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Material Safety Data Sheet Foams**

[FLEXIBLE FOAM](#)

[HATHANE 1640C-54W & 58 COMP A](#)

[FLEXIBLE FOAM](#)

[HATHANE 1640C-54W & 58 COMP B](#)

[MOLDING, INSULATION, & FLOTATION FOAM](#)

[HATHANE 1680 SERIES COMP A](#)

[MOLDING, INSULATION, & FLOTATION FOAM](#)

[HATHANE 1680 SERIES COMP B](#)

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HASTINGS PLASTICS COMPANY

1704 Colorado Ave. Santa Monica, CA 90404 310-829-3449 FAX 310-828-682

PRODUCT DATA
MSDS 1640C-54W & 58 (B)
*REVISED 10/14/09
REPLACES 11/26/03

[Back to Index](#)

HATHANE 1640C - 54W & 58 COMPONENT B

SECTION I - PRODUCT IDENTIFICATION

MANUFACTURER'S NAME	- HASTINGS PLASTICS COMPANY
PRODUCT INFORMATION AND SALES	- (310) 829-3449
EMERGENCY PHONE NO.	- (800) 424-9300
PRODUCT NAME	- Hathane 1640C-54W & 58
PRODUCT CODE NUMBER	- 1640C-54W & 58 Component B
CHEMICAL FAMILY	- Mixture of poly (oxyalkylene) Polyol
CHEMICAL NAME	- Mixture of Hydroxyl - Terminated
SYNONYMS	- Polyether Polyol - Hydrocarbon

SECTION II - HAZARDOUS INGREDIENTS

<u>COMPONENTS</u>	<u>Cas #</u>	<u>%</u>	<u>TLVACGIH</u>	<u>OSHA PEL</u>
HYDROXYL TERMINATED POLY (OXYALKYLENE POLYETHER)	9082-00-2	90	N.E.	
TERTIARY AMINE BEARING COMPOUND		< 2	N.E.	

SECTION III - PHYSICAL DATA

APPEARANCE AND ODOR	- Liquid Clear
SPECIFIC GRAVITY	- 1.06
SOLUBILITY IN WATER (H ₂ O = 1)	- Soluble
PERCENT VOLATILE (GRAMS/PER LITER)	- 0

SECTION IV - FIRE AND HAZARD EXPLOSION DATA

FLASH POINT	- 455°F. (235°C) Pensky-Marten C.C.
EXTINGUISHING MEDIA	- Use water or fog, CO ₂ , dry chemical, or water stream.

SPECIAL FIRE FIGHTING PROCEDURES:

Use self-contained breathing apparatus if fighting fires near this product due to toxicity of thermal decomposition products. Keep containers cool. Stop flow of gas. Do not put fire out unless leak can be stopped safely.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

May decompose during contact with flames, heating elements, or in combustion engines releasing irritating, toxic, and corrosive gases. Container may explode if heated due to resulting pressure rise.

SECTION V - HEALTH EFFECTS DATA

INHALATION:	- May cause irritation to the throat and respiratory passages but at room temperature, vapor inhalation is not considered hazardous. This product contains acrylonitrile: avoid breathing vapors in shipping containers.
EYES:	- May cause minor irritation but no corneal injury.
SKIN:	- No evidence of adverse effects from available information.
OTHER TOXIC EFFECTS:	- This product does not contain any components listed.

SECTION VI - EMERGENCY & FIRST AID PROCEDURES**EYE CONTACT:**

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

SKIN CONTACT:

Remove contaminated clothing and shoes. Wash affected area for at least 15 minutes. Get medical attention.

INHALATION:

Remove to fresh air. Give oxygen. If not breathing give artificial respiration. Keep victim quiet. Do not give stimulants. Get medical attention.

INGESTION:

Induce vomiting. Get medical attention. Never give anything by mouth to an unconscious person.

SECTION VII - EMPLOYEE PROTECTION RECOMMENDATIONS**EYE PROTECTION**

- Goggles or safety glasses.

SKIN PROTECTION

- Chemically resistant gloves recommended.

RESPIRATORY PROTECTION

- None Required

VENTILATION

- None Required during handling but necessary during processing.

OTHER

- Safety showers and eye wash stations should be easily accessible to work area.

SECTION VIII - REACTIVITY DATA**STABILITY**

- Stable

HAZARDOUS POLYMERIZATION

- Will Not Occur

INCOMPATIBILITY (Materials to Avoid)

- Oxidizing materials, isocyanates, and acids.

HAZARDOUS DECOMPOSITION (By fire)

- CO₂, CO, and other aliphatic fragments which have not been determined.

CONDITIONS TO AVOID

- Flames, sparks, extremely hot metal, heating elements, pilot lights, static electricity, combustion engines, ignition sources, etc...

SECTION IX - SPILL OR LEAK PROCEDURES**STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:**

Cover spill with absorbent material, such as sand, sweeping compound or diatomaceous earth, collect material for disposal. Wash spill area with hot water.

WASTE DISPOSAL METHOD:

Waste may be incinerated or disposed of in compliance with Local, State, and Federal environmental control regulations.

SECTION X - SPECIAL PRECAUTIONS & STORAGE DATA**STORAGE TEMPERATURE**

- 60°F (15°C)/120°F (49°C) (Min./Max.)

SPECIAL SENSITIVITY:

Material is hygroscopic and may absorb small amounts of atmospheric moisture.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING:

Do not get in eyes, on skin or clothing. Do not breathe vapor, mist or gas. Keep container closed. Keep away from heat, sparks and flames. Store in tightly closed containers. Empty container may contain hazardous residue. Do not drop, reuse or refill container. Do not smoke. Read label before use. Do not cut, grind, or weld on or near container due to possible toxic fume generation or explosion due to flammable vapor residue. Use explosion proof equipment where vapor concentrations can become ignitable. Ground transfer lines and equipment.

SECTION XI - SHIPPING DATA

TECHNICAL SHIPPING NAME - Poly(oxyalkylene) polyol
 D.O.T. HAZARD - Non-regulated
 FREIGHT CLASS BULK - Polypropylene Glycol
 FREIGHT CLASS PACKAGING - Polypropylene Glycol
 PRODUCT LABEL - Hathane 1640C-54W Component B
 Hathane 1640C-58W Component B

HMIS:

Health	2
Fire Hazard	1
Reactivity	0
Personal Protection	X

DISCLAIMER OF LIABILITY

As the conditions or methods of use are beyond our control, we do not assume any responsibility and expressly disclaim liability for any use of this material. Information contained herein is believed to be true and accurate but all statements are made without warranty, express or implied, regarding the accuracy of the information, the hazards connected with the use of the material or the results to be obtained from the use thereof. It is the user's obligation to determine the conditions of safe use and the suitability of the material for the user's purpose.

HASTINGS PLASTICS COMPANY

1704 Colorado Ave. Santa Monica, CA 90404 310-829-3449 FAX 310-828-6820

PRODUCT DATA
MSDS 1640C-54 & 58 A
*REVISED 5/26/99
REPLACES 4/19/94

[Back to Index](#)

HATHANE 1640C-54 & 58 COMPONENT A

SECTION I - PRODUCT IDENTIFICATION

MANUFACTURER'S NAME	- HASTINGS PLASTICS COMPANY
PRODUCT INFORMATION AND SALES	- (310) 829-3449
EMERGENCY PHONE NUMBER	- (800) 424-9300
PRODUCT NAME	- Hathane 1640C-54 & 58 Comp A
PRODUCT CODE NUMBER	- 1640C-54 & 58 Comp A
CHEMICAL FAMILY	- Aromatic Isocyanate
CHEMICAL NAME	- Diphenylmethane Diisocyanate (MDI)
SYNONYMS	- Methylene Diphenyl Diisocyanate

SECTION II - HAZARDOUS INGREDIENTS

COMPONENTS	CAS #	%
DIPHENYLMETHANE DIISOCYANATE (MDI)	026447-40-5	70 - 80
CONTAINING METHYLENE BISPHENYL ISOCYANATE	000101-68-8	(See regulatory Information)
DIPHENYLMETHANE DIISOCYANATE (HOMOPOLYMER)	039310-05-9	20 - 30
TRIETHYL PHOSPHATE	000078-40-0	< 2%

This document is prepared pursuant to the OSHA Hazard Communication Standard (29 CFR 1910.1200). In addition, other substances not "Hazardous" per this OSHA Standard may be listed. Where proprietary ingredient shows, the identity may be made available as provided in this standard.

SECTION III - PHYSICAL DATA

APPEARANCE	- Light yellow liquid.
BOILING POINT	- 597°F (decomposes).
VAPOR PRESSURE	- 0.0003 mm hg @ 25°C.
VAPOR DENSITY	- Not determined.
SPECIFIC GRAVITY	- 1.2
SOLUBILITY IN WATER	- Reacts.
VOC CONTENT (Gms/Lit)	- N/A

SECTION IV - FIRE AND HAZARD EXPLOSION DATA

FLASH POINT	- 350°F, 177°C (PMCC).
FLAMMABLE LIMITS	- LEL: Not determined. UEL: Not determined.

EXTINGUISHING MEDIA: Carbon Dioxide, dry chemical, or foam. For Large scale fires, alcohol resistant foams are preferred if available. General Purpose synthetic foams or protein foams may function, but much less effectively. Water may be used as a blanket for fire extinguishment. If water is used, it should be used in very large quantity. The reaction between water and isocyanate may be vigorous. If possible, contain fire run off water.

SPECIAL FIRE FIGHTING PROCEDURES: People who are fighting isocyanate fires must be protected against nitrogen oxide fumes and isocyanate vapors by wearing positive pressure self-contained breathing apparatus and full protective clothing.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Down-wind personnel must be evacuated. Do not reseal contaminated containers as pressure buildup may rupture them. A chemical reaction generating CO₂ gas pressure may occur resulting in rupture of the container. Dense smoke emitted when burned without sufficient oxygen. When using water spray, boil over may occur when the product temperature reaches the boiling point of water and the reaction forming CO₂ will accelerate (tank type scenarios, not spills).

SECTION V - REACTIVITY DATA

STABILITY - Stable under recommended storage conditions.

HAZARDOUS POLYMERIZATION: May occur with incompatible reactants especially strong bases (alkalies, tertiaryamines, metal salts), water, or temperature over 160°C (320°C). Temperatures over 49°C (120°F) accelerate the reaction with water.

INCOMPATIBILITY: Water, acid, base (alkalies, ammonia), alcohols, metal compounds, surface active materials. Avoid water as it reacts to form heat, CO₂, and insoluble urea. The combined effect of the CO₂ and heat can produce enough pressure to rupture a closed container. The reaction with water is slow at temperatures less than 49°C (120°F), but accelerated at higher temperatures and in the presence of the above mentioned materials. Some reactions are violent.

HAZARDOUS DECOMPOSITION: Isocyanate vapor and mist, carbon dioxide, carbon monoxide, nitrogen oxides, and traces of hydrogen cyanide.

SECTION VI - HEALTH HAZARD DATA

EYE EFFECTS: May cause slight eye irritation. Corneal injury is unlikely.

SKIN EFFECTS: Prolonged or repeated exposure may cause skin irritation. May stain skin. Skin contact may result in allergic skin reactions or respiratory sensitization but is not expected to result in absorption of amounts sufficient to cause other adverse effects.

SKIN ABSORPTION: The LD₅₀ for skin absorption in rabbits is > 2000mg/kg.

INGESTION: Single dose oral toxicity is low. The oral LD₅₀ for male rats is >5,000mg/kg. No hazards anticipated from ingestion incidental to industrial exposure.

INHALATION: At room temperature, vapors are minimal due to low vapor pressure. However, certain operations may generate or aerosol concentrations sufficient to cause irritation or other adverse effects. Such operations include those in which the material is heated, sprayed or otherwise mechanically dispersed such as drumming, venation or pumping. Excessive exposure may cause irritation of the eyes, upper respiratory tract, and lungs. May cause respiratory sensitization in susceptible individuals. MDI concentrations below the exposure guidelines may cause allergic respiratory reactions in individuals already sensitized. Symptoms may include coughing, difficulty in breathing, and a feeling of tightness in the chest. Effects may be delayed. Impaired lung function (decreased ventilatory capacity) has been associated with overexposure to isocyanates.

SYSTEMIC AND OTHER EFFECTS: Lung injury has been observed in laboratory animals after repeated excessive exposure to MDI/ polymeric MDI aerosol droplets.

CANCER INFORMATION: Lung tumors have been observed in laboratory animals exposed to aerosol droplets of MDI/Polymeric MDI (6 mg/m³) for their lifetime. Tumors occurred concurrently with respiratory irritation and lung injury. Current exposure guidelines are expected to protect against these effects.

MUTAGENICITY (EFFECTS ON GENETIC MATERIAL): Mutagenicity data on MDI are inconclusive.

MDI was weakly positive in some vitro (test tube) studies; other in vitro studies were negative. A mutagenicity study in animals was negative.

SECTION VII - EMERGENCY AND FIRST AID PROCEDURES

INHALATION - Remove to fresh air. If not breathing, give mouth-to-mouth resuscitation. If breathing is difficult, oxygen should be administered by qualified personnel. Call a physician or transport to a medical facility.

EYE CONTACT - Irrigate with flowing water immediately and continuously for 15 minutes. Consult medical personnel. Materials containing MDI may react with the moisture of the eye forming a thick material which may be difficult to wash from the eye.

SKIN CONTACT - Wash off in flowing water or shower.

INGESTION OF FLUID - No adverse effects anticipated by this route of exposure incidental to proper industrial handling.

NOTE TO PHYSICIAN: No specific antidote. Supportive care. Treatment based on judgment of the physician in response to reactions of the patient. The manifestations of respiratory symptoms, including pulmonary edema, resulting from acute exposure may be delayed. May cause respiratory sensitization.

SECTION VIII - HANDLING PRECAUTIONS

EXPOSURE GUIDELINE(S): ACGIH/TLV is 0.005 ppm TWA and OSHA/PEL is 0.02 ppm ceiling for methylene biphenyl isocyanate (MDI).

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, selection of air-purifying or positive-pressure supplied-air will depend on the specific operation and the potential airborne concentration of the material. For emergency and other conditions where the exposure guideline may be greatly exceeded, use an approved positive-pressure self-contained breathing apparatus or positive-pressure airline with auxiliary self-contained air supply. If vapor exposure causes eye discomfort, use a full-face respirator.

EYE PROTECTION: Use safety glasses. Where contact with this material is likely, chemical goggles are recommended, because eye contact may cause pain even though it is unlikely to cause injury.

SKIN PROTECTION: Use protective clothing impervious to this material. Selection of specific items such as gloves, boots, apron, or full-body suit will depend on operation. Remove contaminated clothing immediately, wash skin area with soap and water, and launder clothing before reuse.

SPECIAL PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Store indoors at 50-95°F in original, unopened containers. Protect from atmospheric moisture. Replace outage with inert dry gas-nitrogen.

SECTION IX - ENVIRONMENTAL AND DISPOSAL INFORMATION

ACTION TO TAKE FOR SPILLS AND LEAKS: Evacuate and ventilate spill area. Dike spill to prevent entry into water system. Wear full protective equipment including positive pressure self-contained breathing apparatus.

MAJOR SPILL: If transportation spill involved call CHEMTREC (800) 424-9300. If temporary control of isocyanate vapor is required a blanket of protein foam (available at most fire departments) may be placed over

the spill. Large quantities may be pumped into closed but not sealed containers for disposal.

MINOR SPILLS: Absorb the isocyanate with sawdust or other absorbent, shovel into suitable unsealed containers, transport to well-ventilated area (outside) and treat with neutralizing solution consisting of a mixture of water and 3 - 8% concentrated ammonium hydroxide (or 5 - 10% sodium carbonate). Add about 10 parts of neutralizer per part of isocyanate with mixing. Allow to stand for 48 hours letting evolved CO₂ escape.

CLEAN UP: Decontaminate floor using water/ammonia solution with 1 - 2% added detergent letting stand over affected area for at least 10 minutes. Cover mops and brooms used for this with plastic and dispose properly (often by incineration).

DISPOSAL METHOD: Follow all federal, state, and local regulations. Liquids are usually incinerated in a proper facility. Solids are usually also incinerated or landfilled. Empty drums should be filled with water. Let stand for at least 48 hours. Drums should be drained, triple rinsed, and holed or crushed to prevent reuse. Dispose of drain and rinse fluid according to federal, state, and local regulations. The drain and rinse fluid used for decontamination must be disposed of according to federal, state, and local law and regulations. The most commonly accepted method is in an approved wastewater treatment facility. Plastic or steel drum disposal should be in accordance with federal, state, and local laws and regulations. Commonly accepted disposal methods of plastic drums after shredding are to send to an approved landfill or to incinerate in an appropriate incinerator facility. Steel drums are commonly crushed for disposal and sent to an approved landfill.

REGULATORY INFORMATION: (Not meant to be all-inclusive--selected regulations represented.)

U.S. REGULATIONS: SARA 313 INFORMATION: This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:

<u>CHEMICAL NAME</u>	<u>CASE NUMBER</u>	<u>CONCENTRATION</u>
METHYLENE BIS (PHENYLISOCYANATE) (MBI)	000101-68-8	63 - 76 %

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

An immediate health hazard
 A delayed health hazard
 A reactive hazard

CANADIAN REGULATIONS: The Workplace Hazardous Materials Information System (W.H.M.I.S.) classification for this product is: FLAMMABILITY : 1, HEALTH : 2, REACTIVITY : 2

The Transportation of Dangerous Goods Act (T.D.G.A.) classification for 55 gallon drums of this product is: Diphenylmethane-4,4'-Diisocyanate/class 6.1/UN2489/III
 On containers under 55 gallons, the classification is:
 Diphenylmethane diisocyanate (MDI)

DISCLAIMER OF LIABILITY

As the conditions or methods of use are beyond our control, we do not assume any responsibility and expressly disclaim liability for any use of this material. Information contained herein is believed to be true and accurate but all statements are made without warranty, express or implied, regarding the accuracy of the information, the hazards connected with the use of the material or the results to be obtained from the use thereof. It is the user's obligation to determine the conditions of safe use and the suitability

Prepared By: Joe Morales

F#170-21A

HASTINGS PLASTICS COMPANY

PRODUCT DATA
MSDS 1680 COMP A
*REVISED 5/26/99
REPLACES 4/02/96

1704 Colorado Ave. Santa Monica, CA 90404 310-829-3449 FAX 310-828-6820

[Back to Index](#)

HATHANE 1680-2, 1680-4, 1680-8, AND 1680-11 COMPONENT A

SECTION I - PRODUCT IDENTIFICATION

MANUFACTURER'S NAME - HASTINGS PLASTICS COMPANY
PRODUCT INFORMATION AND SALES - (310) 829-3449
EMERGENCY PHONE NO. - (800) 424-9300
PRODUCT NAME - Hathane 1680 Component A
PRODUCT CODE NUMBER - 1680-2,-4,-8,-11
CHEMICAL FAMILY - Aromatic Isocyanate
CHEMICAL NAME - Isocyanic acid, polymethylenepolyphenylene ester
SYNONYMS - Polymeric diphenylmethane diisocyanate (MDI)
CAS NUMBER - 9016-87-9
T.S.C.A. STATUS - On Inventory
OSHA HAZARD
COMMUNICATION STATUS - This product is hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29 CFR 1910.1200.

SECTION II - HAZARDOUS INGREDIENTS

<u>COMPONENTS</u>	<u>%</u>	<u>OSHA-Ceiling</u>	<u>ACGIH-TWA</u>
4,4'-DIPHENYLMETHANE DIISOCYANATE (MDI) CAS # 101-68-8	45-55	.002 ppm .200 mg/m ³	.005 ppm .051 mg/m ³
HIGHER OLIGOMERS of MDI CAS # 9016-87-9	45-55	N/E	N/E
PHENYL ISOCYANATE CAS # 103-71-9	Trace	N/E	N/E
DIPHENYLMETHANE DIISOCYANATE (MDI) CAS # 26447-40-5	1-10	N/E	N/E

SECTION III - PHYSICAL DATA

APPEARANCE - Liquid
COLOR - Dark Brown
ODOR - Slightly musty odor
MOLECULAR WEIGHT - About 350
MELT POINT/FREEZE - Below 32°F (0°C) for MDI
BOILING POINT - 406°F (208°C) At 5 mmHg for MDI
VAPOR PRESSURE - Less than 10⁻⁵ mmHg at 77°F (25°C) for MDI
VAPOR DENSITY (AIR = 1) - 8.5 (MDI)
SPECIFIC GRAVITY - 1.24 AT 77°F (25°C)
pH - N/E

BULK DENSITY - 10.3 Lbs/Gal

SOLUBILITY IN WATER - Reacts slowly with water to liberate CO² gas

PERCENT VOLATILE - Negligible

SECTION IV - FIRE AND EXPLOSION DATA

FLASH POINT - 390°F (199°C) Pinsky-Martens Closed Cup

EXTINGUISHING MEDIA - Dry Chemical; Carbon Dioxide; Foam; Water spray for large fires.

SPECIAL FIRE FIGHTING PROCEDURES/UNUSUAL FIRE AND EXPLOSION HAZARDS: Full emergency equipment with self contained breathing apparatus and full protective clothing should be worn by fire fighters. During a fire, MDI vapors and other irritating, highly toxic gases may be generated by thermal decomposition or combustion. (See section VIII). At temperatures greater than 400°F (204°C), polymeric MDI can polymerize and decompose which can cause pressure build-up in closed containers. Explosive rupture is possible. Therefore use cold water to cool fire-exposed containers.

SECTION V - HEALTH EFFECTS DATA

ROUTE(S) OF ENTRY: Skin contact from liquid and aerosols (spray application). Inhalation. Although MDI is low in volatility, an inhalation hazard can exist from MDI aerosols or vapors formed during heating, foaming or spraying.

HUMAN EFFECTS AND SYMPTOMS OF OVEREXPOSURE:

ACUTE INHALATION: MDI vapors or mist at concentrations above the TLV can irritate (burning sensation) the mucous membranes in the respiratory tract (nose, throat, lungs) causing runny nose, sore throat, coughing, chest discomfort, shortness of breath and reduced lung function (breathing obstruction). Persons with a preexisting, nonspecific bronchial hyperactivity can respond to concentrations below the TLV with similar symptoms as well as asthma attack. Exposure well above the TLV may lead to bronchitis, bronchial spasm and pulmonary edema (fluid in lungs). These effects are usually reversible. Chemical or hypersensitive pneumonitis, with flu-like symptoms (e.g. fever, chills) has also been reported. These symptoms can be delayed up to several hours after exposure.

CHRONIC INHALATION: As a result of previous repeated overexposures or a single large dose, certain individuals develop isocyanate sensitization (chemical asthma) which will cause them to react to a later exposure to isocyanate at levels well below the TLV. These symptoms, which can include chest tightness, wheezing, cough, shortness of breath or asthma attack, could be immediate or delayed (up to several hours after exposure). Similar to any non-specific asthmatic responses, there are reports that once sensitized an individual can experience these symptoms upon exposure to dust, cold air or other irritants. This increased lung sensitivity can persist for weeks and in severe cases for several years. Overexposure to isocyanates has also been reported to cause lung damage (including decrease in lung function) which may be permanent. Sensitization can either be temporary or permanent.

ACUTE SKIN CONTACT: Isocyanates react with skin protein and moisture and can cause irritation which may include the following symptoms: reddening, swelling, rash, scaling or blistering. Cured material is difficult to remove.

CHRONIC SKIN CONTACT: Prolonged contact can cause reddening, swelling, rash, scaling, blistering, and in some cases, skin sensitization. Individuals who have developed a skin sensitization can develop these symptoms as a result of contact with very small amounts of liquid material or as a result of exposure to vapor. Animal texts have indicated that respiratory sensitization can result from skin contact with MDI. This data reinforces the need to prevent direct skin contact with MDI. (See Section XII Animal Toxicity Data, SENSITIZATION.)

ACUTE EYE CONTACT: Liquid, aerosols or vapors are irritating and can cause tearing, reddening and swelling. If left untreated, corneal damage can occur and injury is slow to heal. However, damage is usually reversible. See Section VI for treatment.

CHRONIC EYE CONTACT: None Found.

ACUTE INGESTION: Can result in irritation and corrosive action in the mouth, stomach tissue and digestive tract. Symptoms can include sore throat, abdominal pain, nausea, vomiting and diarrhea.

CHRONIC INGESTION: None Found.

CARCINOGENICITY: Neither MDI nor polymeric MDI are listed by the NTP, IARC, or regulated by OSHA as carcinogens.

NTP - Not Listed

IARC - Not Listed

OSHA - Not Listed

OTHER - See results of two year inhalation study in Section XII Animal Toxicity Data, carcinogenicity.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Asthma, other respiratory disorders (bronchitis, emphysema, bronchial hyperactivity), skin allergies, eczema.

EXPOSURE LIMITS: Exposure limits have not been established for this product. Use the exposure limits in Section II of the MSDS for MDI: OSHA PEL: 0.02 ppm Ceiling (MDI). ACGIH TLV: 0.005 ppm (0.051 mg/m³) Time Weighted Average (TWA)

SECTION VI - EMERGENCY & FIRST AID PROCEDURES

EYE CONTACT: - Flush with copious amount of water, preferably lukewarm water, for at least 15 minutes, holding eyelids open all the time. Refer individual to physician or ophthalmologist for immediate follow-up.

SKIN CONTACT - Remove contaminated clothing. Wash affected skin thoroughly with soap and water. Wash contaminated clothing before reuse. For severe exposures, get under safety shower after removing clothing, get medical attention if irritation develops or persists after the area is washed.

INHALATION - Move to an area free from risk of further exposure. Administer oxygen or artificial respiration as needed. Obtain medical attention. Asthmatic-type symptoms may develop and may be immediate or delayed up to several hours. Consult physician should this occur.

INGESTION OF FLUID - DO NOT INDUCE VOMITING. Give 1 to 2 cups of milk or water to drink. DO NOT GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. Consult Physician.

NOTE TO PHYSICIAN:

EYE - Stain for evidence of corneal injury. If cornea is burned, instill antibiotic steroid preparation frequently. Work place vapors have produced reversible corneal epithelial edema impairing vision.

SKIN - This compound is a known sensitizer. Treat symptomatically as for contact dermatitis or thermal burns. If burned, treat as thermal burn.

INGESTION - Treat symptomatically. There is no specific antidote. Inducing vomiting is contraindicated because of the irritating nature of this compound.

IHALATION - This compound is a known pulmonary sensitizer. Treatment is essentially symptomatic. An individual having a skin or pulmonary sensitization reaction to this material should be removed from exposure to any isocyanate.

SECTION VII - EMPLOYEE PROTECTION RECOMMENDATIONS

EYE PROTECTION: Liquid chemical goggles or full-face shield. Vapors resistant goggles should be worn when contact lenses are in use. In a splash hazard environment chemical goggles should be used in combination with a full face-shield.

SKIN PROTECTION: Chemical resistant gloves (butyl rubber nitrile rubber, polyvinyl alcohol). However, please note that PVA degrades in water. Cover as much of the exposed skin area as possible with appropriate clothing. If skin creams are used, keep the area covered by the cream to a minimum.

RESPIRATORY PROTECTION: Concentrations greater than the TLV can occur when MDI is sprayed, heated or used in a poorly ventilated area. In such cases, or whenever concentrations of MDI exceed the TLV, respiratory protection must be worn. A positive pressure, supplied-air respirator or a self-contained breathing apparatus is recommended. In situations where MDI is not sprayed, heated, or used in a poorly ventilated area, and a supplied-air or self-contained breathing apparatus is unavailable or its use impractical, at least an air-purifying respirator equipped with an organic vapor cartridge and particulate pre-filters must be worn.

HOWEVER, THIS SHOULD BE PERMITTED ONLY FOR SHORT PERIODS OF TIME (LESS THAN ONE HOUR) AT RELATIVELY LOW CONCENTRATIONS (AT OR NEAR THE TLV). However, due to the poor warning properties of MDI, proper fit and timely replacement of filter elements must be ensured. Observe OSHA regulations for respirator use (29 CFR 1910.134).

VENTILATION: Local exhaust should be used to maintain levels below the TLV whenever MDI is processed, heated or spray applied. Standard reference sources regarding industrial ventilation (ie., ACGIH Industrial Ventilation) should be consulted for guidance about adequate ventilation.

MONITORING: Isocyanate exposure levels must be monitored. Monitoring of airborne isocyanates in the breathing zone of individuals should become part of the overall employee exposure characterization program. Monitoring techniques have been developed by NIOSH, and OSHA. Upon request, HPI Inc. can make available methods which are modifications of these NIOSH and OSHA methods.

MEDICAL SURVEILLANCE: Medical supervision of all employees who handle or come in contact with polymeric MDI is recommended. These should include preemployment and periodic medical examinations with pulmonary function tests (FEV, FVC as a minimum). Persons with asthmatic-type conditions, chronic bronchitis, other chronic respiratory diseases or recurrent skin eczema or sensitization should be excluded from working with isocyanates. Once a person is diagnosed as sensitized to isocyanate, no further exposure can be permitted.

OTHER: Safety showers and eyewash stations should be available. Educate and train employees in safe use of product. Follow all label instructions.

SECTION VIII - REACTIVITY DATA

STABILITY - Stable under normal conditions

HAZARDOUS POLYMERIZATION - May occur if in contact with moisture or other materials which react with isocyanates or temperatures over 400°F (204°C), may cause polymerization.

INCOMPATIBILITY - Water, amines, strong bases, alcohols. Will cause some corrosion to copper alloys and aluminum.

HAZARDOUS DECOMPOSITION PRODUCTS - By high heat and fire: Carbon monoxide, oxides of nitrogen, traces of HCN, MDI.

SECTION IX - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Evacuate and ventilate spill area; dike spill to prevent entry into water system; wear full protective equipment during clean-up.

MAJOR SPILL: If temporary control of isocyanate vapor is required, a blanket of protein foam (available at most fire departments) may be placed over the spill. Large quantities may be pumped into closed, but not sealed, container for disposal.

MINOR SPILL: Absorb isocyanates with sawdust or other absorbent, shovel into suitable unsealed containers, transport to well-ventilated area (outside) and treat with neutralizing solution: mixture of water (80 %) with non-ionic surfactant Tergitol TMN-10 (20%), or: water (90%), concentrated ammonia (3-8%) and detergent (2%). Add about 10 parts of neutralizer per part of isocyanate, with mixing. Allow to stand uncovered for 48 hours to let CO² escape.

CLEAN-UP: Decontaminate floor with decontamination solution letting stand for at least 15 minutes.

WASTE DISPOSAL METHOD: Waste must be disposed of in accordance with federal, state, and local environmental control regulations. Incineration is the preferred method. Empty containers must be handled with care due to product residue. Decontaminate containers prior to disposal. Empty decontaminated containers should be crushed to prevent reuse. DO NOT HEAT OR CUT EMPTY CONTAINER WITH ELECTRIC OR GAS TORCH. (See Sections IV and VIII) Vapors and gases may be highly toxic.

SECTION X - SPECIAL PRECAUTIONS & STORAGE DATA

STORAGE TEMPERATURE - 64°F (18°C)/86°F (30°C)
(MIN./MAX.)

AVERAGE SHELF LIFE - 6 Months

SPECIAL SENSITIVITY - If container is exposed to high heat, 400°F
(204°C) it can be pressurized and possibly rupture. MDI reacts slowly with
HEAT,LIGHT,MOISTURE) water to form CO² gas. This gas can cause sealed containers to expand and possibly rupture.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

Store in tightly closed containers to prevent moisture contamination. Do not reseal if contamination is suspected. Avoid contact with skin and eyes. Do not breathe aerosols or vapors. Warning properties (irritation of the eyes, nose and throat or odor) are not adequate to prevent chronic overexposure from inhalation. This material can produce asthmatic sensitization upon either single inhalation exposure to a relatively high concentration or upon repeated inhalation exposures to lower concentrations. Exposure to vapors of heated MDI can be extremely dangerous. Employee education and training in the safe use and handling if these compound are required under the OSHA Hazard Communication Standard.

SECTION XI - SHIPPING INFORMATION

TECHNICAL SHIPPING

NAME - Methylene Diphenyl Diisocyanate

FREIGHT CLASS BULK - Methylene Diphenyl Diisocyanate

FREIGHT CLASS

PACKAGING - Chemicals NOI (Isocyanate) NMFC 60000

PRODUCT LABEL - Hathane 1680-2,-4,-6,-8,-11 Component A

DOT (DOMESTIC SURFACE)

PROPER SHIPPING NAME - Other Regulated Substances, Liquid, N.O.S.*

HAZARD CLASS OR DIVISION - 9

UN/NA NUMBER - NA3082

PACKAGING GROUP - PGIII

HAZARDOUS SUBSTANCE - MDI, -(Methylene Diphenyl Diisocyanate)

DOT PRODUCT RQ lbs (kgs) - 11111 lbs (5039.9 kgs)

HAZARD LABEL(s) - Class 9

HAZARD PLACARD(s) - Class 9

*WHEN IN INDIVIDUAL CONTAINERS OF LESS THAN THE PRODUCT RQ, THIS MATERIAL SHIPS AS NON-REGULATED

HAZARD CLASS OR DIVISION	-	<u>IMO / IMDG CODE (OCEAN)</u> Non-Regulated
HAZARD CLASS OR DIVISION	-	<u>ICAO / IATA (AIR)</u> Non-Regulated

XII. ANIMAL TOXICITY DATA:

TOXICITY DATA FOR: Diphenylmethane Diisocyanate (Monomeric and Polymeric)

ACUTE TOXICITY

ORAL LD50.....: Greater than 15,800 mg/kg (Rats)

DERMAL LD50.....: Greater than 7,900 mg/kg (Rabbits)

INHALATION LC50.....: Approximately 370-490 mg/m³ for an aerosol of polymeric.

MDI (Rat 4 Hr.). An LC50 (2 Hr.) of greater than 400 mg/m³ was determined on a dust of monomeric MDI (Rat).

EYE EFFECTS.....: Slightly irritating. A maximum primary eye irritation score for a polymeric MDI of 12.0/110 (24 hr.) was obtained. This score is fairly typical for a number of MDI products.

SKIN EFFECTS.....: Slight to moderate irritant. Primary dermal irritation scores are typically below 3.4/8.0 (Draize).

SENSITIZATION.....: MDI has been shown to produce dermal sensitization in several species (guinea pigs, mice, rabbits and dogs). Intradermal or topical application followed by inhalation challenge have resulted in a respiratory sensitization response in guinea pigs. In addition, there is some evidence to suggest that cross-sensitization between different types of diisocyanates may offer.

CHRONIC TOXICITY.....: In a chronic inhalation exposure study, rats were exposed to an aerosol of polymeric MDI for 6 hours per day, 5 days per week for a period for two years. The exposure concentrations were 0, 0.2, 1.0 and 6.0 mg/m³. Microscopic examination of tissues revealed the effects of irritation to the nasal cavity and lungs in animals exposed to 1.0 and 6.0 mg/m³. The No Observable Effect Level (NOEL) was 0.2 mg/m³.

CARCINOGENICITY.....: In the same two year inhalation study described above (See CHRONIC TOXICITY), the occurrence of pulmonary adenomas (benign tumors) and single pulmonary adenocarcinoma (malignant tumor) was considered to be related to the exposure. These tumors were observed only in rats exposed to the high concentration of 6.0 mg/m³.

MUTAGENICITY.....: Monomeric MDI is positive in the Ames assay (with hepatic microsomal activation). However, it is negative in an in vivo- invitro micronucleus assay.

AQUATIC TOXICITY.....: LC50 - 24 hr. (static): Greater than 500 mg/liter for Daphnia magna, Limnea stagnalis, and Zebra fish (Brachydanio rerio) for both polymeric and monomeric MDI.

XIII. FEDERAL REGULATORY INFORMATION:

OSHA STATUS.....: This product is hazardous under the criteria of the Federal OSHA Hazardous Communications Standard 29 CFR 1910.1200.

TSCA STATUS.....: On TSCA Inventory

CERCLA REPORTABLE QUANTITY...: 5000 lbs for 4,4'-Diphenylmethane

Diisocyanate, CAS# 101-68-8.

SARA TITLE III:

SECTION 302 EXTREMELY

HAZARDOUS SUBSTANCES...: None

SECTION 311/312

HAZARD CATEGORIES.....: Immediate Health Hazard; Delayed Health Hazard; Reactive Hazard

SECTION 313

TOXIC CHEMICALS.....: Polymeric Diphenylmethane Diisocyanate,

CAS# 9016-87-9, 100%.;

Contained in this polymeric MDI product is

4,4' -Diphenylmethane Diisocyanate, CAS#

101-68-8; Upper Bound 45%

RCRA STATUS:

MDI is not listed as a hazardous waste. To the best of our knowledge, MDI does not meet the criteria of a hazardous waste if discarded in its purchased form. However, under RCRA, it is the responsibility of the user of products to determine, at the time of disposal, whether a product meets any of the criteria for a hazardous waste. This is because product uses, transformations, mixtures, processes, etc., may render the resulting material hazardous, under the criteria of ignitability, corrosivity, reactivity and toxicity characteristics under the new Toxicity Characteristics Leaching Procedure (TCLP) 40 Code of Federal Regulations 261.20-24.

XIV. OTHER REGULATORY INFORMATION:

The following chemicals are specifically listed by individual states; other products specific health and safety data in other sections of the MSDS may also be applicable for state requirements. For details on your regulatory requirements you should contact the appropriate agency in your state.

COMPONENT NAME

/CAS NUMBER CONCENTRATION STATE CODE

4,4'-Diphenylmethane Diisocyanate (MDI)

101-68-8 Upper Bound 45% PA1, FL, IL, MA, RI, NJ1, NJ4, CN2

Higher Oligomers of MDI

9016-87-9 40-55% PA3, NJ4

Diphenylmethane Diisocyanate (MDI)

26447-40-5 1-10% PA3, NJ4

Phenyl Isocyanate

103-71-9 Trace - ppm% MA

FL = Florida Substance List

IL = Illinois Toxic Substances List

MA = Massachusetts Hazardous Substance List

NJ1 = New Jersey Hazardous Substance List

NJ4 = New Jersey Other - included in 5 predominant ingredient > 1%
PA1 = Pennsylvania Hazardous Substance List
PA3 = Pennsylvania Non-hazardous present at 3% or greater.
RI = Rhode Island List of Designated Substances
CN2 = Canada WHMIS Ingredient Disclosure List over 0.1%.

CALIFORNIA PROPOSITION 65

To the best of our knowledge, this product contains no levels of listed substances, which the state of California has found to cause cancer, birth defects or other reproductive effects.

NFPA 704M RATINGS: Health Flammability Reactivity Other

3 1 1
0=insignificant 1=Slight 2=Moderate 3=High 4=Extreme

HMIS RATINGS: Health Flammability Reactivity

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

Methods of hazard communication is comprised of Product Labels and Material Safety Data Sheets. HMIS and NFPA ratings are provided by HPI as a customer service.

V. APPROVALS:

REASON FOR ISSUE.....: DOT reclassification, Section XI; New Animal Sensitization Data, Section XII.
PREPARED BY.....: J.M
APPROVED BY.....: J.M
APPROVAL DATE.....: 04/02/96
SUPERSEDES DATE.....: 11/23/93
MSDS NUMBER.....: 1680 SERIES COMP "A"

DISCLAIMER OF LIABILITY

As the conditions or methods of use are beyond our control, we do not assume any responsibility and expressly disclaim liability for any use of this material. Information contained herein is believed to be true and accurate but all statements are made without warranty, express or implied, regarding the accuracy of the information, the hazards connected with the use of the material or the results to be obtained from the use thereof. It is the user's obligation to determine the conditions of safe use and the suitability of the material for the user's purpose.

Prepared
By: Joe
Morales
F#170-21A

HASTINGS PLASTICS COMPANY

1704 Colorado Ave. Santa Monica, CA 90404 310-829-3449 FAX 310-828-6820

PRODUCT DATA
MSDS 1680 SERIES
COMP B
*REVISED 03/05/03
REPLACED 12/15/98

[Back to Index](#)

HATHANE 1680-2, 1680-4, 1680-8, AND 1680-11 COMPONENT B

SECTION I - PRODUCT IDENTIFICATION

MANUFACTURER'S NAME - HASTINGS PLASTICS COMPANY
PRODUCT SALES AND INFORMATION - (310) 829-3449
24HR EMERGENCY PHONE # - (800) 424-9300
PRODUCT NAME - Hathane 1680 Component B
PRODUCT CODE NUMBER - 1680-2,-4,-8,-11
CHEMICAL FAMILY - Mixture of Aromatic Amino Polyol and Halogenated Hydrocarbon
CHEMICAL NAME AND SYNONYMS - Polyol & Hydrochloro-fluorocarbons
- Methyl Styrene
FORMULA - Proprietary

SECTION II - HAZARDOUS INGREDIENTS

<u>COMPONENTS</u>	<u>CAS # %</u>	<u>TLVACGIH</u>	<u>OSHA PEL</u>
**1,1-DICHLORO-1-FLUOROETHANE (141B)		1171-006	6-30 900 PPM (CALC) 950 PPM (CALC)

***polymer of propylene oxide and

bis(((2-hydroxyethyl)amino)methylphenol 068909-26-2 70-90 N/A N/A

**Percentage depends on foam density.

***Ratings for material:

HMIS Hazard Ratings: Health - 2, Flammability - 1, Chemical Reactivity - 0

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

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, as the information contained in this MSDS must be considered.

SECTION III - PHYSICAL DATA

APPEARANCE AND - Amber Viscous Liquid

ODOR

BOILING POINT - Not Established

VAPOR PRESSURE - Not Established

VAPOR DENSITY - Not Established

SPECIFIC GRAVITY - 1.25

(H₂O=1)

SOLUBILITY IN WATER - Slight

PERCENT VOLATILE - Not Established

EVAPORATION RATE - Not Established

V.O.C. CONTENT BY WT - 30% (320 GRAMS PER LITER)1680-2/16%(170 GRAMS PER LITER)1680-4
4 1/2% (42 GRAMS PER LITER) 1680-8

SECTION IV - FIRE AND HAZARD EXPLOSION DATA

FLASH POINT °F (method used) - 250 °F Tag Open Cup

FLAMMABLE LIMITS (in air % LEL) - Non-Flammable

EXTINGUISHING MEDIA - Use water or fog, CO₂, dry chemical, or water stream

SPECIAL FIRE FIGHTING PROCEDURES - Use self-contained breathing apparatus if fighting fires near this product due to toxicity of thermal decomposition products. Keep containers cool. Stop flow of gas. Do not put fire out unless leak can be stopped safely.

UNUSUAL FIRE AND EXPLOSION HAZARDS - May decompose during contact with flames, heating elements, or in combustion engines releasing irritating, toxic, and corrosive gases. Container may explode if heated due to resulting pressure rise.

SECTION V - HEALTH EFFECTS DATA

Health hazard assessment of this product is based on experience with similar products. There have been no adverse health effects observed during proper use of this or other similar products.

INHALATION - Materials are low in volatility and therefore not likely to pose a problem from inhalation

EYE EFFECTS - May cause minor irritation but no corneal injury

SKIN EFFECTS - Contact with liquid may cause drying of skin. Chemical itself is not an irritant or sensitizer.

OTHER TOXIC EFFECTS - This product does not contain any components listed

TARGET ORGAN TOXIN - Target organs affected by exposure to this material are: Eyes, skin, central nervous system, respiratory system, heart.

TOXICITY COMMENTS: Dense vapor displaces breathing air in confined or unventilated areas. Inhaling concentrated vapors can cause drowsiness, unconsciousness, head-ache, respiratory depression and death due to asphyxiation. This compound also increases the sensitivity of the heart to adrenalin, possibly resulting in rapid heartbeat (tachycardia), irregular heartbeat (cardiac arrhythmias), and depression of cardiac function. Persons with preexisting heart disease may be at increased risk from exposure.

Exposing female rats to R-141B during pregnancy (20,000 PPM, 6 hrs/day on days 6-15) caused no birth defects, which decreased the number of litters, the number of pups in each litter, and the pups' weight. This therefore not gaining as much weight) during exposure to R-141B. Similar toxicity without evidence of birth defects was also found in rabbits. In rats, serum cholesterol increased after inhaling 2% R-141B for thirteen weeks. No effects were seen in any body tissues (negative histopathology).

R-141B is clastogenic to chinese hamster ovary cells<In vitro> but only at high concentrations (20%0, but is not mutagenic in the CHO/HPRT assay.

An atmosphere containing 30% R141B was weakly mutagenic to S. typhimurium strains TA 1535 and TA 98 (ames Test). A more recent study showed that more highly purified material was not mutagenic, suggesting that impurities may have caused the positive results seen earlier.

****IMPORTANT**** THE CHEMICAL, PHYSICAL, AND TOXICOLOGICAL PROPERTIES OF THIS PRODUCT HAVE NOT BEEN FULLY INVESTIGATED. APPROPRIATE CARE SHOULD BE USED WHEN HANDLING THIS OR ANY OTHER CHEMICAL.

SECTION VI - EMERGENCY & FIRST AID PROCEDURES

EYE CONTACT - Immediately flush with plenty of clean water for at least 15 minutes. Get medical attention.

SKIN CONTACT - Remove contaminated clothing and shoes. Wash affected area for at least 15 minutes. Get medical attention.

INHALATION - Remove to fresh air. Give oxygen. If not breathing give artificial respiration. Keep victim quiet. Do not give stimulants. Get medical attention.

INGESTION - Do not induce vomiting. Get medical attention. Never give anything by mouth to an unconscious person.

SECTION VII - SPECIAL PROTECTION INFORMATION

EYE PROTECTION - Goggles or safety glasses.

SKIN PROTECTION - Chemically resistant gloves recommended.

VENTILATION - Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. Use process enclosures, local exhaust ventilation or other engineering controls to maintain airborne levels to an acceptable level. Supplementary local exhaust ventilation, closed systems, or respiratory protection may be needed in special circumstances.

RESPIRATORY PROTECTION - If engineering controls do not maintain airborne concentrations to an acceptable level, and approved respirator must be worn. Respirator type: mist. If respirators are used, a program should be instituted to assure compliance with OSHA Standard 29 CFR 1910.134.

OTHER - Safety showers and eye wash stations should be easily accessible to work area.

SECTION VIII - HEALTH HAZARDS DATA

EFFECTS OF OVEREXPOSURE:

CARCINOGENIC - Not listed by NTP, IARC, or OSHA

MEDICAL CONDITIONS - None other than slight irritation

(Aggravated by Exposure)

EYES - Slight Eye irritation

SKIN - Effects of dermal contact slight

RESPIRATORY - Believed to be minimally irritating

INHALATION - Remove to fresh air if breathing becomes difficult. Consult a Physician. Administer oxygen if necessary.

INGESTION OF FLUID - Not likely to be a problem, but if ingested, consult a Physician.

EMERGENCY & FIRST AID PROCEDURES

EYES - In case of contact flush with plenty of water for at least 15 minutes.

SKIN - Wash with soap and water

SECTION IX - REACTIVITY DATA

STABILITY - Stable, but avoid periods of prolonged overheating.

HAZARDOUS - Will Not Occur

POLYMERIZATION INCOMPATIBILITY (Materials to Avoid) - Oxidizing materials, isocyanates, and acids.

HAZARDOUS DECOMPOSITION - By fire - CO₂, CO, and other aliphatic fragments which have not been determined.

CONDITIONS TO AVOID - Flames, sparks, extremely hot metal, heating elements, pilot lights, static electricity, combustion engines, ignition sources, etc.

TOXICITY

<u>ROUTE</u>	<u>ANIMAL</u>	<u>DATE</u>
ORAL	RAT	LD50> 5 GM/KG
DERMAL	RAT	LD50> 5 GM/KG
INHALATION	RAT	4 HR LC50= 62,000 PPM

SECTION VII - SPILL OR LEAK PROCEDURES**Steps To Be Taken in Case Material is Released or Spilled:**

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 runoff from entering drains, sewers, or streams.

Waste Disposal Method:

Comply with Local, State, and Federal regulations.

TRANSPORTATION INFORMATION:

DOT (USA) Classification: not regulated

TDG (CANADA) Classification: not regulated

International Civil Aviation Organization (ICAO) Classification: not regulated

International Maritime Dangerous Goods (IMDG) Classification: not regulated

SECTION X - REGULATORY INFORMATION

- OSHA Hazardous chemical(s) according to 29 CFR 1910.1200: none
- 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
- WHMIS (Canada) Ingredient Disclosure List: none
- WHMIS (Canada) Status: controlled
- WHMIS (Canada) controlled material(s):
 alpha-hydro-omega-hydroxy-poly(oxy(methyl-1,2-ethanediyl) ether with bis(((2-hydroxyethyl)amino)methyl)phenol (3:1)
- WHMIS (Canada) Hazard Classification: D/2/B
- Carcinogenicity Classification (components present at 0.1% or more):
- International Agency for Research on Cancer (IARC): not listed
- American Conference of Governmental Industrial Hygienists (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): immediate (acute) health hazard
- US Toxic Substances Control Act (TSCA): This product is listed on the TSCA inventory or otherwise complies with TSCA premanufacture notification requirements.

- Canadian Environmental Protection Act (CEPA) and Domestic Substances Lists (DSL): This product is listed on the DSL or otherwise complies with CEPA new substance notification requirements.
- European Inventory of Existing Commercial Chemical Substances (EINECS): This product is listed on EINECS or has been approved in the European Community by new substance notification.

ADDITIONAL INFORMATION

1,1-DICHLORO-1-FLUOROETHANE:

This chemical (or chemicals) is reported on the United States environmental protection agency toxic substances control act inventory. The product does not contain any chemicals currently on the extremely hazardous list (Sara Title III, section 302).

This product does not contain any chemicals currently listed as toxic chemicals under section 313 of the superfund amendments and reauthorization act of 1986 (Sara III)

As of the date this MSDS was prepared this product does not contain any chemicals currently on the California list of known carcinogens and reproductive toxins (California Proposition 65). This product is a ==HAZARDOUS SUBSTANCE== under the Pennsylvania worker and community right to know act.

DISCLAIMER OF LIABILITY

As the conditions or methods of use are beyond our control, we do not assume any responsibility and expressly disclaim liability for any use of this material. Information contained herein is believed to be true and accurate but all statements are made without warranty, express or implied, regarding the accuracy of the information, the hazards connected with the use of the material or the results to be obtained from the use thereof. It is the user's obligation to determine the conditions of safe use and the suitability of the material for the user's purpose.

Prepared
By: Joe
Morales

F#170-21A