP NO IARC NO OSHA Regulated NO**Signs And Symptoms of Exposure:**

Direct eye contact may cause irritation with redness, swelling, pain and tearing. Prolonged inhalation of vapors can cause irritation of the mouth, nose, throat and mucous membranes. Overexposure may cause headache, dizziness, tiredness, nausea and vomiting. May cause central nervous system effects. Causes skin irritation, skin defatting. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Medical Conditions Generally Aggravated By Exposure:

Pre-existing liver and kidney disorders. Respiratory, central nervous system and skin disorders.

Emergency And First Aid Procedures:

SKIN: Wash with soap and warm water. EYES: Flush with water for 15 minutes. Seek medical attention if irritation persists. INGESTION: Do not induce vomiting. If victim is conscious, give 2-4 glasses of water. Never give anything by mouth to someone unconscious. Seek medical attention immediately. INHALATION: Move to fresh air. If not breathing, give artificial respiration.

Continued on Next Page

Section 7 - Precautions For Safe Handling And Use:**Steps To Be Taken In Case Material Is Released Or Spilled:**

Use an absorbent material and sweep up for disposal

Waste Disposal Method:

Small quantities: non-hazardous landfill. Large quantities: Conform to federal, state and local regulations

Precautions To Be Taken In Handling And Storing:

Store away from heat, sources of ignition and incompatibles

Other Precautions:

Keep out of reach of children.

Section 8 - Control Measures:**Respiratory Protection:**

If exposure limits are exceeded or respiratory irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn.

Ventilation: Local Exhaust Adequate
Mechanical N/A

Special N/A

Other: N/A

Gloves: Impervious gloves such as Neopren

Eye Protection: Monogoggles or Safety glasses

Other Protective

Clothing: None required

Work/Hygienic Practices Use good personal hygiene practices. Wash thoroughly after handling.

Additional Information:

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For Hercules Material Safety Data Sheets by fax anytime, day or night, just call 1-800-942-INFO (1-800-942-4636) from any Touch-Tone phone. Have your fax number ready. Checking the product label for the correct MSDS # will save time.

OSHA-Required Health And Safety Information!

This Material Safety Data Sheet (MSDS) was requested moments ago from Hercules Automated Fax Information System. Please forward it immediately to the person in charge of MSDS's, or retain it at the machine until claimed.

Section 1

MATERIAL SAFETY DATA SHEET # 30
Boiler Liquid



MATERIAL SAFETY INFORMATION SERVICE

Hercules Chemical Company Inc.
 111 South Street
 Passaic NJ 07055
 Phone (800) 221-9330
 Fax (800) 333-3456

Date Prepared: 2/14/1995 Last Reviewed: 7/20/2010

Meets OSHA 29 CFR 1910.1200

Section 2 - Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity; Common Name(s), CAS Numbers)

OSHA PEL

ACGIH TLV

Other Limits

Upper Bound Limit if SARA Reportable

This product is not classified as hazardous in accordance with OSHA 1910.1200

HMIS Hazard Rating: Health: 0 Flammability: 0 Reactivity: 0 Personal Protection: A

Section 3 - Physical/Chemical Characteristics

Boiling Point (°F):	Specific Gravity (H ₂ O = 1):	Vapor Density (Air = 1):	Vapor Pressure (mm Hg):
212	1.03	Approx. 0.6	at 20° C approx. 17
Melting Point (° F)	Evaporation Rate: (Butyl Acetate = 1)	Solubility in Water:	VOC Level (g/l):
32		Complete	0.0
Appearance And Color:	Reddish brown liquid	Odor:	Mild pleasant odor

Section 4 - Fire And Explosion Hazard Data

Flash Point:	Flammable Limits:	LEL:	UEL:
None	N/A		

Extinguishing Media: As appropriate for surrounding fire.

Special Firefighting Procedures:
 None

Unusual Fire And Explosion Hazards:
 None

Continued on Next Page

Section 5 - Reactivity Data

Stability: Stable Conditions To Avoid: None

Incompatibility None known
(Materials To Avoid):

Hazardous Decomposition: Carbon monoxide or carbon dioxide may form on burning of dried material.

Hazardous Polymerization: Will Not Occur

Section 6 - Health Hazard Data

Routes of Entry: Inhalation N/A Skin YES/Primary Ingestion YES/Secondary

Health Hazards:
None known

Carcinogenicity: NTP NO IARC NO OSHA Regulated NO

Signs And Symptoms of Exposure:

None

Medical Conditions Generally Aggravated By Exposure:

None known

Emergency And First Aid Procedures:

SKIN: Wash with soap & water. EYES: As with most foreign materials, should eye contact occur, flush eyes with plenty of water & get medical attention. INGESTION: Do not induce vomiting. Get medical attention.

Continued on Next Page

Section 7 - Precautions For Safe Handling And Use:**Steps To Be Taken In Case Material Is Released Or Spilled:**

Use absorbent material and sweep up.

Waste Disposal Method:

Non-hazardous landfill

Precautions To Be Taken In Handling And Storing:

Store at room temperature or cooler. Keep from freezing.

Other Precautions:

None

Section 8 - Control Measures:**Respiratory Protection:**

None required

Ventilation: Local Exhaust Adequate
Mechanical N/A

Special N/A

Other: N/A

Gloves: None

Eye Protection: Safety goggles

Other Protective
Clothing: None required

Work/Hygienic Practices Wash thoroughly after handling the material.

Additional Information:

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For Hercules Material Safety Data Sheets by fax anytime, day or night, just call 1-800-942-INFO (1-800-942-4636) from any Touch-Tone phone. Have your fax number ready. Checking the product label for the correct MSDS # will save time.

OSHA-Required Health And Safety Information!

This Material Safety Data Sheet (MSDS) was requested moments ago from Hercules Automated Fax Information System. Please forward it immediately to the person in charge of MSDS's, or retain it at the machine until claimed.

Section 1

MATERIAL SAFETY DATA SHEET # 31 Boiler Solder

Date Prepared: 3/13/1991 Last Reviewed: 7/23/2010

Meets OSHA 29 CFR 1910.1200



**MATERIAL
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SERVICE**

Hercules Chemical Company Inc.
111 South Street
Passaic NJ 07055
Phone (800) 221-9330
Fax (800) 333-3456

Section 2 - Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity; Common Name(s), CAS Numbers)	OSHA PEL	ACGIH TLV	Other Limits	Upper Bound Limit if SARA Reportable
Benzoic Acid (65-85-0)	15mg/M ³ As nuisance dust 5mg/M ³ As respirable dust	N/A	N/A	<10 --

HMIS Hazard Rating: Health:1 Flammability: 0 Reactivity: 0 Personal Protection: E

Section 3 - Physical/Chemical Characteristics

Boiling Point (°F):	Specific Gravity (H ₂ O = 1):	Vapor Density (Air = 1):	Vapor Pressure (mm Hg):
N/A	0.4 to 0.47	N/A	N/A
Melting Point (° F):	Evaporation Rate: (Butyl Acetate = 1)	Solubility in Water:	VOC Level (g/l):
N/A		Insoluble	0.0
Appearance And Color:	Grayish silver colored powder	Odor:	Slight characteristic odor

Section 4 - Fire And Explosion Hazard Data

Flash Point:	Flammable Limits:	LEL:	UEL:
N/A	N/A		

Extinguishing Media: Dry chemical, foam or CO₂ to extinguish fires.

Special Firefighting Procedures:

Wear self-contained positive pressure breathing apparatus and full protective clothing.

Unusual Fire And Explosion Hazards:

Contains aluminum powder which could form flammable and explosive mixtures in air, tolerance 50 PPM in air.

Continued on Next Page

Section 5 - Reactivity Data

Stability: Stable **Conditions To Avoid:** High heat and open flame.

Incompatibility (Materials To Avoid): Strong oxidizing agents

Hazardous Decomposition: Decomposition under fire conditions will generate carbon monoxide and other toxic vapors.

Hazardous Polymerization: Will Not Occur

Section 6 - Health Hazard Data

Routes of Entry: **Inhalation** YES/Primary **Skin** YES/Secondary **Ingestion** YES/Secondary

Health Hazards:

Inhalation of dust may irritate the nose and throat. May be harmful if swallowed. Eye and skin irritant. No other chronic health hazard information is available.

Carcinogenicity: **NTP** NO **IARC** NO **OSHA Regulated** NO

Signs And Symptoms of Exposure:

Irritation of eyes and skin

Medical Conditions Generally Aggravated By Exposure:

None known

Emergency And First Aid Procedures:

INHALATION: If overcome by exposure, remove to fresh air immediately. Give oxygen or artificial respiration as needed. Obtain emergency medical attention. **EYE CONTACT:** In case of eye contact, immediately irrigate with plenty of water for at least 15 minutes. Obtain medical attention if irritation persists. **SKIN CONTACT:** Remove contaminated clothing as needed. Wash skin thoroughly with mild soap and water. Obtain medical attention if irritation develops. **INGESTION:** If swallowed induce vomiting. Obtain emergency medical attention.

Continued on Next Page

Section 7 - Precautions For Safe Handling And Use:**Steps To Be Taken In Case Material Is Released Or Spilled:**

Remove sources of ignition. Sweep up and remove to disposal container.

Waste Disposal Method:

Normal landfill

Precautions To Be Taken In Handling And Storing:

Keep from high heat

Other Precautions:

None

Section 8 - Control Measures:**Respiratory Protection:**

N/A

Ventilation: Local Exhaust Adequate
Mechanical N/A

Special N/A

Other: N/A

Gloves: Rubber gloves

Eye Protection: Safety goggles

Other Protective
Clothing: N/A

Work/Hygienic Practices Use good personal hygiene practices. Wash thoroughly after handling.

Additional Information:

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For Hercules Material Safety Data Sheets by fax anytime, day or night, just call 1-800-942-INFO (1-800-942-4636) from any Touch-Tone phone. Have your fax number ready. Checking the product label for the correct MSDS # will save time.

OSHA-Required Health And Safety Information!

This Material Safety Data Sheet (MSDS) was requested moments ago from Hercules Automated Fax Information System. Please forward it immediately to the person in charge of MSDS's, or retain it at the machine until claimed.

Section 1

MATERIAL SAFETY DATA SHEET # 35
Boiler & Heating System Cleaner



MATERIAL SAFETY INFORMATION SERVICE

Hercules Chemical Company Inc.
 111 South Street
 Passaic NJ 07055
 Phone (800) 221-9330
 Fax (800) 333-3456

Date Prepared: 12/23/1986 Last Reviewed: 12/5/2001

Meets OSHA 29 CFR 1910.1200

Section 2 - Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity; Common Name(s), CAS Numbers)	OSHA PEL	ACGIH TLV	Other Limits	Upper Bound Limit if SARA Reportable
Cyclohexylamine (108-91-8)	N/A	10 PPM	N/A	< 1

HMIS Hazard Rating: Health: 0 Flammability: 0 Reactivity: 0 Personal Protection: A

Section 3 - Physical/Chemical Characteristics

Boiling Point (°C):	Specific Gravity (H₂O = 1):	Vapor Density (Air = 1):	Vapor Pressure (mm Hg):
212° F	1.12	> 1	at 20° C 17.5mm
Melting Point (° F)	Evaporation Rate: (Butyl Acetate = 1)	Solubility in Water:	
N/A	> 1	Soluble	
Appearance And Color:	Yellow color liquid		Odor: Slight amine odor

Section 4 - Fire And Explosion Hazard Data

Flash Point:	Flammable Limits:	LEL:	UEL:
None	N/A		

Extinguishing Media: None; non-combustible

Special Firefighting Procedures:
 As appropriate for surrounding fire.

Unusual Fire And Explosion Hazards:
 None

Continued on Next Page

Section 5 - Reactivity Data

Stability: Stable Conditions To Avoid: None

Incompatibility None known
(Materials To Avoid):

Hazardous Decomposition: None

Hazardous Polymerization: Will Not Occur

Section 6 - Health Hazard Data

Routes of Entry: Inhalation N/A Skin YES/Primary Ingestion YES/Secondary

Health Hazards:

None known

Carcinogenicity: NTP NO IARC NO OSHA Regulated NO

Signs And Symptoms of Exposure:

None

Medical Conditions Generally Aggravated By Exposure:

None known

Emergency And First Aid Procedures:

SKIN: Wash with soap & water. EYES: As with most foreign materials should eye contact occur, flush eyes with plenty of water and get medical attention. INGESTION: Irritant; give large quantities of water. Get medical attention.

Continued on Next Page

Section 7 - Precautions For Safe Handling And Use:**Steps To Be Taken In Case Material Is Released Or Spilled:**

Soak up with absorbent material and sweep up.

Waste Disposal Method:

Non-hazardous landfill

Precautions To Be Taken In Handling And Storing:

None

Other Precautions:

None

Section 8 - Control Measures:**Respiratory Protection:**

None required

Ventilation: Local Exhaust Adequate
Mechanical N/A

Special N/A

Gloves: None

Other: N/A

Eye Protection: Goggles

Other Protective
Clothing: None required

Work/Hygienic Practices Wash after handling.



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OSHA-Required Health And Safety Information!

This Material Safety Data Sheet (MSDS) was requested moments ago from Hercules Automated Fax Information System. Please forward it immediately to the person in charge of MSDS's, or retain it at the machine until claimed.

Section 1

MATERIAL SAFETY DATA SHEET # 37
Flip Stick®



MATERIAL SAFETY INFORMATION SERVICE

Hercules Chemical Company Inc.
 111 South Street
 Passaic NJ 07055
 Phone (800) 221-9330
 Fax (800) 333-3456

Date Prepared: 1/31/1990 Last Reviewed: 12/4/2002

Meets OSHA 29 CFR 1910.1200

Section 2 - Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity; Common Name(s), CAS Numbers)	OSHA PEL	ACGIH TLV	Other Limits	Upper Bound Limit if SARA Reportable
Cupric Chloride (7447-39-4)	N/A	1mg/M ³ (dust)	1mg/M ³	10%

HMIS Hazard Rating: Health: 2 Flammability: 0 Reactivity: 0 Personal Protection: E

Section 3 - Physical/Chemical Characteristics

Boiling Point (°F):	Specific Gravity (H ₂ O = 1):	Vapor Density (Air = 1):	Vapor Pressur (mm Hg):
N/A	0.95 to 1.0	N/A	N/A
Melting Point (° F)	Evaporation Rate: (Butyl Acetate = 1)	Solubility in Water:	
N/A		Partially	
Appearance And Color:	Bluish green crystalline powder	Odor:	No odor

Section 4 - Fire And Explosion Hazard Data

Flash Point:	Flammable Limits	LEL:	UEL:
N/A	N/A		

Extinguishing Media: Water, fog, dry chemical, carbon dioxide.

Special Firefighting Procedures:

This product has combustible materials and supplies its own oxygen for sustaining the combustion.

Unusual Fire And Explosion Hazards:

None

Continued on Next Page

Section 5 - Reactivity Data

Stability: Stable Conditions To Avoid: None

Incompatibility N/A
(Materials To Avoid):

Hazardous Decomposition: None

Hazardous Polymerization: Will Not Occur

Section 6 - Health Hazard Data

Routes of Entry Inhalation YES/Primary Skin YES/Primary Ingestion YES/Secondary

Health Hazards

Inhalation of heavy dust may irritate nose and throat. Ingestion can cause injury to mouth.

Carcinogenicity NTP NO IARC NO OSHA Regulated NO

Signs And Symptoms of Exposure:

Irritation of nose and throat. Irritation of eyes and possible conjunctivitis.

Medical Conditions Generally Aggravated By Exposure:

None

Emergency And First Aid Procedures:

EYES: Immediately flush with large amounts of water for at least 15 minutes. If irritation persists, obtain medical attention. SKIN: Wash with soap and water. If irritation persist, obtain medical attention. INHALATION: Remove from exposure. If breathing is difficult or discomfort persists, obtain medical attention. INGESTION: Rinse mouth with water. Give water to dissolve particles. Obtain medical attention.

Continued on Next Page

Section 7 - Precautions For Safe Handling And Use:

Steps To Be Taken In Case Material Is Released Or Spilled:

Sweep up the spilled material making sure no dust is created. Avoid flushing to sewer or stream.

Waste Disposal Method:

Non-hazardous landfill

Precautions To Be Taken In Handling And Storing:

Store in cool dry place.

Other Precautions:

None

Section 8 - Control Measures:

Respiratory Protection:

Use NIOSH/MSHA approved respiratory protection if airborne dust is expected

Ventilation: Local Exhaust Adequate

Special N/A

Mechanical N/A

Other: N/A

Gloves: None normally required.

Eye Protection: Safety glasses if possibility of eye contact with material exists.

Other Protective

Clothing: None normally required

Work/Hygienic Practice: Use good personal hygiene practices. Wash thoroughly after handling.



For Hercules Material Safety Data Sheets by fax anytime, day or night, just call 1-800-942-INFO (1-800-942-4636) from any Touch-Tone phone. Have your fax number ready. Checking the product label for the correct MSDS # will save time.

OSHA-Required Health And Safety Information!

This Material Safety Data Sheet (MSDS) was requested moments ago from Hercules Automated Fax Information System. Please forward it immediately to the person in charge of MSDS's, or retain it at the machine until claimed.

Section 1**MATERIAL SAFETY DATA SHEET # 40**
Hercules Cryotek™ -100 & -100/AI**MATERIAL SAFETY INFORMATION SERVICE**

Hercules Chemical Company Inc.
111 South Street
Passaic NJ 07055
Phone (800) 221-9330
Fax (800) 333-3456

Date Prepared: 6/29/1990 Last Reviewed: 4/17/2012

Meets OSHA 29 CFR 1910.1200

Section 2 - Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity;
Common Name(s), CAS Numbers)

OSHA PEL

ACGIH TLV

Other Limits

Upper Bound
Limit if SARA
Reportable

This product is not classified as hazardous in accordance with OSHA 1910.1200

HMIS Hazard Rating: Health: 0 Flammability: 0 Reactivity: 0 Personal Protection: A

Section 3 - Physical/Chemical Characteristics

Boiling Point (°F):	Specific Gravity (H₂O = 1):	Vapor Density (Air = 1):	Vapor Pressure (mm Hg):
230°	1.04	2.62	At 20° C 0.22
Melting Point (° F)	Evaporation Rate: (Butyl Acetate = 1)	Solubility in Water:	
N/A		Soluble	
Appearance And Color:	Pink or Orange liquid	Odor:	Odorless

Section 4 - Fire And Explosion Hazard Data

Flash Point:	Flammable Limits:	LEL:	UEL:
N/A	None		

Extinguishing Media: Water fog, alcohol foam, dry chemical.

Special Firefighting Procedures:
None

Unusual Fire And Explosion Hazards:
None

Continued on Next Page

Section 5 - Reactivity Data

Stability: Stable **Conditions To Avoid:** None

Incompatibility (Materials To Avoid): Oxidizing materials.

Hazardous Decomposition: None

Hazardous Polymerization: Will Not Occur

Section 6 - Health Hazard Data

Routes of Entry: Inhalation N/A **Skin** N/A **Ingestion** N/A

Health Hazards:

Very low single dose oral toxicity; eye and skin essentially no effect.

Carcinogenicity: NTP NO IARC NO OSHA Regulated NO

Signs And Symptoms of Exposure:

None

Medical Conditions Generally Aggravated By Exposure:

None

Emergency And First Aid Procedures:

EYE AND SKIN CONTACT: Like with all foreign material, flushing and washing with water is good safety and hygienic practice. **INGESTION:** Low in toxicity; induce vomiting if large amounts are ingested.

Continued on Next Page

Section 7 - Precautions For Safe Handling And Use:**Steps To Be Taken In Case Material Is Released Or Spilled:**

Cover with absorbent material; let soak and sweep up.

Waste Disposal Method:

Incinerate or bury (landfill) away from water supplies in accordance with local regulations.

Precautions To Be Taken In Handling And Storing:

None

Other Precautions:

None

Section 8 - Control Measures:**Respiratory Protection:**

None required.

Ventilation: Local Exhaust Adequate
Mechanical N/A

Special N/A

Other N/A

Gloves: None required.

Eye Protection: If possibility of splashing, use safety goggles.

Other Protective Clothing: None

Work/Hygienic Practices Wash thoroughly after handling.



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OSHA-Required Health And Safety Information!

This Material Safety Data Sheet (MSDS) was requested moments ago from Hercules Automated Fax Information System. Please forward it immediately to the person in charge of MSDS's, or retain it at the machine until claimed.

Section 1

MATERIAL SAFETY DATA SHEET # 43 *Hercules Clear Cutting Oil*



Hercules Chemical Company Inc.
 111 South Street
 Passaic NJ 07055
 Phone (800) 221-9330
 Fax (800) 333-3456

Date Prepared: 6/25/1990 Last Reviewed: 3/15/2011

Meets OSHA 29 CFR 1910.1200

Section 2 - Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity; Common Name(s), CAS Numbers)	OSHA PEL	ACGIH TLV	Other Limits	Upper Bound Limit if SARA Reportable
Petroleum-based lubricating oils (64742-52-5)	5mg/M ³	5mg/M ³ (as oil mist,N/A		--
Petroleum-based lubricating oils (64742-53-6)	5mg/M ³ (as oil mist)	5mg/M ³ (as oil mist,N/A		

HMIS Hazard Rating: 1 1 0 A

Section 3 - Physical/Chemical Characteristics

Boiling Point (°F): 465-900° F	Specific Gravity (H ₂ O = 1): At 25° C .906	Vapor Density (Air = 1): >8	Vapor Pressure (mm Hg): At 38° C (100° F) < 0.1
Melting Point (° F) N/A	Evaporation Rate: (Butyl Acetate = 1) <1.0	Solubility in Water: Soluble	VOC Level (g/L): 11
Appearance And Color: Light Amber Liquid		Odor: Petroleum Odor	

Section 4 - Fire And Explosion Hazard Data

Flash Point: 320° F (COC)	Flammable Limits: N/A	LEL: 1%	UEL: 6%
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Extinguishing Media: Dry chemical, CO₂, Foam. Use water to keep fire-exposed containers cool.

Special Firefighting Procedures:

Recommend supplied air breathing gear when fire fighting in confined spaces. Minimize breathing gases, vapor, fumes, or decomposition products. Water froth may be used to flush spills away from exposure.

Unusual Fire And Explosion Hazards:

None

Continued on Next Page

Section 5 - Reactivity Data

Stability: Stable **Conditions To Avoid:** Open flames, sparks, ignition sources.

Incompatibility (Materials To Avoid): Strong oxidizers such as liquid chlorine, sodium or calcium hypochlorite, and pure oxygen.

Hazardous Decomposition: Carbon monoxide, oxides of sulfur and other decomposition products may form upon incomplete combustion.

Hazardous Polymerization: Will Not Occur

Section 6 - Health Hazard Data

Routes of Entry: **Inhalation** YES/Primary **Skin** YES/Primary **Ingestion** YES/Secondary

Health Hazards:

Product has a low order of oral and dermal toxicity. Possible aspiration hazard. Induced vomiting may cause aspiration of product into lungs.

Carcinogenicity: **NTP** NO **IARC** NO **OSHA Regulated** NO

Signs And Symptoms of Exposure:

SKIN CONTACT: Moderate irritant and skin defatter. **EYE CONTACT:** Mild (transient) irritant. Prolonged or repeated skin contact with product tends to remove skin oils possibly leading to irritation and dermatitis; however based on human experience and available toxicological data, this product is judged to be neither a "corrosive" nor an "irritant" by OSHA criteria. **VARIABILITY AMONG INDIVIDUALS:** Health studies have shown that many petroleum hydrocarbons and synthetic lubricants pose potential human health risks which vary from person to person. As a precaution, exposure to liquids, vapors, mist or fumes should be minimized.

Medical Conditions Generally Aggravated By Exposure:

None known.

Emergency And First Aid Procedures:

INHALATION: Vapor inhalation under ambient conditions is normally not a problem. If overcome by vapor from hot product, immediately remove to fresh air if not breathing. Get medical attention. **INGESTION:** Do not induce vomiting. Get medical attention. **SKIN CONTACT:** Wash skin thoroughly with soap and water and remove contaminated clothing. **EYE CONTACT:** Flush with plenty of water for 15 minutes or until irritation subsides. If irritation persists, get medical attention.

Continued on Next Page

Section 7 - Precautions For Safe Handling And Use:**Steps To Be Taken In Case Material Is Released Or Spilled:**

Handle as an oil spill. Use oil-absorbing material. Sweep and scoop up and remove. Prevent spread of spill. Keep product from sewers and water courses by diking, etc. Advise authorities if product has entered, or may enter, sewer, water courses, or extensive land areas. Assure conformity with local regulations.

Waste Disposal Method:

Assure conformity with applicable disposal regulations. Dispose of absorbed material at an approved waste disposal site or facility.

Precautions To Be Taken In Handling And Storing:

No special precautions needed normally. However, avoid breathing oil mist and excessive skin contact.

Other Precautions:

None

Section 8 - Control Measures:**Respiratory Protection:**

If possibility of oil mists exists, use NIOSH approved mask for oil mists.

Ventilation: Local Exhaust As needed to maintain compliance with TLV. Special None
Mechanical N/A Other None

Gloves: Rubber gloves - Oil resistant.

Eye Protection: Goggles if oil is being sprayed or splashed.

Other Protective Clothing: Gloves if prolonged skin contact cannot be avoided.

Work/Hygienic Practices Wash thoroughly after handling. Minimize breathing of vapor mist, fumes. Remove contaminated clothing, launder or dry clean.



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OSHA-Required Health And Safety Information!

This Material Safety Data Sheet (MSDS) was requested moments ago from Hercules Automated Fax Information System. Please forward it immediately to the person in charge of MSDS's, or retain it at the machine until claimed.

Section 1

MATERIAL SAFETY DATA SHEET # 44 Hercules Dark Cutting Oil

Date Prepared: 6/25/1990 Last Reviewed: 6/22/2010

Meets OSHA 29 CFR 1910.1200



**MATERIAL
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INFORMATION
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Hercules Chemical Company Inc.
111 South Street
Passaic NJ 07055
Phone (800) 221-9330
Fax (800) 333-3456

Section 2 - Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity; Common Name(s), CAS Numbers)	OSHA PEL	ACGIH TLV	Other Limits	Upper Bound Limit if SARA Reportable
Petroleum-based lubricating oils (64742-52-5)	5 mg/M ³	5 mg/M ³ (as oil mist)	N/A	--
Petroleum-based lubricating oils (64742-46-7)	5 mg/M ³	5 mg/M ³	N/A	--

HMIS Hazard Rating: 1 1 0 A

Section 3 - Physical/Chemical Characteristics

Boiling Point (°F): 465-900° F	Specific Gravity (H ₂ O = 1): At 25° C .906	Vapor Density (Air = 1): > 8	Vapor Pressure (mm Hg): At 38° C (100°F) < 0.1
Melting Point (° F): N/A	Evaporation Rate: (Butyl Acetate = 1) < 1.0	Solubility in Water: Insoluble	VOC Level: 59 g/l
Appearance And Color: Dark Brownish Amber Liquid		Odor: Petroleum odor	

Section 4 - Fire And Explosion Hazard Data

Flash Point: 320° F (COC)	Flammable Limits: N/A	LEL: 1%	UEL: 6%
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Extinguishing Media: Dry chemical, CO₂, Foam. Use water to keep fire-exposed containers cool.

Special Firefighting Procedures:

Recommend supplied air breathing gear when fire fighting in confined spaces. Minimize breathing gases, vapor, fumes, or decomposition products. Water froth may be used to flush spills away from exposure

Unusual Fire And Explosion Hazards:

None

Continued on Next Page

Section 5 - Reactivity Data

Stability: Stable **Conditions To Avoid:** Open flames, sparks, ignition sources.

Incompatibility (Materials To Avoid): Strong oxidizers such as liquid chlorine, sodium or calcium hypochlorite, and pure oxygen.

Hazardous Decomposition: Carbon monoxide, oxides of sulfur and other decomposition products may form upon incomplete combustion.

Hazardous Polymerization: Will Not Occur

Section 6 - Health Hazard Data

Routes of Entry: **Inhalation** YES/Primary **Skin** YES/Primary **Ingestion** YES/Secondary

Health Hazards:

Product has a low order of oral and dermal toxicity. Possible aspiration hazard. Induced vomiting may cause aspiration of product into lungs.

Carcinogenicity: **NTP** NO **IARC** NO **OSHA Regulated** NO

Signs And Symptoms of Exposure:

SKIN CONTACT: Moderate irritant and skin defatter. **EYE CONTACT:** Mild (transient) irritant. Prolonged or repeated skin contact with product tends to remove skin oils possibly leading to irritation and dermatitis; however based on human experience and available toxicological data, this product is judged to be neither a "corrosive" nor an "irritant" by OSHA criteria. **VARIABILITY AMONG INDIVIDUALS:** Health studies have shown that many petroleum hydrocarbons and synthetic lubricants pose potential human health risks which vary from person to person. As a precaution, exposure to liquids, vapors, mist or fumes should be minimized.

Medical Conditions Generally Aggravated By Exposure:

None known.

Emergency And First Aid Procedures:

INHALATION: Vapor inhalation under ambient conditions is normally not a problem. If overcome by vapor from hot product, immediately remove to fresh air if not breathing. Get medical attention. **INGESTION:** Do not induce vomiting. Get medical attention. **SKIN CONTACT:** Wash skin thoroughly with soap and water and remove contaminated clothing. **EYE CONTACT:** Flush with plenty of water for 15 minutes or until irritation subsides. If irritation persists, get medical attention.

Continued on Next Page

Section 7 - Precautions For Safe Handling And Use:**Steps To Be Taken In Case Material Is Released Or Spilled:**

Handle as an oil spill. Use oil-absorbing material. Sweep and scoop up and remove. Prevent spread of spill. Keep product from sewers and water courses by diking, etc. Advise authorities if product has entered, or may enter, sewer, water courses, or extensive land areas. Assure conformity with local regulations.

Waste Disposal Method:

Assure conformity with applicable disposal regulations. Dispose of absorbed material at an approved waste disposal site or facility.

Precautions To Be Taken In Handling And Storing:

No special precautions needed normally. However, avoid breathing oil mist and excessive skin contact.

Other Precautions:

None

Section 8 - Control Measures:**Respiratory Protection:**

If possibility of oil mists exists, use NIOSH approved mask for oil mists.

Ventilation:	Local Exhaust	As needed to maintain compliance with TLV	Special	None
	Mechanical	N/A	Other	N/A

Gloves: Rubber gloves - Oil resistant.

Eye Protection: Goggles if oil is being sprayed or splashed.

Other Protective Clothing: Gloves if prolonged skin contact cannot be avoided.

Work/Hygienic Practices Wash thoroughly after handling. Minimize breathing of vapor mist, fumes. Remove contaminated clothing, launder or dry clean.



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OSHA-Required Health And Safety Information!

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Section 1

MATERIAL SAFETY DATA SHEET # 47
Hercules Lube Oil



MATERIAL SAFETY INFORMATION SERVICE

Hercules Chemical Company Inc.
 111 South Street
 Passaic NJ 07055
 Phone (800) 221-9330
 Fax (800) 333-3456

Date Prepared: 6/18/1986 Last Reviewed: 7/29/2002

Meets OSHA 29 CFR 1910.1200

Section 2 - Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity; Common Name(s), CAS Numbers)	OSHA PEL	ACGIH TLV	Other Limits	Upper Bound Limit if SARA Reportable
This product is not considered hazardous under OSHA 29 CFR1910.1200				

HMIS Hazard Rating: 0 1 0 A

Section 3 - Physical/Chemical Characteristics

Boiling Point (°C):	Specific Gravity (H₂O = 1):	Vapor Density (Air = 1):	Vapor Pressure (mm Hg):
N/D	0.88	N/D	N/D
Melting Point (° F)	Evaporation Rate: (Butyl Acetate = 1)	Solubility in Water:	
N/D	N/D	Not soluble	
Appearance And Color:	Light Amber Liquid		Odor: Mild petroleum

Section 4 - Fire And Explosion Hazard Data

Flash Point:	Flammable Limits:	LEL:	UEL:
(COC) 410	N/D	N/A	N/A

Extinguishing Media: Water spray, dry chemical, foam or carbon dioxide.

Special Firefighting Procedures:

Use water spray to cool fire-exposed containers. If spill or leak had not ignited, use water spray to disperse the vapors and to provide protection for persons attempting to stop the leak.

Unusual Fire And Explosion Hazards:

None

Continued on Next Page

Section 5 - Reactivity Data

Stability: Stable **Conditions To Avoid:** None

Incompatibility (Materials To Avoid): Strong oxidizing agents.

Hazardous Decomposition: Carbon monoxide, carbon dioxide, aldehydes & ketones, combustible products of nitrogen and sulfur.

Hazardous Polymerization: Will Not Occur

Section 6 - Health Hazard Data

Routes of Entry: **Inhalation** YES/secondary **Skin** YES/primary **Ingestion** YES/secondary

Health Hazards:
None

Carcinogenicity: **NTP** NO **IARC** NO **OSHA Regulated** NO

Signs And Symptoms of Exposure:

None expected other than possible minimal irritant.

Medical Conditions Generally Aggravated By Exposure:

No appreciable effect.

Emergency And First Aid Procedures:

EYE CONTACT: As with most foreign materials, should eye contact occur, flush eyes with plenty of water. **SKIN**

CONTACT: Wash with soap and water.

Continued on Next Page

Section 7 - Precautions For Safe Handling And Use:

Steps To Be Taken In Case Material Is Released Or Spilled:

Contain spill. Wipe up or absorb on suitable material or shovel up.

Waste Disposal Method:

Product does not have RCRA characteristics or meet the criteria of hazardous waste if discarded in its purchased form.

Precautions To Be Taken In Handling And Storing:

Minimum feasible handling temperatures should be maintained.

Other Precautions:

Periods of exposure to high temperatures should be minimized.

Section 8 - Control Measures:

Respiratory Protection:

For normal use, none required. If sprayed as a mist, use fume-mist respirator.

Ventilation:	Local Exhaust	Acceptable	Special	N/A
	Mechanical	N/A		

Gloves:	None required	Other:	N/A
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Eye Protection: Goggles

Other Protective Clothing: None required

Work/Hygienic Practices Wash thoroughly after handling.



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OSHA-Required Health And Safety Information!

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Section 1

MATERIAL SAFETY DATA SHEET # 58 *Hercules Black Magic Asphalt Paint*



MATERIAL SAFETY INFORMATION SERVICE

Hercules Chemical Company Inc.
 111 South Street
 Passaic NJ 07055
 Phone (800) 221-9330
 Fax (800) 333-3456

Date Prepared: 2/22/1990 Last Reviewed: 8/2/2010

Meets OSHA 29 CFR 1910.1200

Section 2 - Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity; Common Name(s), CAS Numbers)	OSHA PEL	ACGIH TLV	Other Limits	Upper Bound Limit if SARA Reportable
Stoddard Cas# 8052-41-3	100PPM	100PPM	350 mg/m3	--
Asphalt CAS# 64742-93-4	ND	5 mg/m3	5 mg/m3	--

HMIS Hazard Rating: Health: 1 Flammability:2 Reactivity:0 Personal Protection: G

Section 3 - Physical/Chemical Characteristics

Boiling Point (°F):	Specific Gravity (H2O = 1):	Vapor Density (Air = 1):	Vapor Pressure (mm Hg):
315	0.91 to 1.0	3.9	at 20° C 1
Melting Point (° F):	Evaporation Rate: (Butyl Acetate = 1)	Solubility in Water:	VOC Level (g/l):
N/A	0.46	Negligible	300
Appearance And Color:	Black liquid	Odor:	Mild aliphatic odor.

Section 4 - Fire And Explosion Hazard Data

Flash Point:	Flammable Limits:	LEL:	UEL:
104° F T.C.C.	0.8 at 212° F.	1.0%	2.0%

Extinguishing Media: Foam, carbon dioxide, dry chemicals, and water fog.

Special Firefighting Procedures:

Do not use direct water stream. Do not enter confined fire space without proper protective equipment including a NIOSH approved self-contained breathing apparatus.

Unusual Fire And Explosion Hazards:

None

Continued on Next Page

Section 5 - Reactivity Data

Stability: Stable **Conditions To Avoid:** None

Incompatibility (Materials To Avoid): Avoid heat, open flame and oxidizing materials.

Hazardous Decomposition: Carbon monoxide and unidentified organics may be formed during combustion.

Hazardous Polymerization: Will Not Occur

Section 6 - Health Hazard Data

Routes of Entry: **Inhalation** YES/Primary **Skin** YES/Primary **Ingestion** YES/Secondary

Health Hazards:

Inhalation of high vapor concentrations can cause dizziness and headaches. Prolonged skin contact can lead to dry and irritated skin possibly causing dermatitis.

Carcinogenicity: **NTP** NO **IARC** NO **OSHA Regulated** NO

Signs And Symptoms of Exposure:

Prolonged exposure to vapors can lead to headaches, dizziness, nausea and even loss of consciousness.

Medical Conditions Generally Aggravated By Exposure:

None known

Emergency And First Aid Procedures:

EYE CONTACT: Flush with water. If persistent irritation occurs, get medical attention. **SKIN CONTACT:** Wash with soap and water. Remove contaminated clothing and do not reuse until laundered. If persistent irritation occurs, get medical attention. **INHALATION:** Remove victim to fresh air and provide oxygen if breathing is difficult. Give artificial respiration if not breathing. Get medical attention. **INGESTION:** DO NOT INDUCE VOMITING even though vomiting may occur. If vomiting occurs, keep head below hips to prevent aspiration of liquid into the lungs. Get medical attention.

Continued on Next Page

Section 7 - Precautions For Safe Handling And Use:**Steps To Be Taken In Case Material Is Released Or Spilled:**

Eliminate all sources of ignition. Soak up with non-combustible absorbent material like clay or vermiculate. Place in drums for proper disposal.

Waste Disposal Method:

Dispose of in accordance with federal, state and local regulations. Incinerate in approved facility. Do not incinerate in closed containers.

Precautions To Be Taken In Handling And Storing:

Store away from oxidizing materials in a cool, dry place with adequate ventilation. Do not store above 120° F.

Other Precautions:

Keep away from heat and open flames. Keep containers tightly sealed.

Section 8 - Control Measures:**Respiratory Protection:**

Use hydrocarbon vapor canister or supplied air respiratory protection in confined or enclosed space, if needed.

Ventilation: Local Exhaust Preferable
Mechanical Acceptable

Special N/A

Other: N/A

Gloves: Use chemical resistant gloves to avoid prolonged contact.

Eye Protection: Safety goggles.

Other Protective Clothing: None

Work/Hygienic Practices Use good personal hygiene practices. Wash thoroughly after handling.



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OSHA-Required Health And Safety Information!

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Section 1

MATERIAL SAFETY DATA SHEET # 62 Hercules PVC & CPVC Purple Primer



MATERIAL SAFETY INFORMATION SERVICE

Hercules Chemical Company Inc.
111 South Street
Passaic NJ 07055
Phone (800) 221-9330
Fax (800) 333-3456

Date Prepared: 1/7/1992 Last Reviewed: 1/26/2009

Meets OSHA 29 CFR 1910.1200

Section 2 - Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity; Common Name(s), CAS Numbers)	OSHA PEL	ACGIH TLV	Other Limits	Upper Bound Limit if SARA Reportable
Tetrahydrofuran(109-99-9)	200PPM	200PPM		
Methyl Ethyl Ketone (78-93-3)	200PPM	200PPM	N/A	--
Cyclohexanone (108-94-1)	50PPM	20PPM	N/A	
Acetone (67-64-1)	1000PPM	500PPM	750 STEL	

HMIS Hazard Rating: Health: 3 Flammability: 4 Reactivity: 1 Personal Protection: G

Section 3 - Physical/Chemical Characteristics

Boiling Point (°F): 133° F Based on first boiling component - Acetone	Specific Gravity (H2O = 1): 0.820 ± 0.03	Vapor Density (Air = 1): 2.0 to 2.5	Vapor Pressure (mm Hg): 400 @ 104° F Based on first boiling component-Acetone
Melting Point (° F): N/A	Evaporation Rate: (Butyl Acetate = 1) 7-11	Solubility in Water: 50% to 75%	VOC Level (g/l): 510
Appearance And Color: Purple Liquid		Odor: Ethereal & Acetone-like	

Section 4 - Fire And Explosion Hazard Data

Flash Point: 0 to -4° F (T.C.C.) (Based on Acetone)	Flammable Limits:	LEL: 2%	UEL: 13.0%
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Extinguishing Media: Foam/Dry Chemical/Carbon Dioxide

Special Firefighting Procedures:

Handle as flammable liquid. Wear self-contained breathing apparatus & chemical goggles. Water may be ineffective, but should be used to keep fire-exposed containers cool.

Unusual Fire And Explosion Hazards:

Vapor is heavier than air and travels considerable distance to source of ignition and flashback. On long standing may form peroxides which may cause violent reaction especially upon evaporation to dryness.

Continued on Next Page

Section 5 - Reactivity Data

Stability: Stable **Conditions To Avoid:** Keep in closed containers away from sparks & open flame.

Incompatibility (Materials To Avoid): Strong oxidizing materials, Lithium Aluminum Hydride, Sodium Aluminum Hydroxide, Sodium & Potassium Hydroxides

Hazardous Decomposition: Carbon dioxide and carbon monoxide are formed. Irritating peroxide fumes formed when heated to decomposition.

Hazardous Polymerization: Avoid excessive exposure to air and cationic initiators like Lewis Acids.

Section 6 - Health Hazard Data

Routes of Entry: **Inhalation** YES/Primary **Skin** YES/Primary **Ingestion** YES/Secondary

Health Hazards:

Corrosive to eyes and skin irritant. Severe overexposure can cause headache, dizziness and narcosis. May cause dermatosis and dermatitis with prolonged repeated contact.

Carcinogenicity: **NTP** NO **IARC** NO **OSHA Regulated** NO

Signs And Symptoms of Exposure:

INGESTION: No effects expected from ingestion of small amount. **INHALATION:** Will cause irritation of mucous membranes, nose, eyes, & throat; coughing, difficulty of breathing. Exposure to high vapor concentration may cause headache, dizziness, nausea, narcosis. **SKIN CONTACT:** Prolonged skin contact causes common solvent defatting effect. **EYE CONTACT:** Vapors slightly uncomfortable. Splashes irritating. Will cause painful burning or stinging of eyes & lids, watering of eyes and Conjunctiva.

Medical Conditions Generally Aggravated By Exposure:

No data found

Emergency And First Aid Procedures:

INGESTION: DO NOT INDUCE VOMITING. If conscious, dilute by giving 2 glasses of water. Call physician immediately. **INHALATION:** Remove to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. If breathing is difficult, give oxygen. Call physician. **SKIN CONTACT:** Wash affected area with soapy water. Remove contaminated clothing. **EYE CONTACT:** Immediately flush eyes with plenty of water for 15 minutes. Consult physician.

Continued on Next Page

Section 7 - Precautions For Safe Handling And Use:**Steps To Be Taken In Case Material Is Released Or Spilled:**

Eliminate sources of ignition. Absorb with sand or inert absorbing material. Dispose of with solid waste in accordance with all regulations. Flush spill area with water, avoid flushing into confined areas.

Waste Disposal Method:

Incinerate in accordance with federal, state and local regulations.

Precautions To Be Taken In Handling And Storing:

Store in cool, well-ventilated area. Keep away from open flame and sources of ignition.

Other Precautions:

Use normal good personal hygiene.

Section 8 - Control Measures:**Respiratory Protection:**

In confined spaces, or other circumstances where adequate ventilation cannot be assured, use NIOSH approved respirator, positive-pressure airline mask or SCBA Self-Contained Breathing Apparatus.

Ventilation: Local Exhaust As required

Mechanical All ventilating devices must be located so they do not provide a source of ignition.

Special When using cements in an area of limited ventilation, use a ventilation device such as a fan or air mover to maintain a safe air concentration.

Gloves: PVA gloves.

Other: N/A

Eye Protection: Chemical safety goggles.

Other Protective Clothing: Apron, boots, eye bath, safety shower.

Work/Hygienic Practices Wash thoroughly after handling. Avoid ingestion of the cements. Do not eat or drink when using cements or in the vicinity where such cements are being used.



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OSHA-Required Health And Safety Information!

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Section 1

MATERIAL SAFETY DATA SHEET # 63 Hercules PVC Clear Primer



MATERIAL SAFETY INFORMATION SERVICE

Hercules Chemical Company Inc.
111 South Street
Passaic NJ 07055
Phone (800) 221-9330
Fax (800) 333-3456

Date Prepared: 3/24/1994 Last Reviewed: 1/26/2009

Meets OSHA 29 CFR 1910.1200

Section 2 - Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity; Common Name(s), CAS Numbers)	OSHA PEL	ACGIH TLV	Other Limits	Upper Bound Limit if SARA Reportable
Tetrahydrofuran(109-99-9)	200PPM	200PPM	N/A	--
Methyl Ethyl Ketone (78-93-3)	200PPM	200PPM	N/A	--
Cyclohexanone (108-94-1)	50PPM	20PPM	N/A	--
Acetone (67-64-1)	1000PPM	500PPM	750 STEL	

HMIS Hazard Rating: Health: 3 Flammability: 4 Reactivity: 1 Personal Protection: G

Section 3 - Physical/Chemical Characteristics

Boiling Point (°F): 133° F Based on first boiling component - Acetone	Specific Gravity (H2O = 1): 0.820 ± 0.03	Vapor Density (Air = 1): 2.0 to 2.5	Vapor Pressure (mm Hg): 400 @ 104° F Based on first boiling component-Acetone
Melting Point (° F): N/A	Evaporation Rate: (Butyl Acetate = 1) 7-11	Solubility in Water: 50% to 75%	VOC Level (g/l): 510
Appearance And Color: Clear Liquid		Odor: Ethereal & Acetone-like	

Section 4 - Fire And Explosion Hazard Data

Flash Point: 0 to -4° F (T.C.C.) (Based on Acetone)	Flammable Limits:	LEL: 2%	UEL: 13.0%
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Extinguishing Media: Foam/Dry Chemical/Carbon Dioxide

Special Firefighting Procedures:

Handle as flammable liquid. Wear self-contained breathing apparatus & chemical goggles. Water may be ineffective, but should be used to keep fire-exposed containers cool.

Unusual Fire And Explosion Hazards:

Vapor is heavier than air and travels considerable distance to source of ignition and flashback. On long standing may form peroxides which may cause violent reaction especially upon evaporation to dryness.

Continued on Next Page

Section 5 - Reactivity Data

Stability: Stable **Conditions To Avoid:** Keep in closed containers away from sparks & open flame.

Incompatibility (Materials To Avoid): Strong oxidizing materials, Lithium Aluminum Hydride, Sodium Aluminum Hydroxide, Sodium & Potassium Hydroxides

Hazardous Decomposition: Carbon dioxide and carbon monoxide are formed. Irritating peroxide fumes formed when heated to decomposition.

Hazardous Polymerization: Avoid excessive exposure to air and cationic initiators like Lewis Acids.

Section 6 - Health Hazard Data

Routes of Entry: **Inhalation** YES/Primary **Skin** YES/Primary **Ingestion** YES/Secondary

Health Hazards:

Corrosive to eyes and skin irritant. Severe overexposure can cause headache, dizziness and narcosis. May cause dermatosis and dermatitis with prolonged repeated contact.

Carcinogenicity: **NTP** NO **IARC** NO **OSHA Regulated** NO

Signs And Symptoms of Exposure:

INGESTION: No effects of exposure expected. **INHALATION:** Will cause irritation of mucous membranes, nose, eyes, & throat; coughing, difficulty of breathing. Exposure to high vapor concentration may cause headache, dizziness, nausea, narcosis. **SKIN CONTACT:** Prolonged skin contact causes common solvent defatting effect. **EYE CONTACT:** Vapors slightly uncomfortable. Splashes irritating. Will cause painful burning or stinging of eyes & lids, watering of eyes and inflammation of Conjunctiva.

Medical Conditions Generally Aggravated By Exposure:

No data found

Emergency And First Aid Procedures:

INGESTION: DO NOT INDUCE VOMITING. If conscious, dilute by giving 2 glasses of water. Call physician immediately. **INHALATION:** Remove to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. If breathing is difficult, give oxygen. Call physician. **SKIN CONTACT:** Wash affected area with soapy water. Remove contaminated clothing. **EYE CONTACT:** Immediately flush eyes with plenty of water for 15 minutes. Consult physician.

Continued on Next Page

Section 7 - Precautions For Safe Handling And Use:**Steps To Be Taken In Case Material Is Released Or Spilled:**

Eliminate sources of ignition. Absorb with sand or inert absorbing material. Dispose of with solid waste in accordance with all regulations. Flush spill area with water, avoid flushing into confined areas.

Waste Disposal Method:

Incinerate in accordance with federal, state and local regulations.

Precautions To Be Taken In Handling And Storing:

Store in cool, well-ventilated area. Keep away from open flame and sources of ignition.

Other Precautions:

Use normal good personal hygiene.

Section 8 - Control Measures:**Respiratory Protection:**

In confined spaces or other circumstances where adequate ventilation cannot be assured use NIOSH-approved respirator, positive pressure airline mask, or self contained breathing apparatus.

Ventilation: Local Exhaust As required

Mechanical All ventilating devices must be located so they do not provide a source of ignition.

Special When using cements in an area of limited ventilation, use a ventilation device such as a fan or air mover to maintain a safe air concentration.

Gloves: PVA gloves.

Other: N/A

Eye Protection: Chemical safety goggles.

Other Protective Clothing: Apron, boots, eye bath, safety shower.

Work/Hygienic Practices Wash thoroughly after handling. Avoid ingestion of the cements. do not eat or drink when using cements or in the vicinity where such cements are being used.



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OSHA-Required Health And Safety Information!

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Section 1

MATERIAL SAFETY DATA SHEET # 69
Pumice Lotion Hand Cleaner



MATERIAL SAFETY INFORMATION SERVICE

Hercules Chemical Company Inc.
 111 South Street
 Passaic NJ 07055
 Phone (800) 221-9330
 Fax (800) 333-3456

Date Prepared: 5/31/1988 Last Reviewed: 1/7/2002

Meets OSHA 29 CFR 1910.1200

Section 2 - Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity; Common Name(s), CAS Numbers)	OSHA PEL	ACGIH TLV	Other Limits	Upper Bound Limit if SARA Reportable
Mineral Spirits (64742-96-7)	500PPM	100PPM	N/A	- -

HMIS Hazard Rating: Health:1 Flammability: 0 Reactivity: 0 Personal Protection: A

Section 3 - Physical/Chemical Characteristics

Boiling Point (°C):	Specific Gravity (H ₂ O = 1):	Vapor Density (Air = 1):	Vapor Pressure (mm Hg):
N/A	0.975	N/A	N/A
Melting Point (° F)	Evaporation Rate: (Butyl Acetate = 1)	Solubility in Water:	
N/A	N/A	Soluble	
Appearance And Color:	White Viscous Liquid	Odor:	N/A

Section 4 - Fire And Explosion Hazard Data

Flash Point:	Flammable Limits:	LEL:	UEL:
< 200° F C.C. (Pensky-Martens)	N/A	N/A	N/A

Extinguishing Media: Carbon Dioxide or Dry Chemical Powder

Special Firefighting Procedures:
 None needed

Unusual Fire And Explosion Hazards:
 None

Continued on Next Page

Section 5 - Reactivity Data

Stability: Stable Conditions To Avoid: None

Incompatibility None

(Materials To Avoid):

Hazardous Decomposition: Could form carbon dioxide & carbon monoxide on burning at high temperatures.

Hazardous Polymerization: Will Not Occur

Section 6 - Health Hazard Data

Routes of Entry: Inhalation No Skin No Ingestion YES/Secondary

Health Hazards:

The acute oral LD_{50} is greater than 5g/kg therefore the product is not toxic orally as defined in 16 CFR 1500.3(c)(2)(i).

Carcinogenicity: NTP NO IARC NO OSHA Regulated NO

Signs And Symptoms of Exposure:

None under normal conditions of use.

Medical Conditions Generally Aggravated By Exposure:

None known

Emergency And First Aid Procedures:

In case of eye contact, flush with water. If irritation persists call a physician. If ingested, do not induce vomiting. Call a physician immediately.

Continued on Next Page

Section 7 - Precautions For Safe Handling And Use:**Steps To Be Taken In Case Material Is Released Or Spilled:**

Rinse away with water or wipe up with a towel.

Waste Disposal Method:

Normal refuse. Check applicable disposal regulations.

Precautions To Be Taken In Handling And Storing:

Keep container closed. Hand cleaner should be stored between 40° F and 100° F to ensure long shelf life of emulsion.

Other Precautions:

None

Section 8 - Control Measures:**Respiratory Protection:**

None

Ventilation: Local Exhaust None needed
Mechanical None needed

Special None needed

Gloves: None needed

Other: None needed

Eye Protection: None needed for normal use.

Other Protective Clothing: None needed

Work/Hygienic Practices None needed



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OSHA-Required Health And Safety Information!

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Section 1

MATERIAL SAFETY DATA SHEET # 7
Tape Dope®



MATERIAL SAFETY INFORMATION SERVICE

Hercules Chemical Company Inc.
 111 South Street
 Passaic NJ 07055
 Phone (800) 221-9330
 Fax (800) 333-3456

Date Prepared: 3/3/1994 Last Reviewed: 7/28/2011

Meets OSHA 29 CFR 1910.1200

Section 2 - Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity; Common Name(s), CAS Numbers)	OSHA PEL	ACGIH TLV	Other Limits	Upper Bound Limit if SARA Reportable
PTFE Tape as an article is not a hazardous material. It is a processed solid polymer.				
Polytetrafluoroethylene CAS 9002-84-0	N/A	N/A		>97
Titanium Dioxide CAS 13463-67-7	15 mg/m ³	10 mg/m ³		>3

HMIS Hazard Rating: Health: 0 Flammability: 0 Reactivity: 0 Personal Protection: A

Section 3 - Physical/Chemical Characteristics

Boiling Point (°F):	Specific Gravity (H2O = 1):	Vapor Density (Air = 1):	Vapor Pressure (mm Hg):
N/A	1.5 to 1.9	N/A	N/A
Melting Point (° F):	Evaporation Rate: (Butyl Acetate = 1)	Solubility in Water:	VOC Level (g/l):
642° (347°C)		Not Soluble	0
Appearance And Color:	White tape	Odor:	None

Section 4 - Fire And Explosion Hazard Data

Flash Point:	Flammable Limits:	LEL:	UEL:
N/A (Non-Burning)		N/A	N/A

Extinguishing Media: Use media suitable for surrounding fire.

Special Firefighting Procedures:

Use self contained breathing apparatus and protective clothing. Use methods suitable for surrounding fire if involved with other chemicals.

Unusual Fire And Explosion Hazards:

Product will emit toxic fumes at high temperatures. Above 800°F Tetrafluoroethylene; Above 825°F Hexafluoropropylene; Above 885°F Perfluoroisobutylene; Above 930°F Carbonyl Fluoride
 Toxic fumes of Hydrogen Fluoride may be released in a fire. Hydrogen Fluoride may react with water to form Hydrofluoric Acid.

Continued on Next Page

Section 5 - Reactivity Data

Stability: Stable **Conditions To Avoid:** Heating above 500°F for prolonged periods.

Incompatibility (Materials To Avoid): Molten alkali metals; Interhalogen compounds.

Hazardous Decomposition: See section 4 of MSDS

Hazardous Polymerization: Will not occur

Section 6 - Health Hazard Data

Routes of Entry: **Inhalation** N/A **Skin** N/A **Ingestion** N/A

Health Hazards:

Inhalation: N/A

Eyes: Mechanical irritation

Skin: Not likely to cause skin irritation and is not likely to be absorbed through the skin

Ingestion: PTFE has been shown to be inert when ingested by rats. The effects of pigmented PTFE are unknown.

Carcinogenicity: **NTP** NO **IARC** NO **OSHA Regulated** NO

Signs And Symptoms of Exposure:

Inhalation of fumes from overheated or burning PTFE may cause Flu like transient sickness with fever and chills. Symptoms typically recede within 48 hours. If symptoms occur, consult a physician.

Medical Conditions Generally Aggravated By Exposure:

Respiratory inflammation

Emergency And First Aid Procedures:

If exposed to fumes, move to fresh air. Get medical attention.

Continued on Next Page

Section 7 - Precautions For Safe Handling And Use:

Steps To Be Taken In Case Material Is Released Or Spilled:

Sweep up. Material can be slippery, especially when wet.

Waste Disposal Method:

Dispose of as harmless organic waste. Burning not recommended. Follow local, state and federal regulations.

Precautions To Be Taken In Handling And Storing:

No unusual precautions. Storage at or below 70°F suggested.

Other Precautions:

None

Section 8 - Control Measures:

Respiratory Protection:

N/A except as above

Ventilation: Local Exhaust N/A
 Mechanical N/A

Special N/A

Gloves: None required

Other: N/A

Eye Protection: Goggles, if contact with eye is probable.

Other Protective Clothing: N/A

Work/Hygienic Practices: N/A



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OSHA-Required Health And Safety Information!

This Material Safety Data Sheet (MSDS) was requested moments ago from Hercules Automated Fax Information System. Please forward it immediately to the person in charge of MSDS's, or retain it at the machine until claimed.

Section 1

MATERIAL SAFETY DATA SHEET # 70 Hercules Purple PVC Primer



MATERIAL SAFETY INFORMATION SERVICE

Hercules Chemical Company Inc.
111 South Street
Passaic NJ 07055
Phone (800) 221-9330
Fax (800) 333-3456

Date Prepared: 3/24/1994 Last Reviewed: 1/26/2009

Meets OSHA 29 CFR 1910.1200

Section 2 - Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity; Common Name(s), CAS Numbers)	OSHA PEL	ACGIH TLV	Other Limits	Upper Bound Limit if SARA Reportable
	TWA	TWA		
Tetrahydrofuran (109-99-9)	200PPM	200PPM	N/A	--
Methyl Ethyl Ketone (78-93-3)	200PPM	200PPM	N/A	--
Cyclohexanone (108-94-1)	50PPM	20PPM	N/A	--
Acetone (CAS67-64-1)	1000 PPM	500PPM	750 STEL	

HMIS Hazard Rating: Health: 3 Flammability: 4 Reactivity: 1 Personal Protection: G

Section 3 - Physical/Chemical Characteristics

Boiling Point (°F): 133 Based on first boiling component-Acetone	Specific Gravity (H2O = 1): 0.820 ± 0.03	Vapor Density (Air = 1): 2.0 to 2.5	Vapor Pressure (mm Hg): 400 @ 104° F Based on first boiling component-Acetone
Melting Point (° F): N/A	Evaporation Rate: (Butyl Acetate = 1) 7-11	Solubility in Water: 50% to 75%	VOC Level (g/l): 510
Appearance And Color: Purple Liquid		Odor: Ethereal & Acetone-like	

Section 4 - Fire And Explosion Hazard Data

Flash Point: 0° to -4.0° F (TCC) (Based on acetone)	Flammable Limits:	LEL: 2%	UEL: 13.0%
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Extinguishing Media: Foam/Dry chemical/CO2

Special Firefighting Procedures:

Handle as flammable liquid. Wear self-contained breathing apparatus & chemical goggles. Water may be ineffective, but should be used to keep fire-exposed containers cool.

Unusual Fire And Explosion Hazards:

Vapor is heavier than air and travels considerable distance to sources of ignition and flashback. On long standing may cause peroxides which may cause violent reaction especially upon evaporation to dryness.

Continued on Next Page

Section 5 - Reactivity Data

Stability: Stable **Conditions To Avoid:** Keep in closed containers away from sparks & open flame.

Incompatibility (Materials To Avoid): Strong oxidizing materials, Lithium Aluminum Hydride, Sodium Aluminum Hydroxide, Sodium & Potassium Hydroxides.

Hazardous Decomposition: Carbon dioxide and carbon monoxide are formed. Irritating Peroxide fumes are formed when heated to decomposition.

Hazardous Polymerization: Avoid excessive exposure to air and cationic initiators like Lewis Acids.

Section 6 - Health Hazard Data

Routes of Entry: **Inhalation** YES/Primary **Skin** YES/Primary **Ingestion** YES/Secondary

Health Hazards:

Corrosive to eyes and skin irritant. Severe overexposure can cause headache, dizziness and narcosis. May cause dermatosis and dermatitis with prolonged repeated contact.

Carcinogenicity: **NTP** NO **IARC** NO **OSHA Regulated** NO

Signs And Symptoms of Exposure:

INGESTION: No effects expected. **INHALATION:** Will cause irritation of mucous membranes, nose, eyes, & throat; coughing, difficulty of breathing. Exposure to high vapor concentration may cause headache, dizziness, nausea, narcosis. **SKIN CONTACT:** Prolonged skin contact causes common solvent defatting effect. **EYE CONTACT:** Vapors slightly uncomfortable. Splashes irritating. Will cause painful burning or stinging of eyes & lids, watering of eyes and conjunctiva.

Medical Conditions Generally Aggravated By Exposure:

No data found

Emergency And First Aid Procedures:

INGESTION: DO NOT INDUCE VOMITING. If conscious, dilute by giving 2 glasses of water. Call a physician immediately. **INHALATION:** Remove to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth resuscitation. If breathing is difficult, give oxygen. Call a physician. **SKIN CONTACT:** Wash affected area with soapy water. Remove contaminated clothing. **EYE CONTACT:** Immediately flush eyes with plenty of water for 15 minutes. Consult a physician.

Continued on Next Page

Section 7 - Precautions For Safe Handling And Use:**Steps To Be Taken In Case Material Is Released Or Spilled:**

Eliminate sources of ignition. Absorb with sand or inert absorbing material. Dispose of with solid waste in accordance with all regulations. Flush spill area with water. Avoid flushing into confined areas.

Waste Disposal Method:

Incinerate in accordance with federal, state and local regulations.

Precautions To Be Taken In Handling And Storing:

Store in cool, well-ventilated area. Keep away from open flame and sources of ignition.

Other Precautions:

Use normal good personal hygiene.

Section 8 - Control Measures:**Respiratory Protection:**

In confined spaces or other circumstances where adequate ventilation cannot be assured use NIOSH-approved respirator, positive pressure airline mask, or self contained breathing apparatus.

Ventilation: Local Exhaust As required

Mechanical All ventilating devices must be located so they do not provide a source of ignition.

Special When using cements in an area of limited ventilation, use a ventilation device such as a fan or air mover to maintain a safe air concentration.

Gloves: PVA gloves

Other: N/A

Eye Protection: Chemical Safety goggles.

Other Protective Clothing: Apron, boots, eye bath, safety shower

Work/Hygienic Practices Wash thoroughly after handling. Avoid ingestion of the cements. do not eat or drink when using cements or in the vicinity where such cements are being used.



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OSHA-Required Health And Safety Information!

This Material Safety Data Sheet (MSDS) was requested moments ago from Hercules Automated Fax Information System. Please forward it immediately to the person in charge of MSDS's, or retain it at the machine until claimed.

Section 1

MATERIAL SAFETY DATA SHEET # 71 Plumbers Caulk - Clear



MATERIAL SAFETY INFORMATION SERVICE

Hercules Chemical Company Inc.
 111 South Street
 Passaic NJ 07055
 Phone (800) 221-9330
 Fax (800) 333-3456

Date Prepared: 9/21/1988 Last Reviewed: 2/23/2011

Meets OSHA 29 CFR 1910.1200

Section 2 - Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity; Common Name(s), CAS Numbers)	OSHA PEL	ACGIH TLV	Other Limits	Upper Bound Limit if SARA Reportable
ETHANEDIOL Cas #107-21-1	N/A	100mg/m ³	AEROSOL FORM	
ALKYLPHENOLETHOXYLATE Cas #9036-19-5	N/A	N/A		

HMIS Hazard Rating: Health: 1 Flammability: 0 Reactivity: 0 Personal Protection: A

Section 3 - Physical/Chemical Characteristics

Boiling Point (°F): 100°C ; 212°F	Specific Gravity (H ₂ O = 1): 1.05	Vapor Density (Air = 1): N/A	Vapor Pressure (mm Hg): N/A
Melting Point (° F): N/A	Evaporation Rate: (Butyl Acetate = 1) N/A	Solubility in Water: Unknown	VOC Level: 50.39 g/L
Appearance And Color: Clear paste		Odor: Ammomia	

Section 4 - Fire And Explosion Hazard Data

Flash Point: None	Flammable Limits:	LEL: N/A	UEL: N/A
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Extinguishing Media: As appropriate for surrounding fire.

Special Firefighting Procedures:

Firefighters must wear NIOSH/MSHA approved positive pressure self-contained breathing apparatus with full face mask and full protective clothing.

Unusual Fire And Explosion Hazards:

None

Continued on Next Page

Section 5 - Reactivity Data

Stability: Stable Conditions To Avoid: Unknown

Incompatibility None known
(Materials To Avoid):

Hazardous Decomposition: CO, CO2 and nitrogen oxides (NOx); Toxic monomer fumes

Hazardous Polymerization: Will Not Occur

Section 6 - Health Hazard Data

Routes of Entry: Inhalation YES Skin YES Ingestion NO EYES: YES

Health Hazards:

Chronic Hazards:

Carcinogenicity: NTP NO IARC NO OSHA Regulated NO

Signs And Symptoms of Exposure:

Direct eye contact may cause irritation with redness, swelling, pain and tearing. Prolonged inhalation of vapors can cause irritation of the mouth, nose, throat and mucous membranes. Overexposure may cause headache, dizziness, tiredness, nausea and vomiting. May cause central nervous system effects. Causes skin irritation, skin defatting. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea

Medical Conditions Generally Aggravated By Exposure:

None known

Emergency And First Aid Procedures:

SKIN: Wash with soap and warm water. EYES: Flush with water for 15 minutes. Seek medical attention if irritation persists. INGESTION: Do not induce vomiting. If victim is conscious, give 2-4 glasses of water. Never give anything by mouth to someone unconscious. Seek medical attention immediately. INHALATION: Move to fresh air. If not breathing, give artificial respiration.

Continued on Next Page

Section 7 - Precautions For Safe Handling And Use:**Steps To Be Taken In Case Material Is Released Or Spilled:**

Use an absorbent material and sweep up for disposal

Waste Disposal Method:

Small quantities: non-hazardous landfill. Large quantities: Conform to federal, state and local regulations.

Precautions To Be Taken In Handling And Storing:

Store away from heat, sources of ignition and incompatibles

Other Precautions:

Keep out of reach of children.

Section 8 - Control Measures:**Respiratory Protection:**

If exposure limits are exceeded or respiratory irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn.

Ventilation: Local Exhaust Adequate.
Mechanical N/A

Special N/A

Other: N/A

Gloves: Impervious gloves such as Neopren

Eye Protection: Monogoggles or Safety glasses.

Other Protective Clothing: None necessary

Work/Hygienic Practices Use good personal hygiene practices.

Additional Information:

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OSHA-Required Health And Safety Information!

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Section 1

MATERIAL SAFETY DATA SHEET # 81
Hercules for Hands(™) Lemon Lotion
Hand Cleaner w/Pumice



MATERIAL SAFETY INFORMATION SERVICE

Hercules Chemical Company Inc.
 111 South Street
 Passaic NJ 07055
 Phone (800) 221-9330
 Fax (800) 333-3456

Date Prepared: 1/3/1992 Last Reviewed: 1/7/2002

Meets OSHA 29 CFR 1910.1200

Section 2 - Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity; Common Name(s), CAS Numbers)	OSHA PEL	ACGIH TLV	Other Limits	Upper Bound Limit if SARA Reportable
*Diimethyl Glutrate (1119-40-0)	N/A	8.19 mg/kg	N/A	N/A
*Dimethyl Adipate (627-93-0)	N/A	N/A	N/A	N/A
*Dimethyl Succinate (106-62-0)	N/A	N/A	N/A	N/A
*Present as Mixture of DiBasic Ester (DBE)	N/A	N/A	N/A	N/A
D-Limonene (5989-27-5)	N/A	N/A	N/A	N/A

HMIS Hazard Rating:

Section 3 - Physical/Chemical Characteristics

Boiling Point (°C): 200-300° C	Specific Gravity (H2O = 1): 1.01	Vapor Density (Air = 1): 1	Vapor Pressure (mm Hg): 0.1 at 20° C
Melting Point (° F) N/A	Evaporation Rate: (Butyl Acetate = 1) 0.1	Solubility in Water: Soluble	
Appearance And Color: Orangish Yellow Liquid		Odor: Sweet Lemon Odor	

Section 4 - Fire And Explosion Hazard Data

Flash Point: 235° F	Flammable Limits: N/A	LEL: 0.9	UEL: 8.0
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Extinguishing Media: Water Spray, Chemical Foam, CO2, Dry Chemical

Special Firefighting Procedures:
None Known

Unusual Fire And Explosion Hazards:
None -- DBE vapors in large quantities can form explosive mixtures in air.

Continued on Next Page

Section 5 - Reactivity Data

Stability: Stable **Conditions To Avoid:** Keep away from open flames & sparks

Incompatibility (Materials To Avoid): Avoid contact with strong oxidants, acids, and alkalis.

Hazardous Decomposition: Carbon Monoxide and Carbon Dioxide

Hazardous Polymerization: Will Not Occur

Section 6 - Health Hazard Data

Routes of Entry: **Inhalation** Yes/Primary **Skin** Yes/Primary **Ingestion** Yes/Secondary

Health Hazards:
None Known

Carcinogenicity: **NTP** NO **IARC** NO **OSHA Regulated** NO

Signs And Symptoms of Exposure:

Not a skin sensitizer. Slight eye irritation in animal tests.

Medical Conditions Generally Aggravated By Exposure:

None

Emergency And First Aid Procedures:

EYE CONTACT: Immediately flush with plenty of water for at least 15 minutes. Call a physician.

INGESTION: Give large quantities of water. Do not induce vomiting. Call a physician.

Continued on Next Page

Section 7 - Precautions For Safe Handling And Use:**Steps To Be Taken In Case Material Is Released Or Spilled:**

Handle as non-hazardous waste.

Waste Disposal Method:

Recover non-usable product and dispose of in landfill or as required by applicable regulations.

Precautions To Be Taken In Handling And Storing:

None

Other Precautions:

None

Section 8 - Control Measures:**Respiratory Protection:**

None

Ventilation: Local Exhaust N/A
Mechanical None

Special None

Gloves: None

Other: None

Eye Protection: None

Other Protective
Clothing: None

Work/Hygienic Practices Use good hygiene practices. When possible wash hands after using.



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OSHA-Required Health And Safety Information!

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Section 1

MATERIAL SAFETY DATA SHEET # 85
Hercules Glug



MATERIAL SAFETY INFORMATION SERVICE

Hercules Chemical Company Inc.
 111 South Street
 Passaic NJ 07055
 Phone (800) 221-9330
 Fax (800) 333-3456

Date Prepared: 12/3/1993 **Last Reviewed:** 10/18/2005

Meets OSHA 29 CFR 1910.1200

Section 2 - Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity; Common Name(s), CAS Numbers)	OSHA PEL	ACGIH TLV	Other Limits	Upper Bound Limit if SARA Reportable
Sodium Hydroxide (1310-73-2)	2mg/M ³	2mg/M ³ (dust)	N/A	- -

HMIS Hazard Rating: Health: 2 Flammability: 0 Reactivity: 2 Personal Protection: E

Section 3 - Physical/Chemical Characteristics

Boiling Point (°F):	Specific Gravity	Vapor Density	Vapor Pressure
2535 F	2.130	N/A	N/A

Melting Point (° F)	Evaporation Rate: (Butyl Acetate = 1)	Solubility in Water:
604	N/A	Appreciable: 42g/100cc of water at 0° C

Appearance And Color: White to Off-White **Odor:** Odorless Flakes

Section 4 - Fire And Explosion Hazard Data

Flash Point	Flammable Limit	LEL:	UEL:
None	N/A		

Extinguishing Media: Does not burn or support combustion.

Special Firefighting Procedures:
 As appropriate for surrounding fire.

Unusual Fire And Explosion Hazards:
 Hot or molten materials will react violently with water, liberating heat and causing splashing. Contact with metals, particularly magnesium, aluminum, and zinc (galvanized), can rapidly generate hydrogen gas which is explosive.

Continued on Next Page

Section 5 - Reactivity Data

Stability: Stable **Conditions To Avoid:** Can react violently with acids and with many organic compounds.

Incompatibility (Materials To Avoid): Aluminum, tin, lead, zinc, and their alloys and all acids.

Hazardous Decomposition: Reaction with various food sugars may form carbon monoxide.

Hazardous Polymerization: Caustic soda & trichloroethylene are especially hazardous since they react to form dichloroacetylene which is spontaneously flammable.

Section 6 - Health Hazard Data

Routes of Entr	Inhalation Yes/Primary	Skin Yes/Primary	Ingestion Yes/Secondary
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Health Hazard

Caustic soda is a corrosive material. Sodium hydroxide: Acute Oral LD50=140-340 mg/kg (Rat) Acute Dermal LD50=1.35 gm/kg (Rabbit)

Carcinogenicit	NTP NO	IARC NO	OSHA Regulated NO
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Signs And Symptoms of Exposure:

INHALATION: Airborne concentrations of dust, mist, or spray of caustic soda may cause damage to the upper respiratory tract and even to the lung tissue proper which could produce chemical pneumonia, depending upon the severity of exposure. **SKIN CONTACT:** Caustic soda is destructive to tissues contacted and produces severe burns. **EYE CONTACT:** Caustic soda is destructive to eye tissues on contact. Will cause severe burns that result in damage to the eyes and even blindness. **INGESTION:** Caustic soda, if swallowed, can cause severe burns and complete tissue perforation of mucous membranes of the mouth, throat, esophagus, and stomach.

Medical Conditions Generally Aggravated By Exposure:

EFFECTS OF OVEREXPOSURE -- ACUTE OVEREXPOSURE: Corrosive to all body tissues with which it comes in contact. **CHRONIC OVEREXPOSURE:** Chronic local effect may consist of multiple areas of superficial destruction of the skin or of primary irritant dermatitis. Similarly, inhalation of dust, spray or mist may result in varying degrees of irritation or damage to the respiratory tract tissues and an increased susceptibility to respiratory illness.

Emergency And First Aid Procedures:

EYES: Object is to flush material out immediately, then seek medical attention. Immediately flush eyes with large amounts of water for at least 15 minutes, holding lids apart to ensure flushing of the entire surface. Washing eyes within 1 minute is essential to achieve maximum effectiveness. Seek medical attention. **SKIN:** Wash contaminated areas with plenty of water. Remove contaminated clothing and footwear and wash clothing before reuse. Discard footwear which cannot be decontaminated. Seek medical attention immediately. **INHALATION:** Get person out of contaminated area to fresh air. If breathing has stopped, resuscitate and administer oxygen if readily available. Seek medical attention immediately. **INGESTION:** Never give anything by mouth to an unconscious person. If swallowed, do not induce vomiting. Give large quantities of water. If available, give several glasses of milk. If vomiting occurs spontaneously, keep airways clear. Seek medical attention immediately.

Continued on Next Page

Section 7 - Precautions For Safe Handling And Use:**Steps To Be Taken In Case Material Is Released Or Spilled:**

Get complete protective equipment. Shovel spilled material into steel containers, flush with ample water, rinse with dilute acid, preferably acetic acid, and finally with water.

Waste Disposal Method:

Dissolve and/or flush to holding area for pH adjustment and dilute before discharging to sewer or stream. For large quantities follow state/local regulations.

Precautions To Be Taken In Handling And Storing:

Store in a cool, dry place. Keep separate from acids, metal, explosives, organic peroxides and easily ignitable materials.

Other Precautions:

Wear complete protective equipment when handling the product in large quantities.

Section 8 - Control Measures:**Respiratory Protection:**

Filter or dust-type respirator.

Ventilation: Local Exhaust As required to control dust or mist.

Special N/A

Mechanical N/A

Other N/A

:

Gloves Neoprene rubber or vinyl.

Eye Protection: Chemical safety goggles plus face shield where appropriate.

Other Protective

Clothing: Rubber safety toe shoes or boots, cotton overalls.

Work/Hygienic Practice Use good personal hygiene practices.

Additional Information:

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OSHA-Required Health And Safety Information!

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Section 1

MATERIAL SAFETY DATA SHEET # 86 Hercules Plastic Poxy (TM)



MATERIAL SAFETY INFORMATION SERVICE

Hercules Chemical Company Inc.
111 South Street
Passaic NJ 07055
Phone (800) 221-9330
Fax (800) 333-3456

Date Prepared: 8/24/1994 Last Reviewed: 6/14/2011

Meets OSHA 29 CFR 1910.1200

Section 2 - Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity; Common Name(s), CAS Numbers)	OSHA PEL	ACGIH TLV	Other Limits	Upper Bound Limit if SARA Reportable
Diglycidyl ethers of bisphenol A resins CAS # 67989-52-0	N/E	N/E		--
2, 4, 6-Tris (Dimethylamino) Methyl Phenol, CAS # 90-72-2	N/E	5ppm		--
Diglycidyl Ether of Bisphenol A, CAS # 25068-38-6	N/E	N/E		--

HMIS Hazard Rating: Health: 1 Flammability: 0 Reactivity: 0 Personal Protection: B

Section 3 - Physical/Chemical Characteristics

Boiling Point (°F):	Specific Gravity (H2O = 1):	Vapor Density (Air = 1):	Vapor Pressure (mm Hg):
N/A	1.79	N/A	N/A
Melting Point (° F)	Evaporation Rate: (Butyl Acetate = 1)	Solubility in Water:	VOC Level: <0.1%
N/A	None	Not Soluble	
Appearance And Color:	2 Part Mastic - Off-White Inner, Blue Outer	Odor:	Mercaptan / Sulfur Odor

Section 4 - Fire And Explosion Hazard Data

Flash Point:	Flammable Limits:	LEL:	UEL:
>200°F	N/A	N/A	N/A

Extinguishing Media: Water Fog, Foam, CO2, Dry Chemical, Alcohol Foam

Special Firefighting Procedures:

Fire fighters should be equipped with NIOSH approved, positive pressure self contained breathing apparatus (SCBA) and full protective clothing.

Unusual Fire And Explosion Hazards:

None. See "Hazardous Decomposition or Byproducts" Below.

Continued on Next Page

Section 5 - Reactivity Data

Stability: Stable Conditions To Avoid: None

Incompatibility
(Materials To Avoid):

Hazardous Decomposition: Carbon Monoxide, Aldehydes, Acids, Oxides of Sulfur and Nitrogen may be formed.

Hazardous Polymerization: Will Not Occur

Section 6 - Health Hazard Data

Routes of Entry: Inhalation No Skin Yes/Secondary Ingestion Yes/Primary

Health Hazards:

None Known

Carcinogenicity: NTP NO IARC NO OSHA Regulated NO

Signs And Symptoms of Exposure:

None

Medical Conditions Generally Aggravated By Exposure:

None

Emergency And First Aid Procedures:

Emergency and First Aid Procedures:

EYES: Flush eyes thoroughly with water for 15 minutes. If effects occur, consult a physician, preferably an ophthalmologist.

SKIN: Wash with soap and water

INGESTION: No emergency medical treatment necessary

INHALATION: N/A

Note to Physician: Consider additional thorough skin wash with mild non-abrasive soap and plenty of warm water for at least fifteen (15) minutes.

Continued on Next Page

Section 7 - Precautions For Safe Handling And Use:**Steps To Be Taken In Case Material Is Released Or Spilled:**

Sweep up in normal manner.

Waste Disposal Method:

Dispose of in non-hazardous landfill. Not a hazardous waste.

Precautions To Be Taken In Handling And Storing:

None. If sanding cured putty or substrates, wear eye protection and dust mask.

Other Precautions:

Storage temperature - less than 90°

Section 8 - Control Measures:**Respiratory Protection:**

See Precautions Above.

Ventilation: Local Exhaust Adequate
Mechanical None

Special None
Other: N/A

Gloves: Polyethylene for prolonged contact.

Eye Protection: Safety goggles if eye contact likely.

Other Protective Clothing: None

Work/Hygienic Practices Wash with soap and water thoroughly after handling.

Additional Information:

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OSHA-Required Health And Safety Information!

This Material Safety Data Sheet (MSDS) was requested moments ago from Hercules Automated Fax Information System. Please forward it immediately to the person in charge of MSDS's, or retain it at the machine until claimed.

Section 1**MATERIAL SAFETY DATA SHEET # 87**
Hercules for Hands™ Towels**MATERIAL SAFETY INFORMATION SERVICE**

Hercules Chemical Company Inc.
111 South Street
Passaic NJ 07055
Phone (800) 221-9330
Fax (800) 333-3456

Date Prepared: Last Reviewed: 7/31/2007

Meets OSHA 29 CFR 1910.1200

Section 2 - Hazardous Ingredients/Identity Information**Hazardous Components (Specific Chemical Identity; Common Name(s), CAS Numbers)**

OSHA PEL

ACGIH TLV

Other Limits

Upper Bound
Limit if SARA
Reportable

This product is not classified as hazardous in accordance with OSHA 1910.1200.

HMIS Hazard Rating: Health: 0 Flammability: 0 Reactivity: 0 Personal Protection: A**Section 3 - Physical/Chemical Characteristics**

Boiling Point (°F):	Specific Gravity (H2O = 1):	Vapor Density (Air = 1):	Vapor Pressure (mm Hg):
100 - 230° C (Solution)	1.01 (Solution)	1	0.1 at 20° C (Solution)
Melting Point (° F):	Evaporation Rate: (Butyl Acetate = 1)	Solubility in Water:	
N/A	01	Soluble	
Appearance And Color:	Colorless	Odor:	Sweet Citrus Odor

Section 4 - Fire And Explosion Hazard Data

Flash Point:	Flammable Limits:	LEL:	UEL:
235° F (Solution based on DBE)	--	0.9	8.0

Extinguishing Media: Water fog, alcohol foam, CO2, dry chemical.**Special Firefighting Procedures:**

Flood with water. When handling fire involving this product, wear SCBA and full protective equipment.

Unusual Fire And Explosion Hazards:

None. DBE vapors, if present in large quantities, can form an explosive mixture in air.

Continued on Next Page

Section 5 - Reactivity Data

Stability: Stable **Conditions To Avoid:** Keep away from open flames and sparks.

Incompatibility (Materials To Avoid): Avoid contact with strong oxidants, acids, and alkalis.

Hazardous Decomposition: CO and CO₂ may be liberated if material is burned.

Hazardous Polymerization: Will Not Occur

Section 6 - Health Hazard Data

Routes of Entry: **Inhalation** Yes/Primary **Skin** Yes/Primary **Ingestion** Yes/Secondary

Health Hazards:

None. See "Signs and Symptoms" below.

Carcinogenicity: **NTP** NO **IARC** NO **OSHA Regulated** NO

Signs And Symptoms of Exposure:

Not a skin sensitizer, not an eye irritant in animal tests. The product, when tested in accordance with 16CFR1500 was found NOT to be a skin sensitizer, a primary eye irritant, dermally toxic, a primary dermal irritant, orally toxic at levels of 5.0 grams/kg, or toxic by inhalation at concentration levels of 2.1 mg/ml.

Medical Conditions Generally Aggravated By Exposure:

None

Emergency And First Aid Procedures:

EYE CONTACT: Immediately flush with plenty of water for at least 15 minutes. Call a physician. **INGESTION:** Give large quantities of water. Do not induce vomiting. Call a physician.

Continued on Next Page

Section 7 - Precautions For Safe Handling And Use:**Steps To Be Taken In Case Material Is Released Or Spilled:**

Handle as non-hazardous waste.

Waste Disposal Method:

Recover non-usable product and dispose of in landfill or as required by applicable regulations.

Precautions To Be Taken In Handling And Storing:

None

Other Precautions:

None

Section 8 - Control Measures:**Respiratory Protection:**

None

Ventilation: Local Exhaust None
Mechanical N/A

Special None
Other: N/A

Gloves: None

Eye Protection: None

Other Protective
Clothing: None



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FAST!

For Hercules Material Safety Data Sheets by fax anytime, day or night, just call 1-800-942-INFO (1-800-942-4636) from any Touch-Tone phone. Have your fax number ready. Checking the product label for the correct MSDS # will save time.

OSHA-Required Health And Safety Information!

This Material Safety Data Sheet (MSDS) was requested moments ago from Hercules Automated Fax Information System. Please forward it immediately to the person in charge of MSDS's, or retain it at the machine until claimed.

Section 1

MATERIAL SAFETY DATA SHEET # 89
Megaloc®



MATERIAL SAFETY INFORMATION SERVICE

Hercules Chemical Company Inc.
 111 South Street
 Passaic NJ 07055
 Phone (800) 221-9330
 Fax (800) 333-3456

Date Prepared: 10/15/1995 **Last Reviewed:** 4/28/2010

Meets OSHA 29 CFR 1910.1200

Section 2 - Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity; Common Name(s), CAS Numbers)	OSHA PEL	ACGIH TLV	Other Limits	Upper Bound Limit if SARA Reportable
This product is not classified as hazardous in accordance with OSHA 1910.1200				

HMIS Hazard Rating: Health: 0 Flammability: 0 Reactivity: 0 Personal Protection: A

Section 3 - Physical/Chemical Characteristics

Boiling Point (°F):	Specific Gravity (H2O = 1):	Vapor Density (Air = 1):	Vapor Pressure (mm Hg):
N/A	1.2	N/A	N/A
Melting Point (° F):	Evaporation Rate: (Butyl Acetate = 1)	Solubility in Water:	VOC Level (gpl):
N/A	N/A	Insoluble	4.0
Appearance And Color:	Blue paste	Odor:	None

Section 4 - Fire And Explosion Hazard Data

Flash Point:	Flammable Limits:	LEL:	UEL:
N/A	N/A		
Extinguishing Media: Dry chemical, foam, carbon dioxide			

Special Firefighting Procedures:

Use water to cool fire-exposed containers. If a leak or spill has not ignited, use water spray to disperse the vapors to provide protection for personnel.

Unusual Fire And Explosion Hazards:

None

Continued on Next Page

Section 5 - Reactivity Data

Stability: Stable **Conditions To Avoid:** Direct contact with open flame.

Incompatibility (Materials To Avoid): None known

Hazardous Decomposition: CO₂ and CO may form on burning

Hazardous Polymerization: Will not occur

Section 6 - Health Hazard Data

Routes of Entry: **Inhalation** N/A **Skin** YES/Primary **Ingestion** YES/Secondary

Health Hazards:

None

Carcinogenicity: **NTP** NO **IARC** NO **OSHA Regulated** NO

Signs And Symptoms of Exposure:

None: Could be mildly irritating to certain persons on prolonged contact.

Medical Conditions Generally Aggravated By Exposure:

None known

Emergency And First Aid Procedures:

SKIN: Wash with soap and water. **EYES:** As with most foreign materials should eye contact occur, flush eyes with plenty of water & get medical attention. **INGESTION:** Do not induce vomiting. Get medical attention.

Continued on Next Page

Section 7 - Precautions For Safe Handling And Use:**Steps To Be Taken In Case Material Is Released Or Spilled:**

Use absorbent material and sweep up.

Waste Disposal Method:

Non-hazardous landfill

Precautions To Be Taken In Handling And Storing:

None

Other Precautions:

Keep away from direct contact with open flame or sparks.

Section 8 - Control Measures:**Respiratory Protection:**

N/A

Ventilation: Local Exhaust Normal ventilation
Mechanical N/A

Special N/A

Other: N/A

Gloves: Rubber gloves

Eye Protection: Goggles or safety goggles

Other Protective

Clothing: None required

Work/Hygienic Practices: Wash up after handling the material.



For Hercules Material Safety Data Sheets by fax anytime, day or night, just call 1-800-942-INFO (1-800-942-4636) from any Touch-Tone phone. Have your fax number ready. Checking the product label for the correct MSDS # will save time.

OSHA-Required Health And Safety Information!

This Material Safety Data Sheet (MSDS) was requested moments ago from Hercules Automated Fax Information System. Please forward it immediately to the person in charge of MSDS's, or retain it at the machine until claimed.

Section 1

MATERIAL SAFETY DATA SHEET # 91
Plastic Seal - "Gun Grade Cartridge"



MATERIAL SAFETY INFORMATION SERVICE

Hercules Chemical Company Inc.
 111 South Street
 Passaic NJ 07055
 Phone (800) 221-9330
 Fax (800) 333-3456

Date Prepared: 11/4/1996 **Last Reviewed:** 9/30/2009

Meets OSHA 29 CFR 1910.1200

Section 2 - Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity; Common Name(s), CAS Numbers)	OSHA PEL	ACGIH TLV	Other Limits	Upper Bound Limit if SARA Reportable
ISOCYANATE FUNCTIONAL URETHANE RESIN CAS 112898-48-3	N/A	N/A	N/A	N/A

HMIS Hazard Rating: Health: 1 Flammability: 0 Reactivity: 0 Personal Protection: B

Section 3 - Physical/Chemical Characteristics

Boiling Point (°F):	Specific Gravity (H₂O = 1):	Vapor Density (Air = 1):	Vapor Pressure (mm Hg):
N/A	1.6	N/A	N/A
Melting Point (° F):	Evaporation Rate: (Butyl Acetate = 1)	Solubility in Water:	VOC Level (gpl):
N/A	0.0	Insoluble	4
Appearance And Color:	Paste	Odor:	N/A

Section 4 - Fire And Explosion Hazard Data

Flash Point:	Flammable Limits:	LEL:	UEL:
>140°F	N/A	N/A	N/A

Extinguishing Media: Water fog, Alcohol Foam, CO₂, Dry Chemical

Special Firefighting Procedures:

Firefighters should wear NIOSH approved positive pressure self-contained breathing apparatus (SCBA) and full protective clothing.

Unusual Fire And Explosion Hazards:

None

Continued on Next Page

Section 5 - Reactivity Data

Stability: Stable **Conditions To Avoid:** High humidity at temperatures over 80° F.

Incompatibility (Materials To Avoid): Water, alcohol, amines and acids will react with the resin and destroy it or cause hardening of the sealant.

Hazardous Decomposition: CO, CO₂, Oxides of Nitrogen and calcium oxide

Hazardous Polymerization: Material will polymerize upon contact with water or water vapor.

Section 6 - Health Hazard Data

Routes of Entry: Inhalation N/A **Skin** YES/Primary **Ingestion** YES/Secondary

Health Hazards:

None known

Carcinogenicity: NTP NO IARC NO OSHA Regulated NO

Signs And Symptoms of Exposure:

EYES: May cause moderate irritation. **SKIN:** May cause local irritation, may cause allergic skin rash to sensitized individuals. **INHALATION:** N/A.

Medical Conditions Generally Aggravated By Exposure:

None known.

Emergency And First Aid Procedures:

EYES: Flush with water for 15 minutes. Call Doctor if irritation persists. **SKIN:** Wash with soap and water. **INHALATION:** N/A. **INGESTION:** Induce vomiting. Call physician immediately.

Continued on Next Page

Section 7 - Precautions For Safe Handling And Use:**Steps To Be Taken In Case Material Is Released Or Spilled:**

Transfer to covered container. Let cure to solid rubber. Not a hazardous waste.

Waste Disposal Method:

Non-hazardous landfill. Dispose of large spills in compliance with all Federal, State, and local regulations.

Precautions To Be Taken In Handling And Storing:

None

Other Precautions:

None

Section 8 - Control Measures:**Respiratory Protection:**

None

Ventilation: Local Exhaust Adequate
Mechanical N/A

Special N/A

Other: N/A

Gloves: Impervious gloves.

Eye Protection: Safety glasses or goggles.

Other Protective
Clothing: None required

Work/Hygienic Practices Use good hygiene practices. When possible, wash hands after using.

Additional Information:

FACTS
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AST!

For Hercules Material Safety Data Sheets by fax anytime, day or night, just call 1-800-942-INFO (1-800-942-4636) from any Touch-Tone phone. Have your fax number ready. Checking the product label for the correct MSDS # will save time.

OSHA-Required Health And Safety Information!

This Material Safety Data Sheet (MSDS) was requested moments ago from Hercules Automated Fax Information System. Please forward it immediately to the person in charge of MSDS's, or retain it at the machine until claimed.

Section 1

MATERIAL SAFETY DATA SHEET # 92
Hercules PVC Cement-Clr, Med Body,
Med & Fast Set, "LOW VOC"

Date Prepared: 11/4/1996 Last Reviewed: 9/14/2009

Meets OSHA 29 CFR 1910.1200



MATERIAL SAFETY INFORMATION SERVICE

Hercules Chemical Company Inc.
 111 South Street
 Passaic NJ 07055
 Phone (800) 221-9330
 Fax (800) 333-3456

Section 2 - Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity; Common Name(s), CAS Numbers)

OSHA PEL	ACGIH TLV	Other Limits	Upper Bound Limit if SARA Reportable	
This MSDS is for LOW VOC Product (As shown on label) ONLY. For regular product see MSDS #52.				
Tetrahydrofuran (109-99-9)	200 PPM	200 PPM	N/A	--
Methyl Ethyl Ketone (78-93-3)	200 PPM	200 PPM	N/A	--
Cyclohexanone (108-94-1)	50 PPM	20 PPM	N/A	--
Acetone (67-64-1)	1000 PPM	500 PPM	N/A	--

HMIS Hazard Rating: Health: 3 Flammability: 4 Reactivity: 1 Personal Protection: G

Section 3 - Physical/Chemical Characteristics

Boiling Point (°F):	Specific Gravity (H2O = 1):	Vapor Density (Air = 1):	Vapor Pressure (mm Hg):
133 Based on first boiling component-Acetone	0.910 ± 0.03	2.0 to 2.5	190 Based on first boiling component-Acetone
Melting Point (° F):	Evaporation Rate: (Butyl Acetate = 1)	Solubility in Water:	VOC Level:
N/A	7-11	55% to 75%	510 gpl
Appearance And Color:	Clear Viscous Liquid	Odor:	Ethereal & Acetone-like

Section 4 - Fire And Explosion Hazard Data

Flash Point:	Flammable Limits:	LEL:	UEL:
0-6° F (T.C.C.) (Based on Acetone)		2%	13%

Extinguishing Media: Dry chemical. Foam. Carbon dioxide

Special Firefighting Procedures:

Handle as flammable liquid. Wear self-contained breathing apparatus & chemical goggles. Water may be ineffective, but should be used to keep fire-exposed containers cool.

Unusual Fire And Explosion Hazards:

Vapor is heavier than air and travels considerable distance to source of ignition and flashback. On long standing may form peroxides which may cause violent reaction especially upon evaporation to dryness.

Continued on Next Page

Section 5 - Reactivity Data

Stability: Stable **Conditions To Avoid:** Keep in closed containers away from sparks and open flame.

Incompatibility (Materials To Avoid): Strong oxidizing materials, Lithium Aluminum Hydride, Sodium Aluminum Hydroxide, Sodium and Potassium Hydroxides.

Hazardous Decomposition: CO₂ and CO are formed. Irritating peroxide fumes form when heated to decomposition.

Hazardous Polymerization: Avoid excessive exposure to air and cationic initiators like Lewis Acids.

Section 6 - Health Hazard Data

Routes of Entry: **Inhalation** Yes/Primary **Skin** Yes/Primary **Ingestion** Yes/Secondary

Health Hazards:

Corrosive to eyes and skin irritant. Severe overexposure can cause headache, dizziness and narcosis. May cause dermatosis with prolonged repeated contact.

Carcinogenicity: **NTP** NO **IARC** NO **OSHA Regulated** NO

Signs And Symptoms of Exposure:

INGESTION: No effects of exposure expected. **INHALATION:** Will cause irritation of mucous membranes, nose, eyes & throat, coughing, difficulty of breathing. Exposure to high vapor concentration may cause headache, dizziness, nausea, narcosis. **SKIN CONTACT:** Prolonged contact causes common solvent defatting effect. **EYE CONTACT:** Vapors slightly uncomfortable, splashes irritating. Will cause painful burning or stinging of eyes and lids, watering of eyes and inflammation of conjunctiva.

Medical Conditions Generally Aggravated By Exposure:

No data found.

Emergency And First Aid Procedures:

INGESTION: Do not induce vomiting. If conscious, dilute by giving 2 glasses of water. Call a physician immediately. **INHALATION:** Remove to fresh air. If not breathing give artificial respiration preferably mouth-to-mouth. If breathing is difficult, give oxygen. Call a physician. **SKIN CONTACT:** Wash affected areas with soapy water. Remove contaminated clothing. **EYE CONTACT:** Immediately flush eyes with plenty of water for 15 minutes. Consult a physician.

Continued on Next Page

Section 7 - Precautions For Safe Handling And Use:

Steps To Be Taken In Case Material Is Released Or Spilled:

Eliminate sources of ignition. Absorb with sand or inert absorbing material and dispose of with solid waste according to Federal, State and local regulations. Flush spill area with water, avoid flushing into confined areas.

Waste Disposal Method:

Incinerate in accordance with Federal, State and local regulations.

Precautions To Be Taken In Handling And Storing:

Store in cool place, well-ventilated area. Keep away from open flame and sources of ignition.

Other Precautions:

Use normal good personal hygiene.

Section 8 - Control Measures:

Respiratory Protection:

In confined spaces or other circumstances where adequate ventilation cannot be assured use NIOSH-approved respirator, positive pressure airline mask, or self contained breathing apparatus.

Ventilation: Local Exhaust As required.

Mechanical All ventilating devices must be located so they do not provide a source of ignition.

Special When using cements in an area of limited ventilation, use a ventilation device such as a fan or air mover to maintain a safe air concentration.

Other: N/A

Gloves: PVA gloves.

Eye Protection: Chemical safety goggles.

Other Protective Clothing: Apron, boots, eye bath, safety shower.

Work/Hygienic Practices Wash thoroughly after handling. Avoid ingestion of the cements. Do not eat or drink when using cements or in the vicinity where such cements are being used.



For Hercules Material Safety Data Sheets by fax anytime, day or night, just call 1-800-942-INFO (1-800-942-4636) from any Touch-Tone phone. Have your fax number ready. Checking the product label for the correct MSDS # will save time.

OSHA-Required Health And Safety Information!

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Section 1

MATERIAL SAFETY DATA SHEET # 93 Hercules PVC Cement, Gray, "LOW VOC"



**MATERIAL
SAFETY
INFORMATION
SERVICE**

Hercules Chemical Company Inc.
111 South Street
Passaic NJ 07055
Phone (800) 221-9330
Fax (800) 333-3456

Date Prepared: 11/4/1996 Last Reviewed: 11/12/2008

Meets OSHA 29 CFR 1910.1200

Section 2 - Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity;
Common Name(s), CAS Numbers)

OSHA PEL

ACGIH TLV

Other Limits

Upper Bound
Limit if SARA
Reportable

This MSDS is for LOW VOC Product (As shown on label) ONLY. For regular product see MSDS #60.

Tetrahydrofuran (109-99-9)	200 PPM	200 PPM	N/A	--
Methyl Ethyl Ketone (78-93-3)	200 PPM	200 PPM	N/A	--
Cyclohexanone (108-94-1)	50 PPM	20 PPM	N/A	--
Acetone (67-64-1)	1000 PPM	500 PPM	N/A	--

HMIS Hazard Rating: Health: 3 Flammability: 4 Reactivity: 1 Personal Protection: G

Section 3 - Physical/Chemical Characteristics

Boiling Point (°F):	Specific Gravity (H ₂ O = 1):	Vapor Density (Air = 1):	Vapor Pressure (mm Hg):
133 Based on first boiling component-Acetone	0.920 ± 0.03	2.0 to 2.5	190 Based on first boiling component-Acetone
Melting Point (° F):	Evaporation Rate: (Butyl Acetate = 1)	Solubility in Water:	VOC Level: 510 gpl
N/A	7-11	55% to 75%	

Appearance And Color: Gray Viscous Liquid

Odor: Ethereal & Acetone-like

Section 4 - Fire And Explosion Hazard Data

Flash Point:	Flammable Limits:	LEL:	UEL:
0-6° F (T.C.C.) (Based on Acetone)		2%	13%

Extinguishing Media: Dry chemical. Foam. Carbon dioxide

Special Firefighting Procedures:

Handle as flammable liquid. Wear self-contained breathing apparatus & chemical goggles. Water may be ineffective, but should be used to keep fire-exposed containers cool.

Unusual Fire And Explosion Hazards:

Vapor is heavier than air and travels considerable distance to source of ignition and flashback. On long standing may form peroxides which may cause violent reaction especially upon evaporation to dryness.

Continued on Next Page

Section 5 - Reactivity Data

Stability: Stable **Conditions To Avoid:** Keep in closed containers away from sparks and open flame.

Incompatibility (Materials To Avoid): Strong oxidizing materials, Lithium Aluminum Hydride, Sodium Aluminum Hydroxide, Sodium and Potassium Hydroxides.

Hazardous Decomposition: CO₂ and CO are formed. Irritating peroxide fumes form when heated to decomposition.

Hazardous Polymerization: Avoid excessive exposure to air and cationic initiators like Lewis Acids.

Section 6 - Health Hazard Data

Routes of Entry: **Inhalation** Yes/Primary **Skin** Yes/Primary **Ingestion** Yes/Secondary

Health Hazards:

Corrosive to eyes and skin irritant. Severe overexposure can cause headache, dizziness and narcosis. May cause dermatosis with prolonged repeated contact.

Carcinogenicity: **NTP** NO **IARC** NO **OSHA Regulated** NO

Signs And Symptoms of Exposure:

INGESTION: No effects of exposure expected. **INHALATION:** Will cause irritation of mucous membranes, nose, eyes & throat, coughing, difficulty of breathing. Exposure to high vapor concentration may cause headache, dizziness, nausea, narcosis. **SKIN CONTACT:** Prolonged contact causes common solvent defatting effect. **EYE CONTACT:** Vapors slightly uncomfortable, splashes irritating. Will cause painful burning or stinging of eyes and lids, watering of eyes and inflammation of conjunctiva.

Medical Conditions Generally Aggravated By Exposure:**Emergency And First Aid Procedures:**

INGESTION: Do not induce vomiting. If conscious, dilute by giving 2 glasses of water. Call a physician immediately. **INHALATION:** Remove to fresh air. If not breathing give artificial respiration preferably mouth-to-mouth. If breathing is difficult, give oxygen. Call a physician. **SKIN CONTACT:** Wash affected areas with soapy water. Remove contaminated clothing. **EYE CONTACT:** Immediately flush eyes with plenty of water for 15 minutes. Consult a physician.

Continued on Next Page

Section 7 - Precautions For Safe Handling And Use:**Steps To Be Taken In Case Material Is Released Or Spilled:**

Eliminate sources of ignition. Absorb with sand or inert absorbing material and dispose of with solid waste according to Federal, State and local regulations. Flush spill area with water, avoid flushing into confined areas.

Waste Disposal Method:

Incinerate in accordance with Federal, State and local regulations.

Precautions To Be Taken In Handling And Storing:

Store in cool place, well-ventilated area. Keep away from open flame and sources of ignition.

Other Precautions:

Use normal good personal hygiene.

Section 8 - Control Measures:**Respiratory Protection:**

In confined spaces or other circumstances where adequate ventilation cannot be assured use NIOSH-approved respirator, positive pressure airline mask, or self contained breathing apparatus.

Ventilation: Local Exhaust As required.

Mechanical All ventilating devices must be located so they do not provide a source of ignition.

Special When using cements in an area of limited ventilation, use a ventilation device such as a fan or air mover to maintain a safe air concentration.

Gloves: PVA gloves.

Other: N/A

Eye Protection: Chemical safety goggles.

Other Protective

Clothing: Apron, boots, eye bath, safety shower.

Work/Hygienic Practices: Wash thoroughly after handling. Avoid ingestion of the cements. Do not eat or drink when using cements or in the vicinity where such cements are being used.



FACTS
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For Hercules Material Safety Data Sheets by fax anytime, day or night, just call 1-800-942-INFO (1-800-942-4636) from any Touch-Tone phone. Have your fax number ready. Checking the product label for the correct MSDS # will save time.

OSHA-Required Health And Safety Information!

This Material Safety Data Sheet (MSDS) was requested moments ago from Hercules Automated Fax Information System. Please forward it immediately to the person in charge of MSDS's, or retain it at the machine until claimed.

Section 1

MATERIAL SAFETY DATA SHEET # 95
Hercules CPVC Cement, "LOW VOC"
Standard (Orange) or Gold

Date Prepared: 11/4/1996 Last Reviewed: 11/21/2007

Meets OSHA 29 CFR 1910.1200



MATERIAL SAFETY INFORMATION SERVICE

Hercules Chemical Company Inc.
 111 South Street
 Passaic NJ 07055
 Phone (800) 221-9330
 Fax (800) 333-3456

Section 2 - Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity; Common Name(s), CAS Numbers)

OSHA PEL

ACGIH TLV

Other Limits

Upper Bound Limit if SARA Reportable

This MSDS is for LOW VOC Product (As shown on label) ONLY. For regular product see MSDS #61.

Hazardous Components (Specific Chemical Identity; Common Name(s), CAS Numbers)	OSHA PEL	ACGIH TLV	Other Limits	Upper Bound Limit if SARA Reportable
Tetrahydrofuran (109-99-9)	200 PPM	200 PPM	N/A	--
Methyl Ethyl Ketone (78-93-3)	200 PPM	200 PPM	N/A	--
Cyclohexanone (108-94-1)	50 PPM	20 PPM	N/A	--
Acetone (67-64-1)	1000 PPM	500 PPM	N/A	--

HMIS Hazard Rating: Health: 3 Flammability: 4 Reactivity: 1 Personal Protection: G

Section 3 - Physical/Chemical Characteristics

Boiling Point (°F):	Specific Gravity (H2O = 1):	Vapor Density (Air = 1):	Vapor Pressure (mm Hg):
133 Based on first boiling component-Acetone	0.920 ± 0.03	2.0 to 2.5	190 Based on first boiling component-Acetone
Melting Point (° F):	Evaporation Rate: (Butyl Acetate = 1)	Solubility in Water:	
N/A	7-11	55% to 75%	
Appearance And Color: Orange or Yellow/Gold Viscous Liquid		Odor: Ethereal & Acetone-like	

Section 4 - Fire And Explosion Hazard Data

Flash Point:	Flammable Limits:	LEL:	UEL:
0-6° F (T.C.C.) (Based on Acetone)		2%	13%

Extinguishing Media: Dry chemical. Foam. Carbon dioxide

Special Firefighting Procedures:

Handle as flammable liquid. Wear self-contained breathing apparatus & chemical goggles. Water may be ineffective, but should be used to keep fire-exposed containers cool.

Unusual Fire And Explosion Hazards:

Vapor is heavier than air and travels considerable distance to source of ignition and flashback. On long standing may form peroxides which may cause violent reaction especially upon evaporation to dryness.

Continued on Next Page

Section 5 - Reactivity Data

Stability: Stable **Conditions To Avoid:** Keep in closed containers away from sparks and open flame.

Incompatibility (Materials To Avoid): Strong oxidizing materials, Lithium Aluminum Hydride, Sodium Aluminum Hydroxide, Sodium and Potassium Hydroxides.

Hazardous Decomposition: CO₂ and CO are formed. Irritating peroxide fumes form when heated to decomposition.

Hazardous Polymerization: Avoid excessive exposure to air and cationic initiators like Lewis Acids.

Section 6 - Health Hazard Data

Routes of Entry: **Inhalation** Yes/Primary **Skin** Yes/Primary **Ingestion** Yes/Secondary

Health Hazards:

Corrosive to eyes and skin irritant. Severe overexposure can cause headache, dizziness and narcosis. May cause dermatosis with prolonged repeated contact.

Carcinogenicity: **NTP** **NO** **IARC** **NO** **OSHA Regulated** **NO**

Signs And Symptoms of Exposure:

INGESTION: No effects of exposure expected. **INHALATION:** Will cause irritation of mucous membranes, nose, eyes & throat, coughing, difficulty of breathing. Exposure to high vapor concentration may cause headache, dizziness, nausea, narcosis. **SKIN CONTACT:** Prolonged contact causes common solvent defatting effect. **EYE CONTACT:** Vapors slightly uncomfortable, splashes irritating. Will cause painful burning or stinging of eyes and lids, watering of eyes and inflammation of conjunctiva.

Medical Conditions Generally Aggravated By Exposure:**Emergency And First Aid Procedures:**

INGESTION: Do not induce vomiting. If conscious, dilute by giving 2 glasses of water. Call a physician immediately. **INHALATION:** Remove to fresh air. If not breathing give artificial respiration preferably mouth-to-mouth. If breathing is difficult, give oxygen. Call a physician. **SKIN CONTACT:** Wash affected areas with soapy water. Remove contaminated clothing. **EYE CONTACT:** Immediately flush eyes with plenty of water for 15 minutes. Consult a physician.

Continued on Next Page

Section 7 - Precautions For Safe Handling And Use:

Steps To Be Taken In Case Material Is Released Or Spilled:

Eliminate sources of ignition. Absorb with sand or inert absorbing material and dispose of with solid waste according to Federal, State and local regulations. Flush spill area with water, avoid flushing into confined areas.

Waste Disposal Method:

Incinerate in accordance with Federal, State and local regulations.

Precautions To Be Taken In Handling And Storing:

Store in cool place, well-ventilated area. Keep away from open flame and sources of ignition.

Other Precautions:

Use normal good personal hygiene.

Section 8 - Control Measures:

Respiratory Protection:

In confined spaces or other circumstances where adequate ventilation cannot be assured use NIOSH-approved respirator, positive pressure airline mask, or self contained breathing apparatus.

Ventilation: Local Exhaust As required.

Mechanical All ventilating devices must be located so they do not provide a source of ignition.

Special When using cements in an area of limited ventilation, use a ventilation device such as a fan or air mover to maintain a safe air concentration.

Other: N/A

Gloves: PVA gloves.

Eye Protection: Chemical safety goggles.

Other Protective Clothing: Apron, boots, eye bath, safety shower.

Work/Hygienic Practices Wash thoroughly after handling. Avoid ingestion of the cements. Do not eat or drink when using cements or in the vicinity where such cements are being used.



For Hercules Material Safety Data Sheets by fax anytime, day or night, just call 1-800-942-INFO (1-800-942-4636) from any Touch-Tone phone. Have your fax number ready. Checking the product label for the correct MSDS # will save time.

OSHA-Required Health And Safety Information!

This Material Safety Data Sheet (MSDS) was requested moments ago from Hercules Automated Fax Information System. Please forward it immediately to the person in charge of MSDS's, or retain it at the machine until claimed.

Section 1

MATERIAL SAFETY DATA SHEET # 95
Hercules CPVC Cement, "LOW VOC"
Standard (Orange) or Gold



MATERIAL SAFETY INFORMATION SERVICE

Hercules Chemical Company Inc.
 111 South Street
 Passaic NJ 07055
 Phone (800) 221-9330
 Fax (800) 333-3456

Date Prepared: 11/4/1996 Last Reviewed: 11/12/2008

Meets OSHA 29 CFR 1910.1200

Section 2 - Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity; Common Name(s), CAS Numbers)

OSHA PEL

ACGIH TLV

Other Limits

Upper Bound Limit if SARA Reportable

This MSDS is for LOW VOC Product (As shown on label) ONLY. For regular product see MSDS #61.

Hazardous Components (Specific Chemical Identity; Common Name(s), CAS Numbers)	OSHA PEL	ACGIH TLV	Other Limits	Upper Bound Limit if SARA Reportable
Tetrahydrofuran (109-99-9)	200 PPM	200 PPM	N/A	--
Methyl Ethyl Ketone (78-93-3)	200 PPM	200 PPM	N/A	--
Cyclohexanone (108-94-1)	50 PPM	20 PPM	N/A	--
Acetone (67-64-1)	1000 PPM	500 PPM	N/A	--

HMIS Hazard Rating: Health: 3 Flammability: 4 Reactivity: 1 Personal Protection: G

Section 3 - Physical/Chemical Characteristics

Boiling Point (°F):	Specific Gravity (H2O = 1):	Vapor Density (Air = 1):	Vapor Pressure (mm Hg):
133 Based on first boiling component-Acetone	0.920 ± 0.03	2.0 to 2.5	190 Based on first boiling component-Acetone
Melting Point (° F):	Evaporation Rate: (Butyl Acetate = 1)	Solubility in Water:	VOC Level:
N/A	7-11	55% to 75%	490 gpl
Appearance And Color: Orange or Yellow/Gold Viscous Liquid		Odor: Ethereal & Acetone-like	

Section 4 - Fire And Explosion Hazard Data

Flash Point:	Flammable Limits:	LEL:	UEL:
0-6° F (T.C.C.) (Based on Acetone)		2%	13%

Extinguishing Media: Dry chemical. Foam. Carbon dioxide

Special Firefighting Procedures:

Handle as flammable liquid. Wear self-contained breathing apparatus & chemical goggles. Water may be ineffective, but should be used to keep fire-exposed containers cool.

Unusual Fire And Explosion Hazards:

Vapor is heavier than air and travels considerable distance to source of ignition and flashback. On long standing may form peroxides which may cause violent reaction especially upon evaporation to dryness.

Continued on Next Page

Section 5 - Reactivity Data

Stability: Stable **Conditions To Avoid:** Keep in closed containers away from sparks and open flame.

Incompatibility (Materials To Avoid): Strong oxidizing materials, Lithium Aluminum Hydride, Sodium Aluminum Hydroxide, Sodium and Potassium Hydroxides.

Hazardous Decomposition: CO₂ and CO are formed. Irritating peroxide fumes form when heated to decomposition.

Hazardous Polymerization: Avoid excessive exposure to air and cationic initiators like Lewis Acids.

Section 6 - Health Hazard Data

Routes of Entry: **Inhalation** Yes/Primary **Skin** Yes/Primary **Ingestion** Yes/Secondary

Health Hazards:

Corrosive to eyes and skin irritant. Severe overexposure can cause headache, dizziness and narcosis. May cause dermatosis with prolonged repeated contact.

Carcinogenicity: **NTP** NO **IARC** NO **OSHA Regulated** NO

Signs And Symptoms of Exposure:

INGESTION: No effects of exposure expected. **INHALATION:** Will cause irritation of mucous membranes, nose, eyes & throat, coughing, difficulty of breathing. Exposure to high vapor concentration may cause headache, dizziness, nausea, narcosis. **SKIN CONTACT:** Prolonged contact causes common solvent defatting effect. **EYE CONTACT:** Vapors slightly uncomfortable, splashes irritating. Will cause painful burning or stinging of eyes and lids, watering of eyes and inflammation of conjunctiva.

Medical Conditions Generally Aggravated By Exposure:**Emergency And First Aid Procedures:**

INGESTION: Do not induce vomiting. If conscious, dilute by giving 2 glasses of water. Call a physician immediately. **INHALATION:** Remove to fresh air. If not breathing give artificial respiration preferably mouth-to-mouth. If breathing is difficult, give oxygen. Call a physician. **SKIN CONTACT:** Wash affected areas with soapy water. Remove contaminated clothing. **EYE CONTACT:** Immediately flush eyes with plenty of water for 15 minutes. Consult a physician.

Continued on Next Page

Section 7 - Precautions For Safe Handling And Use:

Steps To Be Taken In Case Material Is Released Or Spilled:

Eliminate sources of ignition. Absorb with sand or inert absorbing material and dispose of with solid waste according to Federal, State and local regulations. Flush spill area with water, avoid flushing into confined areas.

Waste Disposal Method:

Incinerate in accordance with Federal, State and local regulations.

Precautions To Be Taken In Handling And Storing:

Store in cool place, well-ventilated area. Keep away from open flame and sources of ignition.

Other Precautions:

Use normal good personal hygiene.

Section 8 - Control Measures:

Respiratory Protection:

In confined spaces or other circumstances where adequate ventilation cannot be assured use NIOSH-approved respirator, positive pressure airline mask, or self contained breathing apparatus.

Ventilation: Local Exhaust As required.
Mechanical All ventilating devices must be located so they do not provide a source of ignition.

Special When using cements in an area of limited ventilation, use a ventilation device such as a fan or air mover to maintain a safe air concentration.

Gloves: PVA gloves.

Other: N/A

Eye Protection: Chemical safety goggles.

Other Protective Clothing: Apron, boots, eye bath, safety shower.

Work/Hygienic Practices: Wash thoroughly after handling. Avoid ingestion of the cements. Do not eat or drink when using cements or in the vicinity where such cements are being used.



For Hercules Material Safety Data Sheets by fax anytime, day or night, just call 1-800-942-INFO (1-800-942-4636) from any Touch-Tone phone. Have your fax number ready. Checking the product label for the correct MSDS # will save time.

OSHA-Required Health And Safety Information!

This Material Safety Data Sheet (MSDS) was requested moments ago from Hercules Automated Fax Information System. Please forward it immediately to the person in charge of MSDS's, or retain it at the machine until claimed.

Section 1

MATERIAL SAFETY DATA SHEET # 96
Hercules Multi-Purpose Plastic Pipe
Cement "LOW VOC"



MATERIAL SAFETY INFORMATION SERVICE

Hercules Chemical Company Inc.
 111 South Street
 Passaic NJ 07055
 Phone (800) 221-9330
 Fax (800) 333-3456

Date Prepared: 11/4/1996 Last Reviewed: 11/12/2008

Meets OSHA 29 CFR 1910.1200

Section 2 - Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity; Common Name(s), CAS Numbers)

OSHA PEL	ACGIH TLV	Other Limits	Upper Bound Limit if SARA Reportable	
This MSDS is for LOW VOC Product (As shown on label) ONLY. For regular product see MSDS #66.				
Tetrahydrofuran (109-99-9)	200 PPM	200 PPM	N/A	--
Methyl Ethyl Ketone (78-93-3)	200 PPM	200 PPM	N/A	--
Cyclohexanone (108-94-1)	50 PPM	20 PPM	N/A	--
Acetone (67-64-1)	1000 PPM	500 PPM	N/A	--

HMIS Hazard Rating: Health: 3 Flammability: 4 Reactivity: 1 Personal Protection: G

Section 3 - Physical/Chemical Characteristics

Boiling Point (°F):	Specific Gravity (H ₂ O = 1):	Vapor Density (Air = 1):	Vapor Pressure (mm Hg):
133 Based on first boiling component-Acetone	0.920 ± 0.03	2.0 to 2.5	190 Based on first boiling component-Acetone
Melting Point (° F):	Evaporation Rate: (Butyl Acetate = 1)	Solubility in Water:	VOC Level:
N/A	7-11	55% to 75%	490 gpl
Appearance And Color:	White Viscous Liquid		Odor: Ethereal & Acetone-like

Section 4 - Fire And Explosion Hazard Data

Flash Point:	Flammable Limits:	LEL:	UEL:
0-6° F (T.C.C.) (Based on Acetone)		2%	13%

Extinguishing Media: Dry chemical. Foam. Carbon dioxide

Special Firefighting Procedures:

Handle as flammable liquid. Wear self-contained breathing apparatus & chemical goggles. Water may be ineffective, but should be used to keep fire-exposed containers cool.

Unusual Fire And Explosion Hazards:

Vapor is heavier than air and travels considerable distance to source of ignition and flashback. On long standing may form peroxides which may cause violent reaction especially upon evaporation to dryness.

Continued on Next Page

Section 5 - Reactivity Data

Stability: Stable **Conditions To Avoid:** Keep in closed containers away from sparks and open flame.

Incompatibility (Materials To Avoid): Strong oxidizing materials, Lithium Aluminum Hydride, Sodium Aluminum Hydroxide, Sodium and Potassium Hydroxides.

Hazardous Decomposition: CO₂ and CO are formed. Irritating peroxide fumes form when heated to decomposition.

Hazardous Polymerization: Avoid excessive exposure to air and cationic initiators like Lewis Acids.

Section 6 - Health Hazard Data

Routes of Entry: **Inhalation** Yes/Primary **Skin** Yes/Primary **Ingestion** Yes/Secondary

Health Hazards:

Corrosive to eyes and skin irritant. Severe overexposure can cause headache, dizziness and narcosis. May cause dermatosis with prolonged repeated contact.

Carcinogenicity: **NTP** NO **IARC** NO **OSHA Regulated** NO

Signs And Symptoms of Exposure:

INGESTION: No effects of exposure expected. **INHALATION:** Will cause irritation of mucous membranes, nose, eyes & throat, coughing, difficulty of breathing. Exposure to high vapor concentration may cause headache, dizziness, nausea, narcosis. **SKIN CONTACT:** Prolonged contact causes common solvent defatting effect. **EYE CONTACT:** Vapors slightly uncomfortable, splashes irritating. Will cause painful burning or stinging of eyes and lids, watering of eyes and inflammation of conjunctiva.

Medical Conditions Generally Aggravated By Exposure:**Emergency And First Aid Procedures:**

INGESTION: Do not induce vomiting. If conscious, dilute by giving 2 glasses of water. Call a physician immediately. **INHALATION:** Remove to fresh air. If not breathing give artificial respiration preferably mouth-to-mouth. If breathing is difficult, give oxygen. Call a physician. **SKIN CONTACT:** Wash affected areas with soapy water. Remove contaminated clothing. **EYE CONTACT:** Immediately flush eyes with plenty of water for 15 minutes. Consult a physician.

Continued on Next Page

Section 7 - Precautions For Safe Handling And Use:

Steps To Be Taken In Case Material Is Released Or Spilled:

Eliminate sources of ignition. Absorb with sand or inert absorbing material and dispose of with solid waste according to Federal, State and local regulations. Flush spill area with water, avoid flushing into confined areas.

Waste Disposal Method:

Incinerate in accordance with Federal, State and local regulations.

Precautions To Be Taken In Handling And Storing:

Store in cool place, well-ventilated area. Keep away from open flame and sources of ignition.

Other Precautions:

Use normal good personal hygiene.

Section 8 - Control Measures:

Respiratory Protection:

In confined spaces or other circumstances where adequate ventilation cannot be assured use NIOSH-approved respirator, positive pressure airline mask, or self contained breathing apparatus.

Ventilation: Local Exhaust As required.
Mechanical All ventilating devices must be located so they do not provide a source of ignition.

Special When using cements in an area of limited ventilation, use a ventilation device such as a fan or air mover to maintain a safe air concentration.

Gloves: PVA gloves.

Other: N/A

Eye Protection: Chemical safety goggles.

Other Protective Clothing: Apron, boots, eye bath, safety shower.

Work/Hygienic Practices: Wash thoroughly after handling. Avoid ingestion of the cements. Do not eat or drink when using cements or in the vicinity where such cements are being used.



For Hercules Material Safety Data Sheets by fax anytime, day or night, just call 1-800-942-INFO (1-800-942-4636) from any Touch-Tone phone. Have your fax number ready. Checking the product label for the correct MSDS # will save time.



Material Safety Data Sheet

1 - Chemical Product and Company Identification

Manufacturer: WD-40 Company Address: 1061 Cudahy Place (92110) P.O. Box 80607 San Diego, California, USA 92138 -0607 Telephone: Emergency only: 1-888-324-7596 (PROSAR) Information: 1-888-324-7596 Chemical Spills: 1-800-424-9300 (Chemtrec) 1-703-527-3887 (International Calls)	Chemical Name: Organic Mixture Trade Name: WD-40 Aerosol Product Use: Lubricant, Penetrant, Drives Out Moisture, Removes and Protects Surfaces From Corrosion MSDS Date Of Preparation: 3/11/10
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2 – Hazards Identification

Emergency Overview: DANGER! Flammable aerosol. Contents under pressure. Harmful or fatal if swallowed. If swallowed, may be aspirated and cause lung damage. May cause eye irritation. Avoid eye contact. Use with adequate ventilation. Keep away from heat, sparks and all other sources of ignition. Symptoms of Overexposure: Inhalation: High concentrations may cause nasal and respiratory irritation and central nervous system effects such as headache, dizziness and nausea. Intentional abuse may be harmful or fatal. Skin Contact: Prolonged and/or repeated contact may produce mild irritation and defatting with possible dermatitis. Eye Contact: Contact may be irritating to eyes. May cause redness and tearing. Ingestion: This product has low oral toxicity. Swallowing may cause gastrointestinal irritation, nausea, vomiting and diarrhea. This product is an aspiration hazard. If swallowed, can enter the lungs and may cause chemical pneumonitis, severe lung damage and death. Chronic Effects: None expected. Medical Conditions Aggravated by Exposure: Preexisting eye, skin and respiratory conditions may be aggravated by exposure. Suspected Cancer Agent: Yes No <input checked="" type="checkbox"/>
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3 - Composition/Information on Ingredients

Ingredient	CAS #	Weight Percent
Aliphatic Hydrocarbon	64742-47-8	45-50
Petroleum Base Oil	64742-58-1 64742-53-6 64742-56-9 64742-65-0	<25
LVP Aliphatic Hydrocarbon	64742-47-8	12-18
Carbon Dioxide	124-38-9	2-3
Surfactant	Proprietary	<2
Non-Hazardous Ingredients	Mixture	<10

4 – First Aid Measures

Ingestion (Swallowed): Aspiration Hazard. DO NOT induce vomiting. Call physician, poison control center or the WD-40 Safety Hotline at 1-888-324-7596 immediately. Eye Contact: Flush thoroughly with water. Remove contact lenses if present after the first 5 minutes and continue flushing for several more minutes. Get medical attention if irritation persists.
--

Skin Contact: Wash with soap and water. If irritation develops and persists, get medical attention.
Inhalation (Breathing): If irritation is experienced, move to fresh air. Get medical attention if irritation or other symptoms develop and persist.

5 – Fire Fighting Measures

Extinguishing Media: Use water fog, dry chemical, carbon dioxide or foam. Do not use water jet or flooding amounts of water. Burning product will float on the surface and spread fire.
Special Fire Fighting Procedures: Firefighters should always wear positive pressure self-contained breathing apparatus and full protective clothing. Cool fire-exposed containers with water. Use shielding to protect against bursting containers.
Unusual Fire and Explosion Hazards: Contents under pressure. Keep away from ignition sources and open flames. Exposure of containers to extreme heat and flames can cause them to rupture often with violent force. Vapors are heavier than air and may travel along surfaces to remote ignition sources and flash back.

6 – Accidental Release Measures

Wear appropriate protective clothing (see Section 8). Eliminate all sources of ignition and ventilate area. Leaking cans should be placed in a plastic bag or open pail until the pressure has dissipated. Contain and collect liquid with an inert absorbent and place in a container for disposal. Clean spill area thoroughly. Report spills to authorities as required.

7 – Handling and Storage

Handling: Avoid contact with eyes. Avoid prolonged contact with skin. Avoid breathing vapors or aerosols. Use only with adequate ventilation. Keep away from heat, sparks, pilot lights, hot surfaces and open flames. Unplug electrical tools, motors and appliances before spraying or bringing the can near any source of electricity. Electricity can burn a hole in the can and cause contents to burst into flames. To avoid serious burn injury, do not let the can touch battery terminals, electrical connections on motors or appliances or any other source of electricity. Wash thoroughly with soap and water after handling. Keep containers closed when not in use. Keep out of the reach of children. Do not puncture, crush or incinerate containers, even when empty.
Storage: Store in a cool, well-ventilated area, away from incompatible materials Do not store above 120°F or in direct sunlight. U.F.C (NFPA 30B) Level 3 Aerosol.

8 – Exposure Controls/Personal Protection

Chemical	Occupational Exposure Limits
Aliphatic Hydrocarbon	1200 mg/m3 TWA (manufacturer recommended)
Petroleum Base Oil	5 mg/m3 TWA, 10 mg/m3 STEL ACGIH TLV 5 mg/m3 TWA OSHA PEL
LVP Aliphatic Hydrocarbon	1200 mg/m3 TWA (manufacturer recommended)
Carbon Dioxide	5000 ppm TWA (OSHA/ACGIH), 30,000 ppm STEL (ACGIH)
Surfactant	None Established
Non-Hazardous Ingredients	None Established

The Following Controls are Recommended for Normal Consumer Use of this Product

Engineering Controls: Use in a well-ventilated area.

Personal Protection:

Eye Protection: Avoid eye contact. Always spray away from your face.

Skin Protection: Avoid prolonged skin contact. Chemical resistant gloves recommended for operations where skin contact is likely.

Respiratory Protection: None needed for normal use with adequate ventilation.

For Bulk Processing or Workplace Use the Following Controls are Recommended

Engineering Controls: Use adequate general and local exhaust ventilation to maintain exposure levels below that occupational exposure limits.

Personal Protection:**Eye Protection:** Safety goggles recommended where eye contact is possible.**Skin Protection:** Wear chemical resistant gloves.**Respiratory Protection:** None required if ventilation is adequate. If the occupational exposure limits are exceeded, wear a NIOSH approved respirator. Respirator selection and use should be based on contaminant type, form and concentration. Follow OSHA 1910.134, ANSI Z88.2 and good Industrial Hygiene practice.**Work/Hygiene Practices:** Wash with soap and water after handling.**9 – Physical and Chemical Properties**

Boiling Point:	361 - 369°F (183 - 187°C)	Specific Gravity:	0.8 – 0.82 @ 60°F
Solubility in Water:	Insoluble	pH:	Not Applicable
Vapor Pressure:	95-115 PSI @ 70°F	Vapor Density:	Greater than 1
Percent Volatile:	70-75%	VOC:	412 grams/liter (49.5%)
Coefficient of Water/Oil Distribution:	Not Determined	Appearance/Odor	Light amber liquid/mild odor
Flash Point:	122°F (49°C) Tag Open Cup (concentrate)	Flammable Limits: (Solvent Portion)	LEL: 0.6% UEL: 8.0%
Pour Point:	-63°C (-81.4°F) ASTM D-97	Kinematic Viscosity:	2.79-2.96cSt @ 100°F

10 – Stability and Reactivity**Stability:** Stable**Hazardous Polymerization:** Will not occur.**Conditions to Avoid:** Avoid heat, sparks, flames and other sources of ignition. Do not puncture or incinerate containers.**Incompatibilities:** Strong oxidizing agents.**Hazardous Decomposition Products:** Carbon monoxide and carbon dioxide.**11 – Toxicological Information**

The oral toxicity of this product is estimated to be greater than 5,000 mg/kg based on an assessment of the ingredients. This product is not classified as toxic by established criteria. It is an aspiration hazard. None of the components of this product is listed as a carcinogen or suspected carcinogen or is considered a reproductive hazard.

12 – Ecological Information

No data is currently available.

13 - Disposal Considerations

If this product becomes a waste, it would be expected to meet the criteria of a RCRA ignitable hazardous waste (D001). However, it is the responsibility of the generator to determine at the time of disposal the proper classification and method of disposal. Dispose in accordance with federal, state, and local regulations.

14 – Transportation Information

DOT Surface Shipping Description: Consumer Commodity, ORM-D

IMDG Shipping Description: Un1950, Aerosols, 2.1, LTD QTY

15 – Regulatory Information**U.S. Federal Regulations:**

CERCLA 103 Reportable Quantity: This product is not subject to CERCLA reporting requirements, however, oil spills are reportable to the National Response Center under the Clean Water Act and many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.

SARA TITLE III:

Hazard Category For Section 311/312: Acute Health, Fire Hazard, Sudden Release of Pressure

Section 313 Toxic Chemicals: This product contains the following chemicals subject to SARA Title III Section 313 Reporting requirements: None

Section 302 Extremely Hazardous Substances (TPQ): None

EPA Toxic Substances Control Act (TSCA) Status: All of the components of this product are listed on the TSCA inventory.

California Safe Drinking Water and Toxic Enforcement Act (Proposition 65): This product does not contain chemicals regulated under California Proposition 65.

VOC Regulations: This product complies with the consumer product VOC limits of CARB, the US EPA and states adopting the OTC VOC rules.

Canadian Environmental Protection Act: One of the components is listed on the NDSL. All of the other ingredients are listed on the Canadian Domestic Substances List or exempt from notification.

Canadian WHMIS Classification: Class B-5 (Flammable Aerosol)

This MSDS has been prepared according to the criteria of the Controlled Products Regulation (CPR) and the MSDS contains all of the information required by the CPR.

16 – Other Information:

HMIS Hazard Rating:

Health – 1 (slight hazard), Fire Hazard – 4 (severe hazard), Reactivity – 0 (minimal hazard)

SIGNATURE:  _____

TITLE: Director of Global Quality Assurance

REVISION DATE: March 2010

SUPERSEDES: August 2009

MATERIAL SAFETY DATA SHEET

MSDS 0499

Section 1 -- PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME	Nokorode 95/5 Pre-Tinning Paste Flux	HMIS CODES	Health 1 Flammability 1 Reactivity 0 PPI B
PRODUCT CODES	14115		
CHEMICAL FAMILY:	Organic/Inorganic		
USE	Soldering Flux		
MANUFACTURER'S NAME	The RectorSeal Corporation 2601 Spenwick Drive Houston, Texas 77055 USA	EMERGENCY TELEPHONE NO.	Chemtrec 24 Hours (800) 424-9300
DATE OF PREPARATION	August 7, 2002	TECHNICAL SERVICE TELEPHONE NO.	(800) 231-3345

Section 2 -- COMPOSITION/INFORMATION ON INGREDIENTS

% by WT	CAS No.	INGREDIENT	UNITS
<20	7646-85-7	Zinc Chloride	
		ACGIH TLV	1 mg/m3
		OSHA PEL	1 mg/m3
<1	12125-02-9	Ammonium Chloride	
		ACGIH TLV	10 mg/m3
		OSHA PEL	10 mg/m3
<10	1314-13-2	Zinc Oxide	
		ACGIH TLV	5 mg/m3
		OSHA PEL	5 mg/m3
-	7440-31-5	Tin	
		ACGIH TLV	2 mg/m3
		OSHA PEL	2 mg/m3
<1	7440-36-0	Antimony	
		ACGIH TLV	0.5 mg/m3
		OSHA PEL	0.5 mg/m3

Section 3 -- HAZARDS IDENTIFICATION

SUMMARY OF ACUTE HAZARDS

Irritation to respiratory system from fumes evolved during soldering. Eye contact may cause intense irritation and injury.

ROUTE OF EXPOSURE, SIGNS AND SYMPTOMS

INHALATION

Irritation to respiratory system from fumes evolved during soldering.

EYE CONTACT

Contact may cause intense irritation and injury.

SKIN CONTACT

May cause skin irritation.

INGESTION

Nausea, vomiting, irritation to digestive system.

SUMMARY OF CHRONIC HAZARDS

Short term effects to liver and kidneys can occur. Chemical irritation from continued skin contact can occur. Continuous industrial use in small unventilated areas may result in sufficient inhalation of solder and flux fumes to cause lung damage and irritation of respiratory tract.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

Individuals with pre-existing or chronic diseases of the eyes, skin, respiratory system, cardiovascular system, gastrointestinal system, liver, or kidneys may have increased susceptibility to excessive exposure.

Section 4 -- FIRST AID MEASURES

If INHALED: If overcome by exposure, remove victim to fresh air immediately. Give oxygen or artificial respiration as needed. Obtain emergency medical attention. Prompt action is essential.

If on SKIN: Immediately wash with soap and water. Remove and wash any contaminated clothing.

If in EYES: Flush eyes with large amounts of water for 15 minutes. Get medical attention if irritation persists.

If SWALLOWED: If swallowed, call a physician immediately. Only induce vomiting at the instruction of a physician. Never give anything by mouth to an unconscious person.

Section 5 -- FIRE FIGHTING MEASURES

FLASH POINT >230 F (110 C) SETA CC LEL N/D UEL N/D
EXTINGUISHING MEDIA

Foam, dry chemical, carbon dioxide or water fog.
SPECIAL FIRE FIGHTING PROCEDURES: Wear self-contained full face piece breathing apparatus and other protective clothing. Hazardous decomposition products possible (see Section 10). May release ZnO and HCl fumes.
UNUSUAL FIRE AND EXPLOSION HAZARDS: Heat may build up pressure and rupture closed containers.

Section 6 -- ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Wipe up spills to prevent footing hazard. Avoid flushing into sewers, drains, waterways and soil. Wear protective clothing during clean up.

Section 7 -- HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Keep container closed and upright when not in use. Store flux at ambient conditions. Wash thoroughly after handling to remove all residue.
OTHER PRECAUTIONS: Avoid prolonged or repeated contact with skin or clothing. Empty containers may contain residues; treat as if full and observe all products precautions. Do not reuse empty containers.

Section 8 -- EXPOSURE CONTROLS/PERSONAL PROTECTION

RESPIRATORY PROTECTION (SPECIFY TYPE): In confined, poorly ventilated areas, use NIOSH/MSHA approved air purifying or supplied air respirators during soldering operations until fumes have dissipated.
VENTILATION - LOCAL EXHAUST: Acceptable
SPECIAL: N/A
MECHANICAL (GENERAL): Acceptable
OTHER: N/A
PROTECTIVE GLOVES: Wear rubber gloves.
EYE PROTECTION: Safety glasses (ANSI Z-87.1 or equivalent)
OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Coveralls recommended.
WORK/HYGIENIC PRACTICES: Where use can result in skin contact, wash exposed areas thoroughly before eating, drinking, smoking, or leaving work area. Launder contaminated clothing before reuse.

Section 9 -- PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT: N/A
SPECIFIC GRAVITY (H2O = 1): 1.59
VAPOR PRESSURE (mm Hg): < 0.01 @ 68 F (20 C)
MELTING POINT: 120-150 F (52-66 C)
VAPOR DENSITY (AIR = 1): N/A
EVAPORATION RATE (ETHYL ACETATE = 1): N/A
APPEARANCE/ODOR: Gray / Petroleum Odor
SOLUBILITY IN WATER: Insoluble

Section 10 -- STABILITY AND REACTIVITY

STABILITY: Stable
CONDITIONS TO AVOID: None
INCOMPATIBILITY (MATERIALS TO AVOID): None known
HAZARDOUS DECOMPOSITION PRODUCTS: Toxic fumes of zinc, chlorine, and HCL may be evolved during soldering.
HAZARDOUS POLYMERIZATION: Will not occur.

Section 11 -- TOXICOLOGY INFORMATION

CHRONIC HEALTH HAZARDS
No ingredient in this product is an IARC, NTP or OSHA listed carcinogen.

TOXICOLOGY DATA
Ingredient Name

Zinc Chloride
Oral-Rat LD50:350 mg/kg
Inhalation-Rat LCLo:1960 mg/m3/10M
Ammonium Chloride
Oral-Rat LD50:1650 mg/kg
Inhalation-Rat LC50:N/D
Zinc Oxide
Oral-Rat TDLo:6846 mg/kg
Inhalation-Mouse LC50:2500 mg/m3
Tin

Oral-Rat LD50:N/D
 Inhalation-Rat LC50:N/D

Antimony

Oral-Rat LD50:7 g/kg
 Inhalation-Rat TCLo:50 mg/m3/7H/52W-I

=====
 Section 12 -- Ecological Information
 =====

 ECOLOGICAL DATA
 Ingredient Name

Zinc Chloride	Food Chain Concentration Potential	None
	WATERFOWL TOXICITY	N/A
	BOD	None
	AQUATIC TOXICITY:	7.2 ppm/96 hr/medium bluegill/TLm
Ammonium Chloride	Food Chain Concentration Potential	None
	WATERFOWL TOXICITY	N/A
	BOD	N/A
	AQUATIC TOXICITY:	6 ppm/96 hr/sunfish TLm
Zinc Oxide	Food Chain Concentration Potential	N/D
	WATERFOWL TOXICITY	N/D
	BOD	N/D
	AQUATIC TOXICITY:	N/D
Tin	Food Chain Concentration Potential	N/D
	WATERFOWL TOXICITY	N/D
	BOD	N/D
	AQUATIC TOXICITY:	N/D
Antimony	Food Chain Concentration Potential	N/D
	WATERFOWL TOXICITY	N/D
	BOD	N/D
	AQUATIC TOXICITY:	N/D

=====
 Section 13 -- DISPOSAL CONSIDERATIONS
 =====

Waste Classification: Non-regulated solid waste
 Disposal Method: Approved landfill
 Waste from this product is not considered hazardous as defined under the
 Resource Conservation and Recovery Act (RCRA) 40 CFR 261. Dispose of in
 accordance with Federal, State, and Local regulation regarding pollution.

=====
 Section 14 -- TRANSPORTATION INFORMATION
 =====

DOT: Non-Regulated
 OCEAN (IMDG): Non-Regulated
 AIR (IATA): Non-Regulated
 WHMIS (CANADA): Non-Regulated

=====
 Section 15 -- REGULATORY INFORMATION
 =====

 REGULATORY DATA
 Ingredient Name

Zinc Chloride	SARA 313	Yes
	TSCA Inventory	Yes
	CERCLA RQ	1000 lbs.
	RCRA Code	N/A
Ammonium Chloride	SARA 313	No
	TSCA Inventory	Yes
	CERCLA RQ	N/A
	RCRA Code	N/A
Zinc Oxide	SARA 313	Yes
	TSCA Inventory	Yes
	CERCLA RQ	N/A
	RCRA Code	N/A
Tin	SARA 313	No
	TSCA Inventory	Yes
	CERCLA RQ	N/A
	RCRA Code	N/A
Antimony	SARA 313	Yes
	TSCA Inventory	Yes
	CERCLA RQ	5000 lbs.

RCRA Code N/A

=====
Section 16 -- OTHER INFORMATION

This document is prepared pursuant to the OSHA Hazard Communication Standard (29 CFR 1910.1200). The information herein is given in good faith, but no warranty, expressed or implied is made. Consult RectorSeal for further information: (713) 263-8001

MATERIAL SAFETY DATA SHEET

MSDS 0656

Section 1 -- PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME	Nokorode Regular Paste Flux	HMIS CODES	Health 1 Flammability 1 Reactivity 0 PPI B
PRODUCT CODES	14000, 14003, 14010, 14020, 14030		
CHEMICAL FAMILY	Organic/Inorganic		
USE	Soldering Flux		
MANUFACTURER'S NAME	The RectorSeal Corporation 2601 Spenwick Drive Houston, Texas 77055 USA	EMERGENCY TELEPHONE NO.	Chemtrec 24 Hours (800)424-9300 USA 001-527-3887 International
DATE OF VALIDATION	May 2, 2012	TECHNICAL SERVICE TELEPHONE NO.	(800)231-3345 or (713)263-8001
DATE OF PREPARATION	May 2, 2012		

Section 2 -- HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

OSHA Hazards
Irritant
GHS CLASSIFICATION
PHYSICAL HAZARDS: None
HEALTH HAZARDS
Acute Toxicity:
Oral: Not Classified
Dermal: Not Classified
Inhalation: Not Classified
Skin Corrosion/Irritation: Not Classified
Serious Eye Damage/Eye Irritation: Not Classified
Respiratory or Skin Sensitization: Not Classified
Germ Cell Mutagenicity: Not Classified
Carcinogenicity: Not Classified
Reproductive Toxicology: Not Classified
Target Organ Systemic Toxicity - Single Exposure: Not Classified
Target Organ Systemic Toxicity - Repeated Exposure: Not Classified
Aspiration Toxicity: Not Classified

ENVIRONMENTAL HAZARDS

Hazardous to the Aquatic Environment: Not Classified
Acute aquatic toxicity: Not Classified
Chronic aquatic toxicity: Not Classified
Bioaccumulation potential: Not Classified
Rapid degradability: Not Classified

GHS Label elements, including precautionary statements

Pictogram: Irritant
Signal Word: Warning
Hazard Statements:
H302 - Harmful if swallowed.
H315 - Causes skin irritation.
H319 - Causes serious eye irritation.
Precautionary Statements:
P102 - Keep out of reach of children.
P262 - Do not get in eyes, on skin, or on clothing.
P264 - Wash hands thoroughly after handling.
P281 Use personal protective equipment as required.

SUMMARY OF ACUTE HAZARDS

Irritation to respiratory system from fumes evolved during soldering.
Eye contact may cause intense irritation and injury.

ROUTE OF EXPOSURE, SIGNS AND SYMPTOMS

INHALATION

Irritation to respiratory system from fumes evolved during soldering.

EYE CONTACT

Contact may cause intense irritation and injury.

SKIN CONTACT

May cause skin irritation.

INGESTION

Nausea, vomiting, irritation to digestive system.

SUMMARY OF CHRONIC HAZARDS

Short term effects to liver and kidneys can occur. Chemical irritation from continued skin contact can occur. Continuous industrial use in small unventilated areas may result in sufficient inhalation of solder and flux fumes to cause lung damage and irritation of respiratory tract.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

Individuals with pre-existing or chronic diseases of the eyes, skin, respiratory system, cardiovascular system, gastrointestinal system, liver, or kidneys may have increased susceptibility to excessive exposure.

Section 3 -- COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT: Zinc Chloride
PERCENTAGE BY WEIGHT: 10-25
CAS#: 7646-85-7
EC#: 231-592-0

INGREDIENT: Ammonium Chloride
PERCENTAGE BY WEIGHT: 10-25
CAS#: 12125-02-9
EC#: 235-186-4

INGREDIENT: Petrolatum
PERCENTAGE BY WEIGHT: 70-90
CAS#: 8009-03-8
EC#: 232-373-2

Section 4 -- FIRST AID MEASURES

- If INHALED: If overcome by exposure, remove victim to fresh air immediately. Give oxygen or artificial respiration as needed. Obtain emergency medical attention. Prompt action is essential.
If on SKIN: Immediately wash with soap and water. Remove and wash any contaminated clothing.
If in EYES: Flush eyes with large amounts of water for 15 minutes. Get medical attention if irritation persists.
If SWALLOWED: If swallowed, call a physician immediately. Only induce vomiting at the instruction of a physician. Never give anything by mouth to an unconscious person.

Section 5 -- FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA
Foam, dry chemical, carbon dioxide or water fog.
SPECIAL FIRE FIGHTING PROCEDURES: Wear self-contained full face piece breathing apparatus and other protective clothing. Hazardous decomposition products possible (see Section 10). May release ZnO and HCl fumes.
UNUSUAL FIRE AND EXPLOSION HAZARDS: Heat may build up pressure and rupture closed containers.

Section 6 -- ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Wipe up spills to prevent footing hazard. Avoid flushing into sewers, drains, waterways and soil. Wear protective clothing during clean up.

Section 7 -- HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Keep container closed and upright when not in use. Store flux at ambient conditions. Wash thoroughly after handling to remove all residue.
OTHER PRECAUTIONS: Avoid prolonged or repeated contact with skin or clothing. Empty containers may contain residues; treat as if full and observe all products precautions. Do not reuse empty containers.

Section 8 -- EXPOSURE CONTROLS/PERSONAL PROTECTION

Table with 2 columns: INGREDIENT and UNITS. Rows include Zinc Chloride (ACGIH TLV 1 mg/m3, OSHA PEL 1 mg/m3), Ammonium Chloride (ACGIH TLV 10 mg/m3, OSHA PEL 10 mg/m3), and Petrolatum (ACGIH TLV N/D, OSHA PEL N/D).

RESPIRATORY PROTECTION (SPECIFY TYPE): In confined, poorly ventilated areas, use NIOSH/MSHA approved air purifying or supplied air respirators during

soldering operations until fumes have dissipated.
VENTILATION - LOCAL EXHAUST: Acceptable
SPECIAL: N/A
MECHANICAL (GENERAL): Acceptable
OTHER: N/A
PROTECTIVE GLOVES: Wear rubber gloves.
EYE PROTECTION: Safety glasses (ANSI Z-87.1 or equivalent)
OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Coveralls recommended.
WORK/HYGIENIC PRACTICES: Where use can result in skin contact, wash exposed areas thoroughly before eating, drinking, smoking, or leaving work area.
Laundry contaminated clothing before reuse.

Section 9 -- PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT: N/A
SPECIFIC GRAVITY (H2O = 1): 1.06
VAPOR PRESSURE (mm Hg): < 0.01 @ 68 F (20 C)
MELTING POINT: 120-150 F (52-66 C)
VAPOR DENSITY (AIR = 1): N/A
EVAPORATION RATE (ETHYL ACETATE = 1): N/A
APPEARANCE/ODOR: Tan / Petroleum Odor
SOLUBILITY IN WATER: Insoluble
VOLATILE ORGANIC COMPOUNDS(VOC)Content
(Theoretical Percentage By Weight): 0% or (0 g/L)
Flash POINT >400 F (204 C) SETA CC
LOWER EXPLOSION LIMIT N/D
UPPER EXPLOSION LIMIT N/D

Section 10 -- STABILITY AND REACTIVITY

STABILITY: Stable
CONDITIONS TO AVOID: None
INCOMPATIBILITY (MATERIALS TO AVOID): None known
HAZARDOUS DECOMPOSITION PRODUCTS: Toxic fumes of zinc, chlorine, and HCL may be evolved during soldering.
HAZARDOUS POLYMERIZATION: Will not occur.

Section 11 -- TOXICOLOGY INFORMATION

CHRONIC HEALTH HAZARDS
No ingredient in this product is an IARC, NTP or OSHA listed carcinogen.

TOXICOLOGY DATA
Ingredient Name

Zinc Chloride	Oral-Rat LD50:350 mg/kg Inhalation-Rat LCLo:1960 mg/m3/10M
Ammonium Chloride	Oral-Rat LD50:1650 mg/kg Inhalation-Rat LC50:N/D
Petrolatum	Oral-Rat LD50:N/D Inhalation-Rat LC50:N/D

Section 12 -- Ecological Information

ECOLOGICAL DATA
Ingredient Name

Zinc Chloride	Food Chain Concentration Potential	None
	WATERFOWL TOXICITY	N/A
	BOD	None
	AQUATIC TOXICITY:	7.2 ppm/96 hr/medium bluegill/TLm
Ammonium Chloride	Food Chain Concentration Potential	None
	WATERFOWL TOXICITY	N/A
	BOD	N/A
	AQUATIC TOXICITY:	6 ppm/96 hr/sunfish TLm
Petrolatum	Food Chain Concentration Potential	N/D
	WATERFOWL TOXICITY	N/D
	BOD	N/D
	AQUATIC TOXICITY:	N/D

Section 13 -- DISPOSAL CONSIDERATIONS

Waste Classification: Non-regulated solid waste
Disposal Method: Approved landfill
Waste from this product is not considered hazardous as defined under the

Resource Conservation and Recovery Act (RCRA) 40 CFR 261. Dispose of in accordance with Federal, State, and Local regulation regarding pollution.

=====
Section 14 -- TRANSPORTATION INFORMATION
=====

DOT: Non-Regulated
OCEAN (IMDG): Non-Regulated
AIR (IATA): Non-Regulated
WHMIS (CANADA): Non-Regulated
=====

Section 15 -- REGULATORY INFORMATION
=====

REGULATORY DATA
Ingredient Name
=====

Zinc Chloride	SARA 313	Yes
	TSCA Inventory	Yes
	CERCLA RQ	1000 lb.
	RCRA Code	N/A
Ammonium Chloride	SARA 313	No
	TSCA Inventory	Yes
	CERCLA RQ	N/A
	RCRA Code	N/A
Petrolatum	SARA 313	No
	TSCA Inventory	Yes
	CERCLA RQ	N/A
	RCRA Code	N/A

=====

Section 16 -- OTHER INFORMATION
=====

This document is prepared pursuant to 91/155/EEC ISO 11014-1. The information herein is given in good faith, but no warranty, expressed or implied is made. Consult RectorSeal for further information: (713) 263-8001



PRODUCTS COMPANY

P.O. Box 1300 TRENTON, NJ 08607

TEL. (609) 394-0150 FAX (609)989-4847

Material Safety Data Sheet

MSDS Date: 4/21/10
Product Name: X-PANDO PIPE JOINT COMPOUND
Manufacturer: X-Pando Products Company

1. Product and Company Description

X-Pando Products Company
500 Southard Street
Trenton, NJ 08638

For Product Emergency/Information:
609-394-0150

Product Use:
Sealant for threaded and flanged pipe

2. Hazards Identification

Emergency Overview

Appearance/Odor: Gray to Black powder with no odor.

Potential Health Effects:

Acute Eye:

May cause mechanical irritation if exposed to large amounts of the dust.

Acute Skin:

This product may cause skin irritation.

Acute Inhalation:

May cause irritation to respiratory tract and lung damage if exposure is repeated or prolonged. Although unlikely, inhalation of fumes from heated material may cause metal fume fever, a flu-like illness characterized by delayed symptoms of cough, muscle pains chills and nausea.

Acute ingestion:

This product may cause gastrointestinal harm and nausea if it is swallowed.

Chronic Exposure:

Prolonged or repeated skin contact may cause burns. Prolonged inhalation of dust may lead to lung damage (pneumoconiosis). Symptoms include coughing, difficulty breathing, and the production of black sputum. Symptoms may be delayed until after years of exposure.

Aggravation of Pre-existing Conditions:

Individuals with pulmonary and/or respiratory disease, including, but not limited to, asthma and bronchitis, or subject to eye irritation should be precluded from exposure.

3. Hazardous Chemical Composition

Component	CAS#	%
Magnesium Oxide	1309-48-4	10-30
Graphite (synthetic)	7782-42-5	7-13
Magnesium Chloride	7791-18-6	15-40
Calcium Carbonate	1317-65-3	15-40
Starch Gum	9004-53-9	1-5
Non Hazardous Ingredients	NA	Balance

4. First Aid Measures

First Aid Measures for Accidental:

Eye Exposure:

Irrigate eyes with large amounts of water for at least 15 minutes, while holding the eyelid(s) open. Seek medical attention if irritation persists.

Skin Exposure:

Wash the affected area with soap and water. Seek medical attention if irritation persists.

Inhalation:

Move victim to fresh air and treat symptomatically.

Ingestion:

Contact local poison control center or physician IMMEDIATELY.

5. Fire Fighting Measures

Fire Hazard Data:

Autoignition: N/A

Flash Point: N/A

Flammability Limits (vol/vol%):

Lower:
N/A

Upper:
N/A

Extinguishing Media:

Use medium suitable for surrounding material.

Special Fire Fighting Procedures:

Firefighters should wear full fire-fighting turn-out gear (full Bunker gear) including NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

Unusual Fire and Explosion Hazards:

Fire produces oxides of magnesium, calcium and carbon.

6. Accidental Release Measures

Cleanup and Disposal of Spill:

Vacuum or scoop spilled material and place in closed containers for disposal. Avoid dust generation. Dispose of waste in accordance with local, state and federal regulations.

7. Handling and Storage

Handling/Storage:

Avoid dust generation and wear proper personal protection equipment as identified in Section 8. Store in a closed container in dry area.

8. Exposure Controls / Personal Protection

Exposure Guidelines:

Component	ACGIH	OSHA-PELs
Magnesium Oxide	10 mg/m ³	10 mg/m ³
Graphite (synthetic)	2 mg/m ³	2.5 mg/m ³
Magnesium Chloride	None	None
Calcium Carbonate	None	15 mg/m ³ 5 mg/m ³ respirable dust
Starch Gum	None	None
Non Hazardous Ingredients	NA	NA

Engineering Controls:

Ventilation must be adequate to maintain the ambient workplace atmosphere below the exposure limit(s) outlined in the MSDS.

Respiratory Protection:

If respiratory protection is needed, use only protection authorized in the U.S. Federal OSHA Standard (29 CFR 1910.134), applicable U.S. State regulations, or the Canadian CSA Standard Z94.4-93 and applicable standards of Canadian Provinces.

Eye / Face Protection:

Chemical splash goggles or safety glasses. Emergency eye wash stations and showers should be available within the work area.

Skin Protection:

Wear chemical resistant, impervious gloves for routine industrial use. Use body protection appropriate for task. An apron or other impermeable body protection is suggested. Full-body chemical protective clothing is recommended for emergency response procedures.

9. Physical and Chemical Properties

Physical Appearance: Gray to Black powder

Odor: None

pH: NA

Specific Gravity/Density: 2.56

Water Solubility: Appreciable

Melting Point: N/A
Freezing Point ND
Boiling Point: N/A
Vapor Pressure: ND
Percent Volatiles by Volume: ND
Evaporation Rate: ND
Viscosity: ND
Flash Point: N/A
Explosion Limits: Lower: N/A
Upper: N/A
Autoignition Temp: N/A

10. Stability and Reactivity

Chemical Stability:

Stable

Conditions to Avoid:

Dust generation

Materials / Chemicals to Be Avoided:

Avoid contact with strong acids and strong bases.

Hazardous Decomposition Products:

Hazardous decomposition products such as hydrogen chloride, chlorine and magnesium oxide fumes may develop with exposure to high temperatures.

Hazardous Polymerization:

Will not occur.

11. Toxicological Information

Acute Effects

For Magnesium Oxide: LD50 Mouse: 810 mg/kg

For Magnesium Chloride: LD50 Rat: 8100 mg/kg

Chronic Effects

Carcinogenicity: Not identified as a carcinogen by NTP, IARC or OSHA

Mutagenicity: No Data

Reproductive Effects: No Data

Developmental Effects: No Data

12. Ecological Information

Environmental Fate:

No information found

Environmental Toxicity:

No information found

13. Disposal Considerations

Waste Disposal Method:

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

14. Transportation Information

US Department of Transportation Shipping Name:

US Department of Transportation	Proper Shipping Name	Not regulated
	Hazard Class	Not regulated
	ID Number	Not regulated
	Packing Group	Not regulated

15. Regulatory Information

Federal Regulations:

SARA Title III Hazard Classes:

Fire Hazard: No
Reactive Hazard: No
Release of Pressure: No
Acute Health Hazard: No
Chronic Health Hazard: No

TSCA

All components of this product are on the TSCA inventory or are exempt from TSCA Inventory requirements

U.S. State Regulations:

California Prop 65 List: None

Canada Regulations:

Classification: D2

This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

16. Other Information

National Fire Protection Association NFPA(R) and Hazardous Materials Identification System (HMIS) Hazard Ratings –:

Health Hazard: 1
Flammability: 0
Reactivity: 0

Key Legend Information:

N/A – Not Applicable

ND – Not Determined

ACGIH – American Conference of
Governmental Industrial Hygienists

OSHA – Occupational Safety and Health
Administration

TLV – Threshold Limit Value

IDLH – Immediately Dangerous to Life and
Health

PEL – Permissible Exposure Limit

TWA – Time Weighted Average

STEL – Short Term Exposure Limit

NTP – National Toxicology Program


IARC – International Agency for Research on
Cancer

SAFETY DATA SHEET

Section 1: Product and Company Identification

Product Name: PRESSMARKER®
Product Code: 96143
Product Use: Marker for cardboard, wood, metal, paper, ceramics, glass, leather and rubber.
Supplier: LA-CO Industries, Inc.
 1201 Pratt Boulevard
 Elk Grove Village, IL.
 60007-5746
 E-mail Contact: customer_service@laco.com
Phone: (847) 956-7600
Fax: (847) 956-9885
24-hour Emergency: CHEMTREC: (800) 424-9300

Section 2: Hazards Identification

Protective Clothing	NFPA Rating (USA)	EC Classification	WHMIS (Canada)	Transportation
Not Required for Normal Use		Not Classified as Dangerous	Not Controlled	Not Regulated

Emergency Overview: The ink inside the marker contains components which are considered flammable and hazardous by inhalation of vapors and if swallowed. Exposure to hazardous or dangerous substances is not expected when handling this product for its intended use.

Appearance, Color and Odor: Marker containing less than 10 mL of colored ink. Organic solvent odor.

USA: This product is not a hazardous material as defined by 29 CFR1910.1200, OSHA Hazard Communication Evaluation. This product meets the definition of an "article".

Canada: This is not a controlled product under WHMIS. This product meets the definition of a "manufactured article" and is not subject to the regulations of the Hazardous Products Act.

European Communities (EC): This product is not classified as dangerous according to Directive 1999/45/EC and its amendments.

Potential Health Effects: **ACUTE (short term):**

Relevant Route(s) of Exposure: Skin contact.

- Inhalation:** Exposure to hazardous substances by inhalation is not expected with normal use of the marker.
- Ingestion:** Not an expected route of occupational exposure. Acute oral toxicity of the component substances is low.
- Skin:** Normal use of marker will not result in harmful effects. The ink may cause irritation when in contact with the skin. Some components of the ink may be absorbed through the skin.
- Eye:** Not an expected route of occupational exposure. Liquid and concentrated vapors can irritate the eyes.

SAFETY DATA SHEET

Section 2: Hazards Identification, continued

CHRONIC (long term): see Section 11 for additional toxicological data

Long-term health effects are not expected with normal use of the marker. Prolonged or repeated contact with of the ink to skin may result in defatting and drying of skin and may result in dermatitis.

The component substance, 4-(phenylazo)benzene-1,3-diamine, present at between 1 and 2.5%, is classified in mutagenic category 3, limited evidence of possible mutagenic effects. Exposure to this substance is not expected with normal use of the marker.

- Medical Conditions Aggravated by Exposure:** Preexisting skin disorders may be aggravated by repeated exposure to the liquid in the marker.
- Interactions With Other Chemicals:** Not available
- Potential Environmental Effects:** Not available

Section 3: Composition / Information on Ingredients

<u>Chemical Name</u>	<u>CAS No.</u>	<u>Wt. %</u>	<u>EINECS / ELINCS</u>	<u>Symbol</u>	<u>Risk Phrases</u>
propan-1-ol	71-23-8	60 - 100	200-746-9	F; Xi	R11; R41 - R67
1-methoxypropan-2-ol	107-98-2	10 - 25	203-539-1	None	R10
Phosphoric acid, mono- and bis(2-ethylhexyl) esters	90506-69-7	2.5 - 10	291-933-4	Not classified	Not applicable
4-(phenylazo)benzene-1,3-diamine	495-54-5	1 - 2.5	207-803-7	Xn, Xi, N	Muta. Cat. 3; R68 - R22 - R38 - R50-53

See Section 16 for the full text of the R-phrases above.

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:** No effects expected. If irritation occurs, flush contaminated eye(s) with lukewarm, gently flowing water for 5 minutes. If irritation persists, obtain medical advice.
- Skin Contact:** No health effects expected. If irritation does occur, flush with lukewarm, gently flowing water for 5 minutes. If irritation persists, obtain medical advice.
- Ingestion:** If irritation or discomfort occurs, obtain medical advice immediately.

Section 5: Fire Fighting Measures

- Flammable Properties:** Ink contained within the markers is flammable.
- Suitable extinguishing Media:** For small fires, use water spray, dry chemical, carbon dioxide, or alcohol-resistant foam. For large fires, use carbon dioxide, dry chemical powder, alcohol-resistant foam or polymer foam. Firefighting foams are the extinguishing agent of choice for most flammable liquid fires. Use water spray to cool fire-exposed containers.
- Unsuitable extinguishing Media:** Not available
- Explosion Data:**
- Sensitivity to Mechanical Impact:** Not applicable
- Sensitivity to Static Discharge:** Not applicable

SAFETY DATA SHEET

Section 5: Fire Fighting Measures, continued

Specific Hazards arising from the Chemical: If involved in a fire, combustion may produce toxic and irritating fumes and gases.

Protective Equipment and precautions for firefighters: Self-contained breathing apparatus and protective clothing should be worn. Remove all unprotected personnel.

NFPA

Health: 0
Flammability: 1
Instability: 0

Section 6: Accidental Release Measures

Personal Precautions: If large volumes of liquid ink are released, wear protective gloves, goggles and clothing. Ventilate the area. Monitor the workplace air for harmful concentrations of vapors and take appropriate precautions if concentrations in air exceed workplace exposure limits.

Environmental Precautions: Prevent the product from entering sewers or waterways.

Methods for Containment: If large volumes of liquid ink are released, stop the leak if it is safe to do so. Contain spilled ink with earth, sand, or absorbent material which does not react with spilled material.

Methods for Clean-up: Clean up spills immediately. Shut off or extinguish all sources of ignition. Immediately soak spilled material with water. Soak up spill with absorbent material which does not react with spilled chemical. Put material in suitable, covered, labeled containers. Contaminated absorbent material may pose the same hazards as the spilled product. Dispose of any contaminated, unusable product as described in Section 13 of this SDS.

Section 7: Handling and Storage

Handling: Avoid breathing vapors. Do not use near sources of extreme heat and keep away from sources of ignition. Keep out of reach of children. Keep container tightly closed. Avoid contact with the skin. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Storage: Store out of direct sunlight and away from heat, flames and ignition sources. Keep markers closed when not in use. Store between 4 – 49°C (40-120°F).

Section 8: Exposure Controls/Personal Protection

Exposure Guidelines

Measurable airborne concentrations of the component substances, listed in Section 3, are not expected when the markers are used for their intended purpose. Consult local authorities for acceptable exposure limits.

Exposure Controls

Engineering Controls: Not required for normal use.

Personal Protection:

Eye/Face Protection: Not required for normal use. In case of accidental release of large quantities of ink, wear goggles.

Skin Protection: Not required for normal use. In case of accidental release of large quantities of ink, wear gloves.

Respiratory Protection: Not required for normal use.

General Hygiene Measures: Avoid breathing vapors. Do not ingest. Avoid contact of the ink to skin and eyes. Keep out of reach of children.

SAFETY DATA SHEET

Section 9: Physical and Chemical Properties

Physical State:	Solid, containing liquid ink.	Flash Point & method:	13°C (55°F) CC
Appearance, Color and Odor:	Cylindrical marker; various colors; odor of organic solvent.	Autoignition Temperature:	Not available
Odor Threshold:	Not available	Flammability Limits in Air:	1.7 – 13.5%
pH:	Not applicable	Vapor Pressure:	14 mmHg (of the liquid ink)
Specific Gravity:	0.81 (for liquid ink)	Vapor Density:	Not applicable
Partition coefficient:	Not available	Evaporation Rate:	Not applicable
Solubility:	Not applicable	Boiling Point/Range:	78°C (172°F)
Viscosity:	Not applicable	Melting Point:	Not available
Decomposition Temperature:	Not available	VOC Content:	81% (w/w) for liquid ink

Section 10: Stability and Reactivity

Chemical Stability:	Stable at normal room temperature.
Conditions to Avoid:	Do not use in conditions of extreme heat or near open flames.
Incompatible Materials:	Incompatible with strong oxidizing agents.
Hazardous Decomposition Products:	Not applicable
Possibility of Hazardous Reactions:	Not applicable

Section 11: Toxicological Information

Acute Toxicity Data Acute toxicity data is not available for the liquid ink preparations inside the markers. The ink contains substances which are considered harmful by inhalation and if swallowed. Exposure to toxic and harmful substances by the user is not expected when the marker is used for its intended purpose.

Other Toxicity Data

Carcinogenicity:	Normal use of the markers is not expected to pose the risk of exposure to carcinogenic substances.
Irritation:	Normal use of marker will not result in harmful effects. High concentrations of vapors may cause irritation to the eyes. Ink may cause irritation in contact with skin.
Corrosivity:	Not applicable
Sensitization:	Not applicable
Neurological Effects:	Not applicable with normal use of the marker.
Genetic Effects:	Not applicable with normal use of the marker.
Reproductive Effects:	Not applicable with normal use of the marker.
Developmental Effects:	Not applicable with normal use of the marker.
Target Organ Effects:	Not applicable with normal use of the marker.

SAFETY DATA SHEET

Section 12: Ecological Information

Ecotoxicity: Not available
Persistence/Degradability: Not available
Bioaccumulation/Accumulation: Not available
Mobility: Not available

Section 13: Disposal Considerations

Waste Disposal Method: Do NOT dump 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, LA-CO Industries, Inc. 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.

USA: Dispose of in accordance with local, state and federal laws and regulations.
Canada: Dispose of in accordance with local, provincial and federal laws and regulations.
EC: Waste must be disposed of in accordance with relevant EC Directives and national, regional and local environmental control regulations. For disposal within the EC, the appropriate code according to the European Waste Catalogue (EWC) should be used.

Section 14: Transport Information:

U.S. Hazardous Materials Regulation (DOT 49CFR): Not regulated, this product conforms to small quantity exception of DOT 49CFR173.4.
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: All component substances are listed on the TSCA inventory.

SARA Title III
 Sec. 302/304: None
 Sec. 311/312: Flammable, Chronic health
 Sec. 313: Not applicable
 CERCLA RQ: Not applicable

California Prop 65: To the best of our knowledge this product does not contain chemicals known to the State of California to cause cancer or reproductive harm.

State Right-to-Know Lists : Propan-1-ol can be found on the following state right to know lists: New Jersey, Pennsylvania and Massachusetts.
 1-methoxypropan-2-ol can be found on the following state right to know lists: New Jersey, Pennsylvania and Massachusetts.

SAFETY DATA SHEET

Section 15: Regulatory Information, continued

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. Product meets the definition of a “manufactured article” and is not subject to the regulations of the Hazardous Products Act.
(for workplace exposures)

New Substance Notification Regulations: Phosphoric acid, mono- and bis(2-ethylhexyl) esters, 90506-69-7 is not listed. All other component substances are listed on Canada’s Domestic Substances List (DSL).

NPRI Substances: There are no NPRI reportable substances in the ink preparation.

EC Classification for the Substance/Preparation

European Inventories: All component substances are listed in EINECS.

Symbol: This product is not classified as dangerous according to Directive 1999/45/EC and its amendments.

Section 16: Other Information

Full Text of R-phrases appearing in Section 2:

- R10: Flammable.
- R11: Highly flammable.
- R22: Harmful if swallowed.
- R38: Irritating to skin.
- R41: Risk of serious damage to eyes.
- R50/53: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- R67: Vapours may cause drowsiness and dizziness.
- R68: Possible risk of irreversible effects.

Preparation Information:

Prepared by: LEHDER Environmental Services Limited (519) 336-4101
 www.lehder.com

Revision Date: February 15, 2011

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MATERIAL SAFETY DATA SHEET

MSDS 0155

Section 1 -- PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME	RectorSeal Cold Galvanizing Spray	HMIS CODES	
		Health	2
		Flammability	3
		Reactivity	0
PRODUCT CODES	86625	PPI	B
CHEMICAL FAMILY	Organic		
USE	Metal coating		
MANUFACTURER'S NAME	The RectorSeal Corporation	EMERGENCY TELEPHONE NO.	
	2601 Spenwick Drive	Chemtrec 24 Hours	
	Houston, Texas 77055 USA	(800) 424-9300	
VALIDATION DATE	October 12, 2006	TECHNICAL SERVICE TELEPHONE NO.	
REVISION DATE	October 12, 2006	(800) 231-3345	

Section 2 -- COMPOSITION/INFORMATION ON INGREDIENTS

% by WT	CAS No.	INGREDIENT	UNITS
--	68476-85-7	Propane	
		ACGIH TLV	1000 ppm
		OSHA PEL	1000 ppm
20 Max	108-88-3	Toluene	
		ACGIH TLV	50 ppm
		OSHA PEL	100 ppm
10 Max	1330-20-7	Xylene	
		ACGIH TLV	100 ppm
		OSHA PEL	100 ppm
40 Max	7440-66-6	Zinc Dust	
		ACGIH TLV	10 mg/m3
		OSHA PEL	15 mg/m3
		OSHA STEL	10 mg/m3

Section 3 -- HAZARDS IDENTIFICATION

SUMMARY OF ACUTE HAZARDS

Repeated inhalation may cause dizziness, nausea and CNS effects. May cause severe eye and skin irritation.

ROUTE OF EXPOSURE, SIGNS AND SYMPTOMS

INHALATION

Inhalation of high concentrations may cause central nervous system effects characterized by headache, dizziness, drowsiness, and nausea. Advanced stages may cause collapse, unconsciousness, coma and possible death due to respiratory failure.

EYE CONTACT

Contact with eyes may cause severe irritation.

SKIN CONTACT

Irritation and drying.

INGESTION

May cause irritation of the digestive tract. May cause central nervous system depression, characterized by excitement, followed by headache, dizziness, and nausea. Advanced stages may cause collapse, unconsciousness, coma and possible death due to respiratory failure.

SUMMARY OF CHRONIC HAZARDS

Skin irritation, contact dermatitis, and defatting.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

Individuals with pre-existing or chronic diseases of the eyes, skin, respiratory system, cardiovascular system, gastrointestinal system, liver, or kidneys may have increased susceptibility to excessive exposure.

Section 4 -- FIRST AID MEASURES

If INHALED: If overcome by exposure, remove victim to fresh air immediately. Give oxygen or artificial respiration as needed. Obtain emergency medical attention. Prompt action is essential.

If on SKIN: Immediately wash with soap and water. Remove and wash any contaminated clothing.

If in EYES: Flush eyes with large amounts of water for 15 minutes. Get medical attention if irritation persists.

If SWALLOWED: If swallowed, call a physician immediately. Only induce

vomiting at the instruction of a physician. Never give anything by mouth to an unconscious person.

=====
Section 5 -- FIRE FIGHTING MEASURES
=====

FLASH POINT

LEL UEL
N/D N/D N/D

Positive Flame Extension, (NFPA) Level 3 Aerosol

EXTINGUISHING MEDIA

Foam, dry chemical, CO₂, or water fog.

SPECIAL FIRE FIGHTING PROCEDURES: Wear self-contained full face piece breathing apparatus and full body protective clothing. Hazardous decomposition products possible (see Section 10). Evacuate area. Dike area as run-off may create additional environmental contamination.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Aerosol cans are under pressure - exposure to temperatures above 120F can cause bursting or "rocketing" of cans.
=====

Section 6 -- ACCIDENTAL RELEASE MEASURES
=====

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Use absorbent materials to prevent footing hazard and to contain. Ventilate area with forced air ventilation. Avoid flushing into sewers, drains, waterways, and soil. Wear protective clothing and respiratory protection during cleanup.
=====

Section 7 -- HANDLING AND STORAGE
=====

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Shake well before using. Keep away from heat and open flames. Prolonged exposure to direct sunshine or storage above 120 F may cause can to burst. Do not puncture or incinerate can. OTHER PRECAUTIONS: Avoid prolonged or repeated contact with skin or clothing. Empty containers may contain residues; treat as if full and observe all products precautions.
=====

Section 8 -- EXPOSURE CONTROLS/PERSONAL PROTECTION
=====

RESPIRATORY PROTECTION (SPECIFY TYPE): In confined, poorly ventilated areas, use NIOSH/MSHA approved air purifying or supplied air respirator.

VENTILATION - LOCAL EXHAUST: Acceptable

SPECIAL: Explosion proof

MECHANICAL (GENERAL): Acceptable

OTHER: N/A

PROTECTIVE GLOVES: Wear rubber gloves.

EYE PROTECTION: Safety glasses (ANSI Z-87.1 or equivalent)

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Chemical resistant coveralls recommended.

WORK/HYGIENIC PRACTICES: Where use can result in skin contact, wash exposed areas thoroughly before eating, drinking, smoking, or leaving work area. Launder contaminated clothing before reuse.
=====

Section 9 -- PHYSICAL AND CHEMICAL PROPERTIES
=====

BOILING POINT: >165 F 74 C) @ 760mm Hg
SPECIFIC GRAVITY (H₂O = 1): 1.00
VAPOR PRESSURE (mm Hg): N/D
MELTING POINT: N/A
VAPOR DENSITY (AIR = 1): <1
EVAPORATION RATE (ETHYL ACETATE = 1): >1
APPEARANCE/ODOR: Gray Liquid / Petroleum Odor
SOLUBILITY IN WATER: Slightly
VOLATILE ORGANIC COMPOUNDS(VOC)Content (Theoretical Percentage By Weight): 64.5% or (645 g/L)
=====

Section 10 -- STABILITY AND REACTIVITY
=====

STABILITY: Stable

CONDITIONS TO AVOID: Do not store in temperatures above 120 F.

INCOMPATIBILITY (MATERIALS TO AVOID): Oxidizers, acids and bases.

HAZARDOUS DECOMPOSITION PRODUCTS: CO, CO₂, and fragmented hydrocarbons.

HAZARDOUS POLYMERIZATION: Will not occur.
=====

Section 11 -- TOXICOLOGY INFORMATION
=====

CHRONIC HEALTH HAZARDS

No ingredient in this product is an IARC, NTP or OSHA listed carcinogen.
=====

TOXICOLOGY DATA
Ingredient Name
=====

Propane

Oral-Rat LD50:N/D
Inhalation-Rat LC50:N/D

Toluene
 Oral-Rat LD50:5000 mg/kg
 Inhalation-Rat LCLo:4000 ppm/4H

Xylene
 Oral-Rat LD50:4300 mg/kg
 Inhalation-Rat LC50:5000 ppm/4H

Zinc Dust
 Oral-Rat LD50:N/D
 Inhalation-Rat LC50:N/D

=====
 Section 12 -- Ecological Information
 =====

 ECOLOGICAL DATA
 Ingredient Name

Propane
 Food Chain Concentration Potential: None
 Waterfowl Toxicity: None
 BOD: None
 Aquatic Toxicity: None

Toluene
 Food Chain Concentration Potential: None
 Waterfowl Toxicity: N/A
 BOD: 38%
 Aquatic Toxicity: 1180 mg/l/96 hr/sunfish/TLm

Xylene
 Food Chain Concentration Potential: N/A
 Waterfowl Toxicity: N/A
 BOD: 0%
 Aquatic Toxicity: 22 ppm/96 hr/bluegill/TLm

Zinc Dust
 Food Chain Concentration Potential: N/D
 Waterfowl Toxicity: N/D
 BOD: N/D
 Aquatic Toxicity: N/D

=====
 Section 13 -- DISPOSAL CONSIDERATIONS

Waste Classification: Aerosols
 Disposal Method: Empty containers can be disposed of in trash. Full
 containers should be depressurized to separate liquid phase.
 Dispose of all liquid waste in accordance with all local, state and federal
 regulations.

=====
 Section 14 -- TRANSPORTATION INFORMATION

DOT: Consumer Commodity ORM-D
 OCEAN (IMDG): Aerosols, Class 2.1, UN 1950, IMDG#2102, EMS#2-13
 AIR (IATA): Aerosols, Class 2.1, UN 1950, ERG#126
 WHMIS (CANADA): Class B-5

=====
 Section 15 -- REGULATORY INFORMATION

REGULATORY DATA
 Ingredient Name

Propane	SARA 313	No
	TSCA Inventory	Yes
	CERCLA RQ	N/A
	RCRA Code	N/A
Toluene	SARA 313	Yes
	TSCA Inventory	Yes
	CERCLA RQ	1,000 lbs.
	RCRA Code	U220
Xylene	SARA 313	Yes
	TSCA Inventory	Yes
	CERCLA RQ	100 lbs.
	RCRA Code	U239
Zinc Dust	SARA 313	Yes
	TSCA Inventory	Yes
	CERCLA RQ	1,000 lbs.
	RCRA Code	N/A

=====
 Section 16 -- OTHER INFORMATION

This document is prepared pursuant to the OSHA Hazard Communication
 Standard (29 CFR 1910.1200). The information herein is given in good faith,

but no warranty, expressed or implied is made. Consult RectorSeal for further information: (713) 263-8001

MATERIAL SAFETY DATA SHEET

MSDS 0010

Section 1 -- PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME	RectorSeal No. 100 Virgin	HMIS CODES	
		Health	1
		Flammability	1
		Reactivity	0
		PPI	B
PRODUCT CODES	22631, 22551, 22431, 22390, 22271, 22191, 22112		
CHEMICAL FAMILY	Organic		
USE	Pipe Thread Sealant		
MANUFACTURER'S NAME	The RectorSeal Corporation	EMERGENCY TELEPHONE NO.	
	2601 Spenwick Drive	Chemtrec 24 Hours	
	Houston, Texas 77055 USA	(800)424-9300 USA	
		001-527-3887 International	
DATE OF VALIDATION	April 19, 2012	TECHNICAL SERVICE TELEPHONE NO.	
		(800)231-3345 or (713)263-8001	
DATE OF PREPARATION	April 19, 2012		

Section 2 -- HAZARDS IDENTIFICATION

GHS CLASSIFICATION

PHYSICAL HAZARDS: None

HEALTH HAZARDS

Acute Toxicity:

Oral: Not Classified

Dermal: Not Classified

Inhalation: Not Classified

Skin Corrosion/Irritation: Not Classified

Serious Eye Damage/Eye Irritation: Not Classified

Respiratory or Skin Sensitization: Not Classified

Germ Cell Mutagenicity: Not Classified

Carcinogenicity: Not Classified

Reproductive Toxicology: Not Classified

Target Organ Systemic Toxicity - Single Exposure: Not Classified

Target Organ Systemic Toxicity - Repeated Exposure: Not Classified

Aspiration Toxicity: Not Classified

ENVIRONMENTAL HAZARDS

Hazardous to the Aquatic Environment: Not Classified

Acute aquatic toxicity: Not Classified

Chronic aquatic toxicity: Not Classified

Bioaccumulation potential: Not Classified

Rapid degradability: Not Classified

GHS Label elements, including precautionary statements

Pictogram: None

Signal Word: None

Hazard Statements: None

Precautionary Statements:

P102 - Keep out of reach of children.

P264 - Wash hands thoroughly after handling.

Classification according to EU Directives 67/548/EEC or 1999/45/EC

LABELING SYMBOLS: None

RISK R-PHRASES: None

SAFETY S-PHRASES:

S2 : Keep out of the reach of children.

SUMMARY OF ACUTE HAZARDS

May produce slight to moderate skin and eye irritation.

ROUTE OF EXPOSURE, SIGNS AND SYMPTOMS

INHALATION

None known.

EYE CONTACT

Irritation, watering may occur.

SKIN CONTACT

Frequent or prolonged contact may irritate and cause dermatitis.

INGESTION

May cause nausea and vomiting. Not expected to produce toxic effects unless large amounts are ingested.

SUMMARY OF CHRONIC HAZARDS

None known.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

Individuals with pre-existing or chronic diseases of the eyes, skin or persons with chemical sensitivity may have increased susceptibility to excessive exposures.

Section 3 -- COMPOSITION/INFORMATION ON INGREDIENTS

% by WT CAS No. INGREDIENT UNITS
None as defined by OSHA Hazard Communication Standard 29 CFR 1910.1200.

Section 4 -- FIRST AID MEASURES

If INHALED: N/A
If on SKIN: Wash with soap and water. Seek medical attention if irritation persists.
If in EYES: Flush with large amounts of water. Get medical attention if irritation persists.
If SWALLOWED: If swallowed, call a physician immediately. Only induce vomiting at the instruction of a physician. Never give anything by mouth to an unconscious person.

Section 5 -- FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

Foam, dry chemical, carbon dioxide or water fog.
SPECIAL FIRE FIGHTING PROCEDURES: Wear self-contained breathing apparatus (SCBA) and other protective clothing. Hazardous decomposition products possible (see Section 10).

UNUSUAL FIRE AND EXPLOSION HAZARDS: Heat may build up pressure and rupture closed containers. Above 500 F (260 C) the fumes are acutely toxic.

Section 6 -- ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Wipe or scrape up spilled material to prevent footing hazard and place in trash.

Section 7 -- HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Keep container closed and upright when not in use.

OTHER PRECAUTIONS: Avoid prolonged or repeated contact with skin or clothing. Empty containers may contain residues; treat as if full and observe all products precautions. Do not reuse empty containers. KEEP OUT OF REACH OF CHILDREN.

Section 8 -- EXPOSURE CONTROLS/PERSONAL PROTECTION

RESPIRATORY PROTECTION (SPECIFY TYPE): None required.

VENTILATION - LOCAL EXHAUST: N/A

SPECIAL: N/A

MECHANICAL (GENERAL): N/A

OTHER: N/A

PROTECTIVE GLOVES: Wear rubber gloves.

EYE PROTECTION: Chemical splash goggles (ANSI Z-87.1 or equivalent)

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Coveralls recommended.

WORK/HYGIENIC PRACTICES: Where use can result in skin contact, wash exposed areas thoroughly before eating, drinking, smoking, or leaving work area. Launder contaminated clothing before reuse.

Section 9 -- PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT: N/D
SPECIFIC GRAVITY (H2O = 1): 1.32
VAPOR PRESSURE (mm Hg): < 1 @ 77 F (25 C)
MELTING POINT: N/A
VAPOR DENSITY (AIR = 1): N/A
EVAPORATION RATE (ETHYL ACETATE = 1): N/A
APPEARANCE/ODOR: White Paste/Slight Odor
SOLUBILITY IN WATER: Negligible
VOLATILE ORGANIC COMPOUNDS(VOC)Content (Theoretical Percentage By Weight): 0% or (0 g/L)
FLASH POINT: >300 F (149 C) SETA CC
LOWER EXPLOSION LIMIT: N/D
UPPER EXPLOSION LIMIT: N/D

Section 10 -- STABILITY AND REACTIVITY

STABILITY: Stable

CONDITIONS TO AVOID: None known.

INCOMPATIBILITY (MATERIALS TO AVOID): Gaseous oxygen and strong oxidizing materials.

HAZARDOUS DECOMPOSITION PRODUCTS: CO, CO2 and fragmented hydrocarbons.
HAZARDOUS POLYMERIZATION: Will not occur.

=====
Section 11 -- TOXICOLOGY INFORMATION

CHRONIC HEALTH HAZARDS

No ingredient in this product is an IARC, NTP or OSHA listed carcinogen.

TOXICOLOGY DATA

Ingredient Name

Oral-Rat LD50: N/A
Inhalation-Rat LC50: N/A

=====
Section 12 -- Ecological Information

ECOLOGICAL DATA

Ingredient Name

Food Chain Concentration Potential N/A
WATERFOWL TOXICITY N/A
BOD N/A
AQUATIC TOXICITY N/A

=====
Section 13 -- DISPOSAL CONSIDERATIONS

Waste Classification: Non-regulated solid waste

Disposal Method: Approved landfill

Waste from this product is not considered hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261. Dispose of in accordance with Federal, State, and Local regulation regarding pollution.

=====
Section 14 -- TRANSPORTATION INFORMATION

DOT: Non-Regulated
OCEAN (IMDG): Non-Regulated
AIR (IATA): Non-Regulated
WHMIS (CANADA): Non-Regulated

=====
Section 15 -- REGULATORY INFORMATION

REGULATORY DATA

Ingredient Name

SARA 313 N/A
TSCA Inventory All components listed
CERCLA RQ N/A
RCRA Code N/A

=====
Section 16 -- OTHER INFORMATION

LABELING SYMBOLS: None

RISK R-PHRASES: None

SAFETY S-PHRASES:

S2 : Keep out of the reach of children.

This document is prepared pursuant to the OSHA Hazard Communication Standard (29 CFR 1910.1200). The information herein is given in good faith, but no warranty, expressed or implied is made. Consult RectorSeal for further information: (713) 263-8001

MATERIAL SAFETY DATA SHEET

MSDS 0012

Section 1 -- PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME	RectorSeal No. 5 Special	HMIS CODES	
		Health	1
		Flammability	1
		Reactivity	0
		PPI	B
PRODUCT CODES	26551, 26431, 26390, 26271, 26191, 26112		
CHEMICAL FAMILY	Organic		
USE	Pipe Thread Sealant		
MANUFACTURER'S NAME	The RectorSeal Corporation	EMERGENCY TELEPHONE NO.	
	2601 Spenwick Drive	Chemtrec 24 Hours	
	Houston, Texas 77055 USA	(800) 424-9300	
VALIDATION DATE	June 1, 2010	TECHNICAL SERVICE TELEPHONE NO.	
REVISION DATE	June 1, 2010	(800) 231-3345	

Section 2 -- COMPOSITION/INFORMATION ON INGREDIENTS

% by WT	CAS No.	INGREDIENT	UNITS
16 Max	111-77-3	Diethylene Glycol Methyl Ether	
		ACGIH TLV	N/D ppm
		OSHA PEL	N/D ppm

Section 3 -- HAZARDS IDENTIFICATION

SUMMARY OF ACUTE HAZARDS

Irritation to eyes, nose and throat; drowsiness, narcosis, tremors and other CNS effects at high concentration.

ROUTE OF EXPOSURE, SIGNS AND SYMPTOMS

INHALATION

Nasal and respiratory irritation, dizziness, narcosis, headache, nausea, CNS depression and unconsciousness.

EYE CONTACT

Watering, blurred vision, inflammation and irritation which can result in corneal injury.

SKIN CONTACT

Irritation, dermatitis.

INGESTION

Nausea, vomiting; CNS depression; irritation of gastrointestinal tract, liver and peritoneal wall; lung congestion.

SUMMARY OF CHRONIC HAZARDS

Skin irritation and dermatitis. Possible liver and kidney damage.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

Individuals with pre-existing or chronic diseases of the eyes, skin, respiratory system, cardiovascular system, gastrointestinal system, liver or kidneys may have increased susceptibility to excessive exposures.

Section 4 -- FIRST AID MEASURES

If INHALED: If overcome by exposure, remove victim to fresh air immediately. Give oxygen or artificial respiration as needed. Obtain emergency medical attention. Prompt action is essential.

If on SKIN: Immediately flush with large amounts of water for at least 15 minutes. Get prompt medical attention.

If in EYES: Flush eyes with large amounts of water for 15 minutes. Get medical attention.

If SWALLOWED: If swallowed, call a physician immediately. Only induce vomiting at the instruction of a physician. Never give anything by mouth to an unconscious person.

Section 5 -- FIRE FIGHTING MEASURES

FLASH POINT	LEL	UEL
208 F (98 C) SETA CC	N/D	N/D

EXTINGUISHING MEDIA

Foam, dry chemical, carbon dioxide or water fog.

SPECIAL FIRE FIGHTING PROCEDURES: Wear self-contained breathing apparatus (SCBA) and other protective clothing. Hazardous decomposition products possible (see Section 10).

UNUSUAL FIRE AND EXPLOSION HAZARDS: Combustible - moderate flash point.

Vapors heavier than air and may travel along the ground or to low spots at considerable distances to a source of ignition resulting in potential flashback. Burning liquid may float on water. Heat may build up pressure and rupture containers.

=====
Section 6 -- ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Remove all sources of ignition. Use absorbent materials to prevent footing hazard and to contain. Ventilate area with natural or explosion-proof, forced air ventilation. Avoid flushing into sewers, drains, waterways, and soil. Wear protective clothing and respiratory protection during cleanup.

=====
Section 7 -- HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Keep container closed and upright when not in use. Do not store near heat, sparks, or open flames. OTHER PRECAUTIONS: Avoid prolonged or repeated contact with skin or clothing. Empty containers may contain residues; treat as if full and observe all products precautions. Do not reuse empty containers. KEEP OUT OF REACH OF CHILDREN.

=====
Section 8 -- EXPOSURE CONTROLS/PERSONAL PROTECTION

RESPIRATORY PROTECTION (SPECIFY TYPE): In confined poorly ventilated areas, use NIOSH/MSHA approved air purifying or supplied air purifying or supplied air respirators.
VENTILATION - LOCAL EXHAUST: Acceptable
SPECIAL: Explosion-proof equipment.
MECHANICAL (GENERAL): Preferable
OTHER: N/A
PROTECTIVE GLOVES: Wear rubber gloves.
EYE PROTECTION: Chemical splash goggles (ANSI Z-87.1 or equivalent)
OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Coveralls recommended.
WORK/HYGIENIC PRACTICES: Where use can result in skin contact, wash exposed areas thoroughly before eating, drinking, smoking, or leaving work area. Launder contaminated clothing before reuse.

=====
Section 9 -- PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT: 374 F (190 C) @ 760mm Hg
SPECIFIC GRAVITY (H2O = 1): 1.40
VAPOR PRESSURE (mm Hg): 0.25 @ 77 F (20 C)
MELTING POINT: N/A
VAPOR DENSITY (AIR = 1): >1
EVAPORATION RATE (ETHYL ACETATE = 1): <1
APPEARANCE/ODOR: Gray Paste/Mild Odor
SOLUBILITY IN WATER: 16%
VOLATILE ORGANIC COMPOUNDS(VOC)Content
(Theoretical Percentage By Weight): 16% or (160 g/L)

=====
Section 10 -- STABILITY AND REACTIVITY

STABILITY: Stable
CONDITIONS TO AVOID: Heat, sparks, open flames, and strong oxidizing. Temperatures above 500 F (260 C).
INCOMPATIBILITY (MATERIALS TO AVOID): Gaseous oxygen, strong oxidizing materials, molten alkali metals.
HAZARDOUS DECOMPOSITION PRODUCTS: CO, CO2 and fragmented hydrocarbons.
HAZARDOUS POLYMERIZATION: Will not occur.

=====
Section 11 -- TOXICOLOGY INFORMATION

CHRONIC HEALTH HAZARDS
No ingredient in this product is an IARC, NTP or OSHA listed carcinogen.

TOXICOLOGY DATA
Ingredient Name

Diethylene Glycol Methyl Ether
Oral-Rat LD50:5500 mg/kg
Inhalation-Rat LC50:N/D

=====
Section 12 -- Ecological Information

ECOLOGICAL DATA
Ingredient Name

Diethylene Glycol Methyl Ether
Food Chain Concentration Potential N/A
WATERFOWL TOXICITY N/A

BOD
AQUATIC TOXICITY

34%
N/A

=====
Section 13 -- DISPOSAL CONSIDERATIONS

Waste Classification: Non-regulated solid waste
Disposal Method: Approved landfill
Waste from this product is not considered hazardous as defined under the
Resource Conservation and Recovery Act (RCRA) 40 CFR 261. Dispose of in
accordance with Federal, State, and Local regulation regarding pollution.
=====

Section 14 -- TRANSPORTATION INFORMATION

DOT: Non-Regulated
OCEAN (IMDG): Non-Regulated
AIR (IATA): Non-Regulated
WHMIS (CANADA): Non-Regulated
=====

Section 15 -- REGULATORY INFORMATION

REGULATORY DATA
Ingredient Name

Diethylene Glycol Methyl Ether		
SARA 313	Yes	
TSCA Inventory	Yes	
CERCLA RQ	N/A	
RCRA Code	N/A	

=====

Section 16 -- OTHER INFORMATION

This document is prepared pursuant to the OSHA Hazard Communication
Standard (29 CFR 1910.1200). The information herein is given in good faith,
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information: (713) 263-8001

MATERIAL SAFETY DATA SHEET

MSDS 0004

Section 1 -- PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME	RectorSeal No. 7	HMIS CODES	Health	2
			Flammability	3
			Reactivity	0
PRODUCT CODES	17432		PPI	B
CHEMICAL FAMILY	Organic			
USE	Pipe Thread Sealant			
MANUFACTURER'S NAME	The RectorSeal Corporation	EMERGENCY TELEPHONE NO.	Chemtrec 24 Hours	
	2601 Spenwick Drive		(800)424-9300 USA	
	Houston, Texas 77055 USA		001-527-3887 International	
DATE OF VALIDATION	September 3, 2011	TECHNICAL SERVICE TELEPHONE NO.	(800)231-3345 or (713)263-8001	
DATE OF PREPARATION	September 3, 2011			

Section 2 -- HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW
 OSHA Hazards
 Flammable liquid, Target Organ Effect, Irritant
 TARGET ORGANS
 Liver, Kidney
 GHS CLASSIFICATION
 PHYSICAL HAZARDS: Flammable Liquid, Category 3
 HEALTH HAZARDS
 Acute Toxicity:
 Oral: Category 4
 Dermal: Category 5
 Inhalation: Category 4
 Skin Corrosion/Irritation: Category 3
 Serious Eye Damage/Eye Irritation: Category 2A
 Skin Sensitization: Not Classified
 Respiratory Sensitization: Not Classified
 Germ Cell Mutagenicity: Not Classified
 Carcinogenicity: See Section 11
 Reproductive Toxicology: Not Classified
 Target Organ Systemic Toxicity - Single Exposure: Category 3
 Target Organ Systemic Toxicity - Repeated Exposure: Not Classified
 Aspiration Toxicity: Not Classified

GHS Label elements, including precautionary statements
 Pictogram: Flammable, Harmful / Irritant
 Signal Word: Danger
 Hazard Statements:
 H226 - Flammable liquid and vapour.
 H302 - Harmful if swallowed.
 H313 - May be harmful in contact with skin.
 H316 - Causes mild skin irritation.
 H318 - Causes serious eye damage.
 H319 - Causes serious eye irritation
 H335 + H336 - May cause respiratory irritation, and drowsiness or dizziness.
 Precautionary Statements:
 P102 - Keep out of reach of children.
 P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking
 P240 - Ground/Bond container and receiving equipment
 P261 - Avoid breathing dust/fume/gas/mist/vapors/spray
 P262 - Do not get in eyes, on skin, or on clothing.
 P264 - Wash hands thoroughly after handling.
 P280 - Wear protective gloves/protective clothing/eye protection/face protection.
 P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
 P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes.
 Remove contact lenses, if present and easy to do. Continue rinsing.
 P362 - Take off contaminated clothing and wash before reuse.
 EUH066 - Repeated exposure may cause skin dryness or cracking
 Precautionary Statements - EU No. 1272/2008

Classification according to EU Directives 67/548/EEC or 1999/45/EC
 For the full text of the R phrases mentioned in this Section, see Section 16
 Symbol(s) Xi - Irritant

F - Highly flammable
R -phrase(s)
R11 - Highly flammable
R36 - Irritating to eyes
R66 - Repeated exposure may cause skin dryness or cracking
R67 - Vapors may cause drowsiness and dizziness
R-code(s) F;R11 - Xi;R36 - R66 - R67

SUMMARY OF ACUTE HAZARDS

Irritation to eyes, nose and throat; drowsiness, narcosis, tremors and other CNS effects at high concentration.

ROUTE OF EXPOSURE, SIGNS AND SYMPTOMS

INHALATION

Nasal and respiratory irritation, dizziness, narcosis, headache, nausea, CNS depression and unconsciousness.

EYE CONTACT

Watering, blurred vision, inflammation and irritation which can result in corneal injury.

SKIN CONTACT

Irritation, dermatitis.

INGESTION

Nausea, vomiting; CNS depression; irritation of gastrointestinal tract, liver and peritoneal wall; lung congestion.

SUMMARY OF CHRONIC HAZARDS

Skin irritation and dermatitis. Possible liver and kidney damage.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

Individuals with pre-existing or chronic diseases of the eyes, skin, respiratory system, cardiovascular system, gastrointestinal system, liver or kidneys may have increased susceptibility to excessive exposures.

=====
Section 3 -- COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT: Diacetone Alcohol
PERCENTAGE BY WEIGHT: --
CAS NUMBER: 123-42-2
EC# : 204-626-7

INGREDIENT: Ethyl Acetate
PERCENTAGE BY WEIGHT: --
CAS NUMBER: 141-78-6
EC# : 205-500-4

INGREDIENT: Methyl Isobutyl Ketone
PERCENTAGE BY WEIGHT: --
CAS NUMBER: 108-10-1
EC# : 203-550-1

=====
Section 4 -- FIRST AID MEASURES

If INHALED: If overcome by exposure, remove victim to fresh air immediately. Give oxygen or artificial respiration as needed. Obtain emergency medical attention. Prompt action is essential.
If on SKIN: Immediately flush with large amounts of water for at least 15 minutes. Get prompt medical attention.
If in EYES: Flush eyes with large amounts of water for 15 minutes. Get medical attention.
If SWALLOWED: If swallowed, call a physician immediately. Only induce vomiting at the instruction of a physician. Never give anything by mouth to an unconscious person.

=====
Section 5 -- FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

Foam, dry chemical, carbon dioxide or water fog.

SPECIAL FIRE FIGHTING PROCEDURES: Wear self-contained breathing apparatus (SCBA) and other protective clothing. Hazardous decomposition products possible (see Section 10).

UNUSUAL FIRE AND EXPLOSION HAZARDS: Flammable - ambient flash point.

Vapors heavier than air and may travel along the ground or to low spots at considerable distances to a source of ignition resulting in potential flashback. Burning liquid may float on water. Heat may build up pressure and rupture containers.

=====
Section 6 -- ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Remove all sources of ignition. Use absorbent materials to prevent footing hazard and to contain. Ventilate area with natural or explosion-proof, forced air ventilation. Avoid flushing into sewers, drains, waterways, and soil. Wear protective clothing and respiratory protection during cleanup.

=====
Section 7 -- HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Keep container closed and upright when not in use. Do not store near heat, sparks, or open flames.
OTHER PRECAUTIONS: Avoid prolonged or repeated contact with skin or clothing. Empty containers may contain residues; treat as if full and observe all products precautions. Do not reuse empty containers.
KEEP OUT OF REACH OF CHILDREN.

=====
Section 8 -- EXPOSURE CONTROLS/PERSONAL PROTECTION

INGREDIENT	UNITS
Diacetone Alcohol	
ACGIH TLV	50 ppm
OSHA PEL	50 ppm
Ethyl Acetate	
ACGIH TLV	400 ppm
OSHA PEL	400 ppm
Methyl Isobutyl Ketone	
ACGIH TLV	50 ppm
OSHA PEL	100 ppm

RESPIRATORY PROTECTION (SPECIFY TYPE): In confined poorly ventilated areas, use NIOSH/MSHA approved air purifying or supplied air purifying or supplied air respirators.
VENTILATION - LOCAL EXHAUST: Acceptable
SPECIAL: Explosion-proof equipment.
MECHANICAL (GENERAL): Preferable
OTHER: N/A
PROTECTIVE GLOVES: Wear rubber gloves.
EYE PROTECTION: Chemical splash goggles (ANSI Z-87.1 or equivalent)
OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Coveralls recommended.
WORK/HYGIENIC PRACTICES: Where use can result in skin contact, wash exposed areas thoroughly before eating, drinking, smoking, or leaving work area. Launder contaminated clothing before reuse.

=====
Section 9 -- PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT:	322 F (161 C) @ 760mm Hg
SPECIFIC GRAVITY (H2O = 1):	1.46
VAPOR PRESSURE (mm Hg):	0.3 @ 68 F (20 C)
MELTING POINT:	N/A
VAPOR DENSITY (AIR = 1):	1.1
EVAPORATION RATE (ETHYL ACETATE = 1):	0.14
APPEARANCE/ODOR:	Black Paste/Mild Odor
SOLUBILITY IN WATER:	Insoluble
VOLATILE ORGANIC COMPOUNDS(VOC)Content (Theoretical Percentage By Weight):	28% or (280 g/L)
FLASH POINT	77 F (25 C) SETA CC
LOWER EXPLOSION LIMIT	N/D
UPPER EXPLOSION LIMIT	N/D

=====
Section 10 -- STABILITY AND REACTIVITY

STABILITY: Stable
CONDITIONS TO AVOID: Heat, sparks, open flames, and strong oxidizing. Temperatures above 500 F (260 C).
INCOMPATIBILITY (MATERIALS TO AVOID): Gaseous oxygen, strong oxidizing materials, molten alkali metals.
HAZARDOUS DECOMPOSITION PRODUCTS: CO, CO2 and fragmented hydrocarbons.
HAZARDOUS POLYMERIZATION: Will not occur.

=====
Section 11 -- TOXICOLOGY INFORMATION

CHRONIC HEALTH HAZARDS
No ingredients in this product is an IARC, NTP or OSHA Lister carcinogen.

TOXICOLOGY DATA
Ingredient Name

Diacetone Alcohol	Oral-Rat	LD50:4000 mg/kg
	Inhalation-Human	TCLo: 100 ppm
Ethyl Acetate	Oral rat LD50:	5620 mg/kg
	Inhalation rat LC50:	200 gm/m3
	Skin rabbit LD50:	> 20 ml/kg
Methyl Isobutyl Ketone	Oral rat LD50:	2080 mg/kg
	Skin rabbit	> 20 mL/kg; irritation eye rabbit

=====
 Section 12 -- Ecological Information

ECOLOGICAL DATA
 Ingredient Name

Diacetone Alcohol	Food Chain Concentration Potential	N/A
	WATERFOWL TOXICITY	N/A
	BOD	N/A
	AQUATIC TOXICITY	N/A
Ethyl Acetate	Food Chain Concentration Potential	N/A
	WATERFOWL TOXICITY LC50/96-Hr values for fish are >100 mg/l	
	BOD	N/A
	AQUATIC TOXICITY	N/A
Methyl Isobutyl Ketone	Food Chain Concentration Potential	N/A
	WATERFOWL TOXICITY	N/A
	BOD	N/A
	AQUATIC TOXICITY	N/A

=====
 Section 13 -- DISPOSAL CONSIDERATIONS

Waste Classification: RCRA Hazardous Waste, D001
 Disposal Method: Approved incineration
 Waste from this product is considered hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261. Dispose of in accordance with Federal, State, and Local regulation regarding pollution.

=====
 Section 14 -- TRANSPORTATION INFORMATION

DOT: UN1993, Flammable liquid n.o.s. (contains diacetone alcohol & ethyl acetate), Class 3, PG III, ERG#128
 Quarts and less: Consumer Commodity, ORM-D
 OCEAN (IMDG): UN1993, Flammable liquid n.o.s. (contains diacetone alcohol & ethyl acetate), Class 3, PG III, MFAG#3-07
 Quarts and less: UN1993, Flammable liquid n.o.s. (contains diacetone alcohol & ethyl acetate), Class 3, PG III, Limited Quantities or Ltd Qty
 AIR (IATA): UN1993, Flammable liquid n.o.s. (contains diacetone alcohol & ethyl acetate), Class 3, PG III, ERG#128

=====
 Section 15 -- REGULATORY INFORMATION

REGULATORY DATA
 Ingredient Name

Diacetone Alcohol	SARA 313	N/A
	TSCA Inventory	Yes
	CERCLA RQ	N/A
	RCRA Code	N/A
Ethyl Acetate	SARA 313	N/A
	TSCA Inventory	Yes
	CERCLA RQ	N/A
	RCRA Code	U112
Methyl Isobutyl Ketone	SARA 313	N/A
	TSCA Inventory	Yes
	CERCLA RQ	N/A
	RCRA Code	U161

=====
 Section 16 -- OTHER INFORMATION

This document is prepared pursuant to the OSHA Hazard Communication Standard (29 CFR 1910.1200). The information herein is given in good faith, but no warranty, expressed or implied is made. Consult RectorSeal for further information: (713) 263-8001

MATERIAL SAFETY DATA SHEET

MSDS 0077

Section 1 -- PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME	RectorSeal T Plus 2	HMIS CODES	Health 1 Flammability 1 Reactivity 0
PRODUCT CODES	23112, 23191, 23271, 23391, 23431, 23551, 23552, 23631, 23633, 23710, 23714	PPI	B
CHEMICAL FAMILY:	Organic		
USE	Pipe Thread Sealant		
MANUFACTURER'S NAME	The RectorSeal Corporation 2601 Spenwick Drive Houston, Texas 77055 USA	EMERGENCY TELEPHONE NO.	Chemtrec 24 Hours (800)424-9300 USA 001-527-3887 International
DATE OF VALIDATION	April 5, 2012	TECHNICAL SERVICE TELEPHONE NO.	(800)231-3345 or (713)263-8001
DATE OF PREPARATION	April 5, 2012		

Section 2 -- HAZARDS IDENTIFICATION

GHS CLASSIFICATION
 PHYSICAL HAZARDS: None
 HEALTH HAZARDS
 Acute Toxicity:
 Oral: Not Classified
 Dermal: Not Classified
 Inhalation: Not Classified
 Skin Corrosion/Irritation: Not Classified
 Serious Eye Damage/Eye Irritation: Not Classified
 Respiratory or Skin Sensitization: Not Classified
 Germ Cell Mutagenicity: Not Classified
 Carcinogenicity: Not Classified
 Reproductive Toxicology: Not Classified
 Target Organ Systemic Toxicity - Single Exposure: Not Classified
 Target Organ Systemic Toxicity - Repeated Exposure: Not Classified
 Aspiration Toxicity: Not Classified

ENVIRONMENTAL HAZARDS
 Hazardous to the Aquatic Environment: Not Classified
 Acute aquatic toxicity: Not Classified
 Chronic aquatic toxicity: Not Classified
 Bioaccumulation potential: Not Classified
 Rapid degradability: Not Classified

GHS Label elements, including precautionary statements
 Pictogram: None
 Signal Word: None
 Hazard Statements: None
 Precautionary Statements:
 P102 - Keep out of reach of children.
 P264 - Wash hands thoroughly after handling.

Classification according to EU Directives 67/548/EEC or 1999/45/EC
 LABELING SYMBOLS: None
 RISK R-PHRASES: None
 SAFETY S-PHRASES:
 S2 : Keep out of the reach of children.

SUMMARY OF ACUTE HAZARDS
 May produce slight to moderate skin and eye irritation.
 ROUTE OF EXPOSURE, SIGNS AND SYMPTOMS
 INHALATION
 None known.
 EYE CONTACT
 Irritation, watering may occur.
 SKIN CONTACT
 Frequent or prolonged contact may irritate and cause dermatitis.
 INGESTION
 May cause nausea and vomiting. Not expected to produce toxic effects unless large amounts are ingested.
 SUMMARY OF CHRONIC HAZARDS
 None known.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

Individuals with pre-existing or chronic diseases of the eyes, skin or persons with chemical sensitivity may have increased susceptibility to excessive exposures.

Section 3 -- COMPOSITION/INFORMATION ON INGREDIENTS

% by WT CAS No. INGREDIENT UNITS
None as defined by OSHA Hazard Communication Standard 29 CFR 1910.1200.

Section 4 -- FIRST AID MEASURES

If INHALED: N/A
If on SKIN: Wash with soap and water. Seek medical attention if irritation persists.
If in EYES: Flush with large amounts of water. Get medical attention if irritation persists.
If SWALLOWED: If swallowed, call a physician immediately. Only induce vomiting at the instruction of a physician. Never give anything by mouth to an unconscious person.

Section 5 -- FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

Foam, dry chemical, carbon dioxide or water fog.
SPECIAL FIRE FIGHTING PROCEDURES: Wear self-contained breathing apparatus (SCBA) and other protective clothing. Hazardous decomposition products possible (see Section 10).

UNUSUAL FIRE AND EXPLOSION HAZARDS: Heat may build up pressure and rupture closed containers. Above 500 F (260 C) the fumes are acutely toxic.

Section 6 -- ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Wipe or scrape up spilled material to prevent footing hazard and place in trash.

Section 7 -- HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Keep container closed and upright when not in use.

OTHER PRECAUTIONS: Avoid prolonged or repeated contact with skin or clothing. Empty containers may contain residues; treat as if full and observe all products precautions. Do not reuse empty containers. KEEP OUT OF REACH OF CHILDREN.

Section 8 -- EXPOSURE CONTROLS/PERSONAL PROTECTION

RESPIRATORY PROTECTION (SPECIFY TYPE): None required.

VENTILATION - LOCAL EXHAUST: N/A

SPECIAL: N/A

MECHANICAL (GENERAL): N/A

OTHER: N/A

PROTECTIVE GLOVES: Wear rubber gloves.

EYE PROTECTION: Chemical splash goggles (ANSI Z-87.1 or equivalent)

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Coveralls recommended.

WORK/HYGIENIC PRACTICES: Where use can result in skin contact, wash exposed areas thoroughly before eating, drinking, smoking, or leaving work area. Launder contaminated clothing before reuse.

Section 9 -- PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT: N/D
SPECIFIC GRAVITY (H2O = 1): 1.32
VAPOR PRESSURE (mm Hg): < 1 @ 77 F (25 C)
MELTING POINT: N/A
VAPOR DENSITY (AIR = 1): N/A
EVAPORATION RATE (ETHYL ACETATE = 1): N/A
APPEARANCE/ODOR: White Paste/Slight Odor
SOLUBILITY IN WATER: Negligible
VOLATILE ORGANIC COMPOUNDS(VOC)Content (Theoretical Percentage By Weight): 0% or (0 g/L)
FLASH POINT: >300 F (149 C) SETA CC
LOWER EXPLOSION LIMIT: N/D
UPPER EXPLOSION LIMIT: N/D

Section 10 -- STABILITY AND REACTIVITY

STABILITY: Stable

CONDITIONS TO AVOID: None known.

INCOMPATIBILITY (MATERIALS TO AVOID): Gaseous oxygen and strong oxidizing materials.

HAZARDOUS DECOMPOSITION PRODUCTS: CO, CO2 and fragmented hydrocarbons.
HAZARDOUS POLYMERIZATION: Will not occur.

=====
Section 11 -- TOXICOLOGY INFORMATION

CHRONIC HEALTH HAZARDS

No ingredient in this product is an IARC, NTP or OSHA listed carcinogen.

TOXICOLOGY DATA

Ingredient Name

Oral-Rat LD50: N/A
Inhalation-Rat LC50: N/A
=====

Section 12 -- Ecological Information

ECOLOGICAL DATA

Ingredient Name

Food Chain Concentration Potential N/A
WATERFOWL TOXICITY N/A
BOD N/A
AQUATIC TOXICITY N/A
=====

Section 13 -- DISPOSAL CONSIDERATIONS

Waste Classification: Non-regulated solid waste

Disposal Method: Approved landfill

Waste from this product is not considered hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261. Dispose of in accordance with Federal, State, and Local regulation regarding pollution.

=====
Section 14 -- TRANSPORTATION INFORMATION

DOT: Non-Regulated
OCEAN (IMDG): Non-Regulated
AIR (IATA): Non-Regulated
WHMIS (CANADA): Non-Regulated
=====

Section 15 -- REGULATORY INFORMATION

REGULATORY DATA

Ingredient Name

SARA 313 N/A
TSCA Inventory All components listed
CERCLA RQ N/A
RCRA Code N/A
=====

Section 16 -- OTHER INFORMATION

LABELING SYMBOLS: None

RISK R-PHRASES: None

SAFETY S-PHRASES:

S2 : Keep out of the reach of children.

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MATERIAL SAFETY DATA SHEET

MSDS 0094

Section 1 -- PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME	RectorSeal Tru-Blu	HMIS CODES	
		Health	1
		Flammability	2
		Reactivity	0
PRODUCT CODES	31300, 31431, 31551, 31552, 31631, 31780, 31782, 31785	PPI	B
CHEMICAL FAMILY:	Organic		
USE	Pipe Thread Sealant		
MANUFACTURER'S NAME	The RectorSeal Corporation	EMERGENCY TELEPHONE NO.	
	2601 Spenwick Drive	Chemtrec 24 Hours	
	Houston, Texas 77055 USA	(800)424-9300 USA	
		001-527-3887 International	
DATE OF VALIDATION	May 1, 2012	TECHNICAL SERVICE TELEPHONE NO.	
DATE OF PREPARATION	Mat 1, 2012	(800)231-3345 or (713)263-8001	

Section 2 -- HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

OSHA Hazards

Combustable

TARGET ORGANS

Not Classified

GHS CLASSIFICATION

PHYSICAL HAZARDS

Flammable liquids (Category 4)

HEALTH HAZARDS

Acute Toxicity:

Oral: Not Classified

Dermal: Not Classified

Inhalation: Not Classified

Skin Corrosion/Irritation: Not Classified

Serious Eye Damage/Eye Irritation: Not Classified

Skin Sensitization: Not Classified

Respiratory Sensitization: Not Classified

Germ Cell Mutagenicity: Not Classified

Carcinogenicity: See Section 11

Reproductive Toxicology: Not Classified

Target Organ Systemic Toxicity - Single Exposure: Not Classified

Target Organ Systemic Toxicity - Repeated Exposure: Not Classified

Aspiration Toxicity: Not Classified

GHS Label elements, including precautionary statements

Pictogram: Flammable, Harmful / Irritant

Signal Word: Warning

Hazard Statements

H226 - Flammable liquid and vapor.

H303 - May be harmful if swallowed.

H313 - May be harmful in contact with skin.

H335 + H336 - May cause respiratory irritation, and drowsiness or dizziness.

Precautionary Statements:

P102 - Keep out of reach of children.

P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking

P240 - Ground/Bond container and receiving equipment

P261 - Avoid breathing dust/fume/gas/mist/vapors/spray

P262 - Do not get in eyes, on skin, or on clothing.

P264 - Wash hands thoroughly after handling.

P280 - Wear protective gloves/protective clothing/eye protection/face protection.

P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

P362 - Take off contaminated clothing and wash before reuse.

EUH066 - Repeated exposure may cause skin dryness or cracking

Precautionary Statements - EU No. 1272/2008

SUMMARY OF ACUTE HAZARDS

Irritation to eyes, nose and throat; drowsiness, narcosis, tremors and other CNS effects at high concentration.

ROUTE OF EXPOSURE, SIGNS AND SYMPTOMS

INHALATION

Nasal and respiratory irritation, dizziness, narcosis, headache, nausea, CNS depression and unconsciousness.

EYE CONTACT

Watering, blurred vision, inflammation and irritation which can result in corneal injury.

SKIN CONTACT

Irritation, dermatitis.

INGESTION

Nausea, vomiting; CNS depression; irritation of gastrointestinal tract, liver and peritoneal wall; lung congestion.

SUMMARY OF CHRONIC HAZARDS

Skin irritation and dermatitis. Possible liver and kidney damage.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

Individuals with pre-existing or chronic diseases of the eyes, skin, respiratory system, cardiovascular system, gastrointestinal system, liver or kidneys may have increased susceptibility to excessive exposures.

=====
Section 3 -- COMPOSITION/INFORMATION ON INGREDIENTS
=====

INGREDIENT: Diacetone Alcohol

PERCENTAGE BY WEIGHT: 20-30

CAS NUMBER: 123-42-2

EC# : 204-626-7
=====

Section 4 -- FIRST AID MEASURES
=====

If INHALED: If overcome by exposure, remove victim to fresh air immediately. Give oxygen or artificial respiration as needed. Obtain emergency medical attention. Prompt action is essential.

If on SKIN: Wash with soap and water. If irritation occurs, seek medical attention.

If in EYES: Flush eyes with large amounts of water for 15 minutes. Get medical attention.

If SWALLOWED: If swallowed, call a physician immediately. Only induce vomiting at the instruction of a physician. Never give anything by mouth to an unconscious person.

=====
Section 5 -- FIRE FIGHTING MEASURES
=====

FLASH POINT	LEL	UEL
150 F (65 C) SETA CC	N/D	N/D

EXTINGUISHING MEDIA

Foam, dry chemical, carbon dioxide or water fog.

SPECIAL FIRE FIGHTING PROCEDURES: Wear self-contained breathing apparatus (SCBA) and other protective clothing. Hazardous decomposition products possible (see Section 10).

UNUSUAL FIRE AND EXPLOSION HAZARDS: Combustible - moderate flash point. Vapors heavier than air and may travel along the ground or to low spots at considerable distances to a source of ignition resulting in potential flashback. Burning liquid may float on water. Heat may build up pressure and rupture containers.

=====
Section 6 -- ACCIDENTAL RELEASE MEASURES
=====

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Remove all sources of ignition. Use absorbent materials to prevent footing hazard and to contain. Ventilate area with natural or explosion-proof, forced air ventilation. Avoid flushing into sewers, drains, waterways, and soil. Wear protective clothing and respiratory protection during cleanup.

=====
Section 7 -- HANDLING AND STORAGE
=====

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Keep container closed and upright when not in use. Do not store near heat, sparks, or open flames.

OTHER PRECAUTIONS: Avoid prolonged or repeated contact with skin or clothing. Empty containers may contain residues; treat as if full and observe all products precautions. Do not reuse empty containers.
KEEP OUT OF REACH OF CHILDREN.

=====
Section 8 -- EXPOSURE CONTROLS/PERSONAL PROTECTION
=====

INGREDIENT	UNITS
Diacetone Alcohol	
ACGIH TLV	50 ppm
OSHA PEL	50 ppm

RESPIRATORY PROTECTION (SPECIFY TYPE): In confined poorly ventilated areas, use NIOSH/MSHA approved air purifying or supplied air purifying or supplied air respirators.

VENTILATION - LOCAL EXHAUST: Acceptable

SPECIAL: Explosion-proof equipment.
MECHANICAL (GENERAL): Preferable
OTHER: N/A
PROTECTIVE GLOVES: Wear rubber gloves.
EYE PROTECTION: Chemical splash goggles (ANSI Z-87.1 or equivalent)
OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Coveralls recommended.
WORK/HYGIENIC PRACTICES: Where use can result in skin contact, wash exposed areas thoroughly before eating, drinking, smoking, or leaving work area.
Launder contaminated clothing before reuse.

=====
Section 9 -- PHYSICAL AND CHEMICAL PROPERTIES
=====

BOILING POINT: 322 F (161 C) @ 760mm Hg
SPECIFIC GRAVITY (H2O = 1): 1.38
VAPOR PRESSURE (mm Hg): 0.3 @ 68 F (20 C)
MELTING POINT: N/A
VAPOR DENSITY (AIR = 1): 1.1
EVAPORATION RATE (ETHYL ACETATE = 1): 0.14
APPEARANCE/ODOR: Blue Paste/Mild Odor
SOLUBILITY IN WATER: 23%
VOLATILE ORGANIC COMPOUNDS(VOC)Content
(Theoretical Percentage By Weight): 23% or (230 g/L)

=====
Section 10 -- STABILITY AND REACTIVITY
=====

STABILITY: Stable
CONDITIONS TO AVOID: Heat, sparks, open flames, and strong oxidizing.
Temperatures above 500 F (260 C).
INCOMPATIBILITY (MATERIALS TO AVOID): Gaseous oxygen, strong oxidizing materials, molten alkali metals.
HAZARDOUS DECOMPOSITION PRODUCTS: CO, CO2 and fragmented hydrocarbons.
HAZARDOUS POLYMERIZATION: Will not occur.

=====
Section 11 -- TOXICOLOGY INFORMATION
=====

CHRONIC HEALTH HAZARDS
No ingredients in this product is an IARC, NTP or OSHA Lister carcinogen.

TOXICOLOGY DATA
Ingredient Name

Diacetone Alcohol
Oral-Rat LD50:4000 mg/kg
Inhalation-Human TCLo: 100 ppm

=====
Section 12 -- Ecological Information
=====

ECOLOGICAL DATA
Ingredient Name

Diacetone Alcohol
Food Chain Concentration Potential N/A
WATERFOWL TOXICITY N/A
BOD N/A
AQUATIC TOXICITY N/A

=====
Section 13 -- DISPOSAL CONSIDERATIONS
=====

Waste Classification: Non-regulated solid waste
Disposal Method: Approved landfill
Waste from this product is not considered hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261. Dispose of in accordance with Federal, State, and Local regulation regarding pollution.

=====
Section 14 -- TRANSPORTATION INFORMATION
=====

DOT: Non-Regulated
OCEAN (IMDG): Non-Regulated
AIR (IATA): Non-Regulated
WHMIS (CANADA): Non-Regulated

=====
Section 15 -- REGULATORY INFORMATION
=====

REGULATORY DATA
Ingredient Name

Diacetone Alcohol
SARA 313 N/A
TSCA Inventory Yes
CERCLA RQ N/A
RCRA Code N/A

=====
Section 16 -- OTHER INFORMATION

This document is prepared pursuant to the OSHA Hazard Communication Standard (29 CFR 1910.1200). The information herein is given in good faith, but no warranty, expressed or implied is made. Consult RectorSeal for further information: (713) 263-8001

MATERIAL SAFETY DATA SHEET

MSDS 0037

Section 1 -- PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME	RectorSeek Low-Temp	HMIS CODES	
		Health	2
		Flammability	0
		Reactivity	0
PRODUCT CODES	61554, 61434, 61273, 61158, 61111	PPI	B
CHEMICAL FAMILY	Organic/Inorganic		
USE	Leak Locator		
MANUFACTURER'S NAME	The RectorSeal Corporation	EMERGENCY TELEPHONE NO.	
	2601 Spenwick Drive	Chemtrec 24 Hours	
	Houston, Texas 77055 USA	(800) 424-9300	
VALIDATION DATE	August 4, 2009	TECHNICAL SERVICE TELEPHONE NO.	
REVISION DATE	August 4, 2009	(800) 231-3345	

Section 2 -- COMPOSITION/INFORMATION ON INGREDIENTS

% by WT	CAS No.	INGREDIENT	UNITS
1-50	57-55-6	Propylene Glycol	
		ACGIH TLV	N/D
		OSHA PEL	N/D

Section 3 -- HAZARDS IDENTIFICATION

SUMMARY OF ACUTE HAZARDS
None known.

ROUTE OF EXPOSURE, SIGNS AND SYMPTOMS

INHALATION
None

EYE CONTACT
May cause slight eye irritation.

SKIN CONTACT
None

INGESTION
May cause nausea and vomiting. Not expected to produce toxic effects unless large amounts are ingested.

SUMMARY OF CHRONIC HAZARDS
None known.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE
None known.

Section 4 -- FIRST AID MEASURES

If INHALED: N/A

If on SKIN: Wash with water.

If in EYES: Flush eyes with large amounts of water. Get medical attention if irritation persists.

If SWALLOWED: If swallowed, call a physician immediately. Only induce vomiting at the instruction of a physician. Never give anything by mouth to an unconscious person.

Section 5 -- FIRE FIGHTING MEASURES

FLASH POINT	None	LEL	UEL
		N/D	N/D

EXTINGUISHING MEDIA
Non-flammable. Use agents appropriate for surrounding fires.

SPECIAL FIRE FIGHTING PROCEDURES: Wear self-contained full face piece breathing apparatus and other protective clothing.

UNUSUAL FIRE AND EXPLOSION HAZARDS: None

Section 6 -- ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Use absorbent materials to prevent footing hazard and to contain.

Section 7 -- HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Keep container closed and upright when not in use.

OTHER PRECAUTIONS: Avoid prolonged or repeated contact with skin or clothing. Empty containers may contain residues; treat as if full and observe all products precautions. Do not reuse empty containers.

Section 8 -- EXPOSURE CONTROLS/PERSONAL PROTECTION

RESPIRATORY PROTECTION (SPECIFY TYPE): None required.
VENTILATION - LOCAL EXHAUST: Acceptable
SPECIAL: N/A
MECHANICAL (GENERAL): Acceptable
OTHER: N/A
PROTECTIVE GLOVES: Wear rubber gloves.
EYE PROTECTION: Safety glasses (ANSI Z-87.1 or equivalent)
OTHER PROTECTIVE CLOTHING OR EQUIPMENT: N/A
WORK/HYGIENIC PRACTICES: Where use can result in skin contact, wash exposed areas thoroughly before eating, drinking, smoking, or leaving work area. Launder contaminated clothing before reuse.

Section 9 -- PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT: 212 F (100 C) @ 760mm Hg
SPECIFIC GRAVITY (H2O = 1): 0.99
VAPOR PRESSURE (mm Hg): < 1 @ 68 F (20 C)
MELTING POINT: N/A
VAPOR DENSITY (AIR = 1): >1
EVAPORATION RATE (ETHYL ACETATE = 1): <1
APPEARANCE/ODOR: Red Liquid / Mild Odor
SOLUBILITY IN WATER: Soluble

Section 10 -- STABILITY AND REACTIVITY

STABILITY: Stable
CONDITIONS TO AVOID: None
INCOMPATIBILITY (MATERIALS TO AVOID): None
HAZARDOUS DECOMPOSITION PRODUCTS: CO, CO, and fragmented hydrocarbons.
HAZARDOUS POLYMERIZATION: Will not occur.

Section 11 -- TOXICOLOGY INFORMATION

CHRONIC HEALTH HAZARDS
No ingredient in this product is an IARC, NTP or OSHA listed carcinogen.

TOXICOLOGY DATA
Ingredient Name

Propylene Glycol
Oral-Rat LD50: 20 g/kg
Inhalation-Rat LC50:N/D

Section 12 -- Ecological Information

ECOLOGICAL DATA
Ingredient Name
N/A

Propylene Glycol
Food Chain Concentration Potential None
Waterfowl Toxicity N/A
BOD 2.2%
Aquatic Toxicity N/A

Section 13 -- DISPOSAL CONSIDERATIONS

Waste Classification: Non-regulated liquid waste.
Disposal Method: Dispose of in accordance with local, state and federal regulations.

Section 14 -- TRANSPORTATION INFORMATION

DOT: Non-regulated
OCEAN (IMDG): Non-regulated
AIR (IATA): Non-regulated
WHMIS (CANADA): Non-regulated

Section 15 -- REGULATORY INFORMATION

REGULATORY DATA
Ingredient Name

Propylene Glycol
SARA 313 No

TSCA Inventory	Yes
CERCLA RQ	N/A
RCRA Code	N/A

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Section 16 -- OTHER INFORMATION
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This document is prepared pursuant to the OSHA Hazard Communication Standard (29 CFR 1910.1200). The information herein is given in good faith, but no warranty, expressed or implied is made. Consult RectorSeal for further information: (713) 263-8001

MATERIAL SAFETY DATA SHEET

HMIS CODES:

H	F	R	P
0	2	0	A

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 Administrator
(Non-Mandatory Form)
Form Approved OMB No. 1218-0072

IDENTITY (AS USED ON LABEL AND LIST):

**SELECT-UNYTE
THREAD SEALING COMPOUND WITH PTFE TF**

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's Name:
J.C. WHITLAM MANUFACTURING COMPANY

Emergency Telephone Number:
(330) 334 - 2524

Address (Number, Street, City, State, and ZIP Code):
200 WEST WALNUT STREET

Telephone Number for Information:
(330) 334 - 2524

P.O. BOX 380

Date Prepared: January 26, 2012

WADSWORTH, OHIO 44282-0380

Signature of Preparer (optional):

Section II - Hazardous Ingredients/Identity Information

HAZARDOUS COMPONENTS (SPECIFIC CHEMICAL IDENTITY: COMMON NAME(S))	OSHA PEL	ACGIH TLV	OTHER LIMITS Recommended	% (optional)
ISOPROPANOL [CAS#67-63-0]	400 ppm	400 ppm	N/A	8 - 13%
BUTYL CELLOSOLVE [CAS#111-76-2]	50 ppm	25 ppm	N/A	20 - 25%

Section III - Physical/Chemical Characteristics+

Boiling Point:	N/A	Specific Gravity (H2O =1):	1.41
Vapor Pressure (mm Hg):	.88	Melting Point:	N/A
Vapor Density (AIR = 1):	> 1	Evaporation Rate (Butyl Acetate = 1):	0.6
Solubility in Water:	SLIGHT	VOC Content:	150 g/l

Appearance and Odor: WHITE PASTE - MILD ODOR

Section IV - Fire and Explosion Hazard Data

Flash Point (Method Used): 82°F (28°C) ASTM METHOD D93-80	Flammable Limits: 921°F (494°C) IGNITION TEMPERATURE	LEL: 1.1%	UEL: 10.6%
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Extinguishing Media: CARBON DIOXIDE OR DRY CHEMICAL OR WATER.

Special Fire Fighting Procedures: NONE

Unusual Fire and Explosion Hazards:
CONTACT WITH STRONG OXIDIZERS MAY CAUSE FIRES OR EXPLOSIONS. CARBON MONOXIDE MAY BE RELEASED.

Section V - Reactivity Data		SELECT-UNYTE THREAD SEALING COMPOUND WITH PTFE		TF
Stability:	Unstable:		Conditions to Avoid: N/A	
	Stable:	X		

Incompatibility (Materials to Avoid):
LIQUID OXYGEN SYSTEMS, LIQUID SODIUM, GASEOUS FLUORINE, STRONG OXIDIZERS.

Hazardous Decomposition or Byproducts: N/A

Hazardous Polymerization:	May Occur:		Conditions to Avoid: N/A	
	Will Not Occur:	X		

Section VI - Health Hazard Data

Route(s) of Entry:	Inhalation? YES	Skin? YES	Ingestion? YES
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Health Hazards (Acute and Chronic): NONE

Carcinogenicity:	NTP? NO	IARC Monographs? NO	OSHA Regulated? NO
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Signs and Symptoms of Exposure:
INHALATION: POSSIBLE DIZZINESS IF USED IN CONFINED AREA.
SKIN: MAY CAUSE MILD IRRITATION TO SENSITIVE SKIN.

Medical Conditions Generally Aggravated by Exposure: NONE KNOWN.

Emergency and First Aid Procedures:
EYE CONTACT: FLUSH EYES WITH WATER.
SKIN: WASH EXPOSED AREA WITH SOAP AND WATER. WASH CLOTHING BEFORE REUSE.
INHALATION: MOVE TO WELL VENTILATED AREA. INGESTION: CONSULT A PHYSICIAN.

Section VII - Precautions for Safe Handling and Use

Steps to Be Taken in Case Material is Released or Spilled:
NORMAL GOOD HOUSEKEEPING PROCEDURES.

Waste Disposal Method:
DISPOSAL TO BE DONE IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS.

Precautions to Be Taken in Handling and Storing:
STORE AWAY FROM HEAT OR OPEN FLAME. CLOSE CONTAINER AFTER USE.

Other Precautions:
WEAR PROTECTIVE GLOVES TO PREVENT POSSIBLE SKIN ABSORPTION AND DERMATITIS. KEEP OUT OF REACH OF CHILDREN.

Section VIII - Control Measures

Respiratory Protection (Specify Type):
AVOID BREATHING OF FUMES. IF USED IN A CONFINED AREA, A RESPIRATOR MAY BE NECESSARY.

Ventilation:	Local Exhaust: NORMAL VENTILATION IS ADEQUATE.	Special: N/A
	Mechanical (General): N/A	Other: N/A

Protective Gloves: MAY BE NECESSARY FOR SENSITIVE SKIN.	Eye Protection: KEEP OUT OF EYES. WEAR PROTECTIVE GOGGLES WHERE NECESSARY.
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Other Protective Clothing or Equipment: N/A

Work/Hygienic Practices: WASH UP WITH SOAP AND WATER AFTER USE.

MATERIAL SAFETY DATA SHEET

SECTION 1 – PRODUCT INFORMATION

Supplier Name

The Mill-Rose Company
7310 Corporate Blvd.
Mentor, OH 44060

Emergency Telephone No.

(800) 321-3598

Date Prepared: April 1, 2012

Replaces: June, 2007

Product

Gas Line Thread Seal Tape
With PTFE

Trade Names and Synonyms

3-Wrap Yellow Gas Tape

SECTION 2 – HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

Ingredients	OSHA PEL	CAS Number	ACGIH TLV
Polytetrafluoroethylene	N/A	9002-84-0	N/A
Petroleum Solvent	N/A	64742-47-8	N/A
Pigment	N/A	N/A	N/A

SECTION 3 – PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point: N/A

Vapor Pressure (mm Hg): N/A

Vapor Density (air=1): N/A

Solubility in Water: Insoluble

Specific Gravity (H₂O=1): 2.1

Melting Point: N/A

Evaporation Rate (Butyl Acetate=1): N/A

Appearance and Odor: Yellow polymeric film/odorless

SECTION 4 – FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method Used): N/A

Flammable Limits: N/A

Extinguishing Media: Any standard medium

Special Fire Fighting Procedures: Combustible solid. Will burn if in contact with flame.

Combustion ceases when flame is removed. Decomposition on heating above 260°C results in the emission of toxic fumes. Fire fighters to wear self contained breathing apparatus if there is a risk of exposure to products of combustion and decomposition.

Unusual Fire and Explosion Hazards: Toxic fumes given off above 260°C

SECTION 5 – REACTIVITY DATA

Conditions to Avoid: Temperatures above 260°C without adequate ventilation

Incompatibility (Materials to avoid): Alkali metals, extremely potent oxidizers (e.g. fluorine, chlorine tri- fluoride), 80% NaOH or KOH, metal hydrides such as boranes (e.g. B₂H₆), Aluminum chloride, ammonia, certain amines (R-NH₂) imines (RH-NH) and 70% nitric acid at temperatures near 260°C. Do not use on oxygen lines.

SECTION 6 – HEALTH HAZARD DATA

Health Hazards (Acute):

Swallowed: No adverse effect known

Eye: See above

Skin: See above

Inhalation: The material is not normally an inhalation hazard at temperatures below 260°C as it remains an inert solid. However, exposure to thermal degradation products at temperatures above 260°C or fumes from tobacco contaminated with particles of the product may result in “Polymer Fume Fever” or influenza-like symptoms (chills, headaches, difficulty in breathing and fever). Symptoms may appear several hours after exposure but will disappear within 24-48 hours. There are exposure standards for decomposition products.

	TWA		STEL	
HF*	ppm	mg/m3	ppm	mg/m3
	3	2.6	Peak Limitation	

*Measured as an inspirable fraction

Carbonyl fluoride is the main decomposition product formed when PTFE is subjected to extended exposure at normal sintering temperatures (400°C). Carbonyl fluoride is immediately converted to highly corrosive hydrogen fluoride in the presence of moist air.

Health Hazards (Chronic): No adverse effects known.

Toxicity: No LD50 data is available on PTFE. No toxicity was observed in male/female rats when fed PTFE (up to 25%) for 90 days. Local sarcomas were induced in mice and rats implanted subcutaneously or intraperitoneally with PTFE. However, this is not considered relevant to normal industrial usage.

Carcinogenicity: PTFE has been classified by the International Agency for Research into Cancer as a group III agent. As such it is not classifiable as to its carcinogenicity to humans.

Emergency and First Aid Procedures: Inhalation: Remove victim from exposure – avoid becoming a casualty. Allow patient to assume most comfortable position and keep warm. Keep at rest until fully recovered. If breathing labored and patient cyanotic (blue) ensure that airways are clear and have a qualified person give oxygen through a face mask. If breathing has stopped apply artificial respiration at once. In event of cardiac arrest apply external cardiac massage. Seek medical advice.

SECTION 7 – PRECAUTIONS FOR SAFE HANDLING AND USE

Steps to be taken in case material is released or spilt: Sweep up

Waste Disposal Method: Burning is not recommended. Comply with local regulations

Precautions to be taken in Handling and Storage: Keep away from flames. Store below 260°C

SECTION 8 – CONTROL MEASURES

Respiratory Protection: No special controls are necessary if used within recommended operation temperatures (ie -260°C to +260°C).

Ventilation: See above

Protective Gloves: See above

Eye Protection: See above

Other Protective Clothing or Equipment: See above

Work/Hygienic Practices: See above

NOTICE FROM THE MILL-ROSE COMPANY

The information in this Material Safety Data Sheet (MSDS) relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process. We believe that the information contained herein is current as of the date of the MSDS. Since use of this information and these opinions and the conditions of use of the product are not within the control of The Mill-Rose Company, it is the user's obligation to determine the conditions of safe use of the product.