



**SECTION 1: IDENTIFICATION**

PRODUCT IDENTIFIER

Product Name      Epoxy  
Product Code      MM-100 A  
Intended Use(s)    Epoxy resin

CONTACT INFORMATION FOR SUPPLIER OF SAFETY DATA SHEET

Factor II, Incorporated  
5642 White Mountain Ave  
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[www.factor2.com](http://www.factor2.com)  
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EMERGENCY TELEPHONE NUMBERS

928- 368-7502

**SECTION 2: HAZARD(S) IDENTIFICATION**

**GHS Classification**

**Health**

Skin Irritation, Category 2  
Serious Eye Damage, Category 1  
Skin Sensitization, Category 1

**Environmental:**

Chronic Hazards to the Aquatic Environment, Category 2

**Hazard Pictogram(s)**



**Signal word**

DANGER

**Hazard statement(s)**

H315: Causes skin irritation.  
H318: Causes serious eye damage.  
H317: May cause an allergic skin reaction.



H411: Toxic to aquatic life with long lasting effects.

**Precautionary statement(s) :**

**Prevention**

- P261: Avoid breathing dust/fume/gas/mist/vapours/spray.
- P264: Wash thoroughly after handling.
- P272: Contaminated work clothing should not be allowed out of the workplace.
- P280: Wear protective gloves/protective clothing/eye protection/face protection.
- P273: Avoid release to the environment.

**Response**

- P302+P352: IF ON SKIN: Wash with plenty of soap and water.
- P333+P313: If skin irritation or rash occurs: Get medical advice/attention.
- P362+P364: Take off contaminated clothing and wash it before reuse.
- P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P310: Immediately call a POISON CENTER/doctor/physician.
- P391: Collect spillage.

**Disposal:**

- P501: Dispose of contents/container in accordance with local/regional/national/ international regulations.

**3. COMPOSITION / INFORMATION ON INGREDIENTS**

Chemical Name	Wt.%	CAS
Barium sulfate	40 - 70	7727-43-7
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)] bisoxirane	10 - 30	1675-54-3
Titanium dioxide (TiO2)	3 - 7	13463-67-7
Oxirane, 2,2'-[1,4-butanediylbis(oxymethylene)] bis-	1 - 5	2425-79-8

**SECTION 4: FIRST-AID MEASURES**

**EYES** Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Get immediate medical attention.

**SKIN** Immediately wash skin with soap and plenty of water. Remove contaminated clothing. Get medical attention immediately. Wash clothing before reuse.

**INGESTION** If swallowed, call a physician immediately. DO NOT induce vomiting unless directed to do so by medical personnel. Provided



the patient is conscious, wash out mouth with water. Never give anything by mouth to an unconscious person.

**INHALATION**

Remove to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Get immediate medical attention.

**NOTES TO PHYSICIAN**

Symptomatic and supportive therapy as needed. Following severe exposure medical follow-up should be monitored for at least 48 hours.

**SECTION 5: FIRE-FIGHTING MEASURES**

**EXTINGUISHING MEDIA**

Water spray, carbon dioxide, dry chemical, or foam.

**HAZARDOUS COMBUSTION PRODUCTS**

Carbon monoxide and carbon dioxide.

**FIRE FIGHTING PROCEDURES**

Cool fire exposed containers with water spray. Remove containers from the fire area if possible. Do not release runoff from fire control methods to sewers or waterways.

**FIRE FIGHTING EQUIPMENT**

Firefighters should wear positive pressure self-contained breathing apparatus (SCBA) and consider use of unmanned hose holders or monitor nozzles for fighting large fires.

**SECTION 6: ACCIDENTAL RELEASE MEASURES**

**SMALL SPILL**

Evacuate the area. Clean-up should only be performed by trained personnel. People dealing with a major spill should wear full protective clothing including appropriate respiratory protection. Prevent product spill from entering sewers or waterways. Neutralize small spills with a decontaminant.

**LARGE SPILL**

Contain and absorb large spills onto an inert, non-flammable adsorbent carrier (such as earth or sand). Shovel into open-top drums or plastic bags for further decontamination, if necessary. Wash the spill area clean with a liquid decontaminant. Remove and properly dispose of residues. Notify applicable government authorities if release is reportable. (See CERCLA in Section 15).

**ENVIRONMENTAL PRECAUTIONS**

**WATER SPILL**

Do not discharge into drains or rivers.



**GENERAL PROCEDURES**

Refer to section 8 of SDS for personal protection details.

**RELEASE NOTES**

Composition and extent of any spill should be evaluated against local regulations and reported to the proper agencies, if necessary.

**SECTION 7: HANDLING AND STORAGE**

**GENERAL PROCEDURES**

Avoid contact with eyes, skin and clothing. Use only with adequate ventilation. Avoid breathing vapor over open containers. Avoid open container exposure to damp air. Avoid breathing aerosols, mists, and vapors.

**HANDLING**

Use appropriate personal protective equipment as specified in Section 8. Handle in a well-ventilated area. Handle and use in a manner consistent with good industrial/manufacturing techniques and practices.

**STORAGE**

Store in a dry and well-ventilated place, away from excessive heat, in original or similar container. Avoid unnecessary contact. Protect from freezing. Containers should be tightly sealed to prevent contamination with foreign materials.

**STORAGE TEMPERATURE**

65-80°F (18-27°C)

**SHELF LIFE**

12 months from date of shipment under manufacturers recommended storage conditions.

**SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION**

**EXPOSURE GUIDELINES**

OSHA HAZARDOUS COMPONENTS (29 CFR1910.1200)				
Chemical Name	EXPOSURE LIMITS			
	Type		ppm	mg/m <sup>3</sup>
Barium sulfate	OSHA PEL	TWA	- [1]	15T 5R [1]
		STEL	-	-
	ACGIH TLV	TWA	-	10
		STEL	-	-
	NIOSH IDLH	TWA	- [1]	10T 5R [1]
NIOSH REL	STEL	-	-	
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane	OSHA PEL	TWA	-	-
		STEL	-	-
	ACGIH TLV	TWA	-	-
		STEL	-	-
	NIOSH REL	TWA	-	-



Titanium dioxide (TiO <sub>2</sub> )	OSHA PEL	STEL	-	-
		TWA	[2]	15 [2]
		STEL	-	-
	ACGIH TLV	TWA	-	10
		STEL	-	-
	Oxirane, 2,2'-[1,4-butanediylbis (oxymethylene)] bis-	OSHA PEL	TWA	-
STEL			-	-
ACGIH TLV		TWA	-	-
		STEL	-	-
NIOSH REL	TWA	-	-	
	STEL	-	-	
<b>Footnotes:</b>				
1. T = Total, R = Respirable				
2. Total dust				

**ENGINEERING CONTROLS:**

Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

**PERSONAL PROTECTIVE EQUIPMENT**

**EYES AND FACE**

Safety goggles or glasses are recommended. Plastic face shields should be used for complete face protection to protect against possible splashing or spraying of material. ANSI Z87.1 or approved equivalent.

**SKIN** Chemical-resistant gloves and chemical goggles, face-shield, and synthetic apron or coveralls should be used to prevent contact with eyes, skin, or clothing. Wear nitrile or neoprene gloves. Chemical resistant gloves lined with polyethylene offer maximum protection.

**RESPIRATORY**

Exhaust ventilation recommended. An organic vapor cartridge or fresh air supplied respirator (NIOSH approved) may be necessary for certain applications. Consider the type of application, environmental concentrations, and other materials being used concurrently when determining respirator use and selection. Observe OSHA regulations for respirator use (29 CFR 1910.134).

**PROTECTIVE CLOTHING**

Protective clothing should be selected and used in accordance with 'Guidelines for the Selection of Chemical Protective Clothing' published by ACGIH.

**WORK HYGIENIC PRACTICES**

Contaminated clothing should be changed and washed before reuse. Eating, drinking and smoking in immediate work area should be prohibited. Wash hands before eating.



**OTHER USE PRECAUTIONS:**

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Training is important. Follow all label precautions.

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

<b>PHYSICAL STATE</b>	Paste-like
<b>ODOR</b>	Slight
<b>COLOR</b>	White
<b>Ph</b>	No data available.
<b>FLASH POINT AND METHOD</b>	> 200°C (392°F) Pensky-Martens CC
<b>VAPOR PRESSURE</b>	No data available.
<b>VAPOR DENSITY</b>	No data available.
<b>BOILING POINT</b>	No data available.
<b>SOLUBILITY IN WATER</b>	Insoluble
<b>SPECIFIC GRAVITY</b>	2.1 (water=1) at 25°C (77°F)
<b>VISCOSITY #1</b>	160000 Centipoise at 25°C (77°F)
<b>(VOC)</b>	Nil

**SECTION 10: STABILITY AND REACTIVITY**

<b>REACTIVITY:</b>	Hazardous reactions will not occur under normal transport or storage conditions.
<b>STABILITY:</b>	This product is stable under normal ambient conditions of temperature and pressure.
<b>CONDITIONS TO AVOID:</b>	No data available.
<b>POSSIBILITY OF HAZARDOUS REACTIONS:</b>	No data available.
<b>HAZARDOUS DECOMPOSITION PRODUCTS:</b>	Carbon monoxide and carbon dioxide.
<b>INCOMPATIBLE MATERIALS:</b>	Strong oxidizing agents, strong acids, strong bases.

**SECTION 11: TOXICOLOGICAL INFORMATION**

**ACUTE TOXICITY**

Chemical Name	ORAL LD <sub>50</sub>	DERMAL LD <sub>50</sub>	INHALATION LC <sub>50</sub>
Barium sulfate	No data available	No data available	No data available
2,2'-[(1-methylethylidene) bis (4,1-phenyleneoxymethylene)] bisoxirane	> 5000 mg/kg Rat	> 2000 mg/kg Rabbit	13.04 mg/l Rat (4 h)



Titanium dioxide (TiO <sub>2</sub> )	> 10000 mg/kg (Rat)	No data available	> 6.82 mg/l (4 h Rat)
Oxirane, 2,2'-[1,4-> 6.82 mg/l Rat (4 > 10000 mg/kg Rat h) butanediy[bis(oxymethylene)] bis-	1410 mg/kg Rat	> 2150 mg/kg Rabbit	No data available

<b>SKIN CORROSION/IRRITATION:</b>	Causes severe skin burns
<b>SERIOUS EYE DAMAGE/IRRITATION:</b>	Causes serious eye damage
<b>RESPIRATORY OR SKIN SENSITISATION:</b>	May cause sensitization by skin contact
<b>GERM CELL MUTAGENICITY:</b>	No data available

**CARCINOGENICITY**

Chemical Name	IARC Status
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane	3
Titanium dioxide (TiO <sub>2</sub> )	2B

<b>REPRODUCTIVE TOXICITY:</b>	No data available
<b>STOT-SINGLE EXPOSURE:</b>	No data available
<b>STOT-REPEATED EXPOSURE:</b>	No data available
<b>ASPIRATION HAZARD:</b>	No data available

**SECTION 12: ECOLOGICAL INFORMATION**

<b>ENVIRONMENTAL DATA:</b>	This product may cause risk of hazardous effects to the environment.
<b>ECOTOXICOLOGICAL INFORMATION:</b>	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Avoid release to the environment.
<b>BIOACCUMULATION/ACCUMULATION:</b>	No data available.
<b>DISTRIBUTION:</b>	No data available.
<b>CHEMICAL FATE INFORMATION:</b>	No data available

**SECTION 13: DISPOSAL CONSIDERATIONS**

<b>DISPOSAL METHOD:</b>	The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container
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must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protections and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers

**SECTION 14: TRANSPORT INFORMATION**

**DOT (DEPARTMENT OF TRANSPORTATION)**

**PROPER SHIPPING NAME:**

Environmentally hazardous substance, liquid, n.o.s. **(See Note)**

**TECHNICAL NAME:**

Bisphenol A epoxy resin

**PRIMARY HAZARD CLASS/DIVISION:**

9

**UN/NA NUMBER:**

UN3082

**PACKING GROUP:**

III

**NAERG:**

171

**LABEL:**

Class 9 (miscellaneous hazardous materials)

**MARINE POLLUTANT #1:**

Yes

**OTHER SHIPPING INFORMATION:**

Only regulated for bulk and vessel shipments, per 49CFR171.4 (c) Exceptions. Except when all or part of the transportation is by vessel, the requirements of this subchapter specific to marine pollutants do not apply to non-bulk packagings transported by motor vehicle, rail car, or aircraft.

**AIR (ICAO/IATA)**

**SHIPPING NAME:**

Environmentally hazardous substance, liquid, n.o.s. **(See Note)**

**TECHNICAL NAME:**

Bisphenol A epoxy resin

**UN/NA NUMBER:**

UN3082

**PRIMARY HAZARD CLASS/DIVISION:**

9

**PACKING GROUP:**

III

**ERG:**

9L

**LABEL:**

Class 9 (miscellaneous hazardous materials)

**NOTE:**

Only regulated for bulk and vessel shipments, per 49CFR171.4 (c) Exceptions. Except when all or part of the transportation is by vessel, the requirements of this subchapter specific to marine pollutants do not apply to non-bulk packagings transported by motor vehicle, rail car, or aircraft.

**VESSEL (IMO/IMDG)**

**SHIPPING NAME:**

Environmentally hazardous substance, liquid, n.o.s.

**TECHNICAL NAME:**

Bisphenol A epoxy resin





<b>UN/NA NUMBER:</b>	UN3082
<b>PRIMARY HAZARD CLASS/DIVISION:</b>	9
<b>PACKING GROUP:</b>	III
<b>EmS:</b>	F-A, S-F
<b>MARINE POLLUTANT #1:</b>	Yes
<b>LABEL:</b>	Class 9 (miscellaneous hazardous materials)

**SECTION 15: REGULATORY INFORMATION**

**UNITED STATES**

**SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)**

**311/312 HAZARD CATEGORIES**

Refer to Section 2 for hazard classification.

**313 REPORTABLE INGREDIENTS**

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:

**CERCLA (COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT)**

**CERCLA REGULATORY**

This product does not contain any substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302).

**TSCA (TOXIC SUBSTANCE CONTROL ACT)**

**TSCA REGULATORY**

This product does not contain any chemicals subject to TSCA Section 12(b) export notification.

**TSCA STATUS**

This product or its components are listed in or exempt from the TSCA inventory requirements.

**CLEAN AIR ACT**

Chemical Name	CAS	Wt. %
Epichlorohydrin -	106-89-8	-

**OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA)**

**29 CFR1910.119---PROCESS SAFETY MANAGEMENT OF HIGHLY HAZARDOUS CHEMICALS**

None of the chemicals in this product are considered highly hazardous by OSHA



**CALIFORNIA PROPOSITION 65**



**WARNING:** This product can expose you to chemicals including [see table below], which is [are] known to the State of California to cause cancer and birth defects or other reproductive harm. For more information, go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

Chemical Name	Wt.%	Listed
Titanium dioxide (TiO2)	3 - 7	Cancer
Epichlorohydrin	-	Cancer Male Reproductive

**OSHA HAZARD COMM. RULE:** The contents of the SDS comply with the OSHA Hazard Communication Standard 29 CFR 1910.1200.

**CANADA**

**WHMIS (WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM)**

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

**DOMESTIC SUBSTANCE LIST (INVENTORY)**

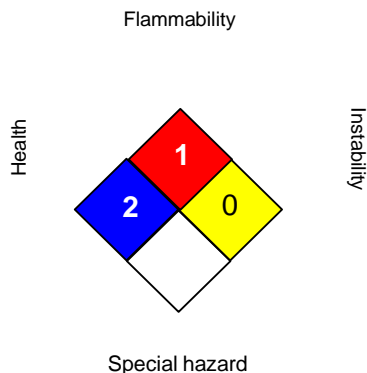
All components in this product are listed in or exempted from the Domestic Substances List (DSL) or the Non-Domestic Substances List (NDSL).

**GENERAL COMMENTS**

No data available.

**SECTION 16: OTHER INFORMATION**

**NFPA:**



**HMIS III:**

<b>HEALTH</b>	<b>*2</b>
<b>FLAMMABILITY</b>	<b>1</b>
<b>PHYSICAL HAZARD</b>	<b>0</b>
<b>PERSONAL PROTECTION</b>	<b>X</b>

0 = not significant, 1 = Slight, 2 = Moderate, 3 = High 4 = Extreme, \* = Chronic

**HMIS RATINGS NOTES:** Personal Protection: See Section 8



**Factor II, Incorporated**

The Art, Science and Technology of  
Silicones and Prosthetics...

**Safety Data Sheet**

**Product Code MM-100**

Date of Issue: -02-13-2014

Revision Date: 02-13-2020

**DISCLAIMER / STATEMENT OF LIABILITY:**

This is a computer-generated document that is valid without a signature.

The information above is supplied in good faith and, to the best of our knowledge, is based on available sources believed to be reliable and accurate. This document and any information provided herein are for your guidance only. The use by the requestor is beyond Factor II control; therefore, the responsibility for appropriate and safe use of the above information lies with the End user. Factor II shall not be responsible for any misuse and/or misapplication of the information in this document.



**SECTION 1: IDENTIFICATION**

PRODUCT IDENTIFIER

Product Name      Epoxy

Product Code      MM-100 B

Intended Use(s) :    For professional use only

CONTACT INFORMATION FOR SUPPLIER OF SAFETY DATA SHEET

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[sales@factor2.com](mailto:sales@factor2.com)

EMERGENCY TELEPHONE NUMBERS

928- 368-7502

**SECTION 2: HAZARD IDENTIFICATION**

**GHS CLASSIFICATIONS**

**Health**

Acute Toxicity (Oral)	Category 4
Acute Toxicity (Inhalation)	Category 2
Skin Corrosion	Category 1
Serious Eye Damage	Category 1
Skin Sensitization	Category 1
Reproductive Toxicity	Category 1
Target Organ Toxicity (Single exposure)	Category 3

**Environmental**

Chronic Hazards to the Aquatic Environment	Category 2
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**GHS LABEL**



Skull and crossbones



Corrosion



Health hazard



Environment

**SIGNAL WORD**

**DANGER**



**HAZARD STATEMENTS**

- H302: Harmful if swallowed.
- H330: Fatal if inhaled.
- H314: Causes severe skin burns and eye damage.
- H317: May cause an allergic skin reaction.
- H360: May damage fertility or the unborn child.
- H335: May cause respiratory irritation.
- H411: Toxic to aquatic life with long lasting effects.

**PRECAUTIONARY STATEMENTS**

**Prevention:**

- P201: Obtain special instructions before use.
- P202: Do not handle until all safety precautions have been read and understood.
- P260: Do not breathe dust/fume/gas/mist/vapours/spray.
- P271: Use only outdoors or in a well-ventilated area.
- P284: In case of inadequate ventilation wear respiratory protection.
- P264: Wash thoroughly after handling.
- P270: Do not eat, drink or smoke when using this product.
- P272: Contaminated work clothing should not be allowed out of the workplace.
- P280: Wear protective gloves/protective clothing/eye protection/face protection.
- P273: Avoid release to the environment.

**Response:**

- P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
- P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
- P363: Wash contaminated clothing before reuse.
- P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P310: Immediately call a POISON CENTER/doctor/physician.
- P308+P313: IF exposed or concerned: Get medical advice/ attention.
- P391: Collect spillage.

**Storage:**

- P403+P233: Store in a well-ventilated place. Keep container tightly closed.
- P405: Store locked up.

**Disposal:**

- P501: Dispose of contents/container in accordance with local/regional/national/international regulations.

**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

Chemical Name	Wt. %	CAS
Polyamine adduct	30 - 60	Proprietary



1,2-Ethanediamine, N-(2-aminoethyl)-	15 - 40	111-40-0
4,4'-Isopropylidenediphenol	10 - 30	80-05-7

**SECTION 4: FIRST AID MEASURES**

**EYES** Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Get medical advice/attention.

**SKIN** Immediately wash skin with soap and plenty of water. Remove contaminated clothing. Get medical attention immediately. Wash clothing before reuse.

**INGESTION** If swallowed, call a physician immediately. Do NOT induce vomiting. Provided the patient is conscious, wash out mouth with water. Never give anything by mouth to an unconscious person.

**INHALATION** Remove to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Get immediate medical attention.

**NOTES TO PHYSICIAN** Symptomatic and supportive therapy as needed. Following severe exposure medical follow-up should be monitored for at least 48 hours.

**SECTION 5: FIRE FIGHTING MEASURES**

**EXTINGUISHING MEDIA**

Water spray, carbon dioxide, dry chemical, or alcohol-resistant foam.

**HAZARDOUS COMBUSTION PRODUCTS**

Carbon monoxide, carbon dioxide, nitrogen oxides, nitric acid, ammonia, aldehydes, nitrosamine, and chlorine.

**FIRE FIGHTING PROCEDURES**

Cool fire exposed containers with water spray. Remove containers from the fire area if possible. Do not release runoff from fire control methods to sewers or waterways.

**FIRE FIGHTING EQUIPMENT**

Firefighters should wear positive pressure self-contained breathing apparatus (SCBA) and consider use of unmanned hose holders or monitor nozzles for fighting large fires.

**SECTION 6: ACCIDENTAL RELEASE MEASURES**

**SPILL AND LEAK PROCEDURES**

Evacuate unnecessary personnel from the spill area. Eliminate all sources of ignition. Ensure adequate ventilation. Use personal protective equipment. Dike and contain spill. Prevent product from entering drains or waterways. Absorb with noncombustible



material (such as sand, earth, diatomaceous earth, or vermiculite) and transfer to a container for disposal according to local/national regulations.

**ENVIRONMENTAL PRECAUTIONS**

**WATER SPILL** Do not discharge into drains, surface waters, or groundwater.

**GENERAL PROCEDURES** Refer to section 8 of SDS for personal protection details.

**RELEASE NOTES** Composition and extent of any spill should be evaluated against local regulations and reported to the proper agencies, if necessary.

**SECTION 7: HANDLING AND STORAGE**

**GENERAL PROCEDURES**

Avoid contact with eyes, skin and clothing. Use only with adequate ventilation. Avoid breathing vapor over open containers. Avoid open container exposure to damp air. Avoid breathing aerosols, mists, and vapors.

**HANDLING**

Use appropriate personal protective equipment as specified in Section 8. Handle in a well-ventilated area. Handle and use in a manner consistent with good industrial/manufacturing techniques and practices.

**STORAGE**

Store in a dry and well-ventilated place, away from excessive heat, in original or similar container. Avoid unnecessary contact. Protect from freezing. Containers should be tightly sealed to prevent contamination with foreign materials.

**STORAGE TEMPERATURE** 65-80°F (18-27°C)

**SHELF LIFE**

12 months from date of shipment under manufacturers recommended storage conditions.

**SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION**

**EXPOSURE GUIDELINES**

<b>OSHA HAZARDOUS COMPONENTS (29 CFR1910.1200)</b>				
<b>Chemical Name</b>	<b>EXPOSURE LIMITS</b>			
	<b>Type</b>		<b>ppm</b>	<b>mg/m3</b>
Polyamine adduct	OSHA PEL	TWA	-	-
		STEL	-	-
	ACGIH TLV	TWA	-	-
		STEL	-	-
	NIOSH REL	TWA	-	-



		STEL	-	-
1,2-Ethanediamine, N-(2-aminoethyl)-	OSHA PEL	TWA	1	4
		STEL	-	-
	ACGIH TLV	TWA	1	-
		STEL	-	-
	NIOSH REL	TWA	1 [1]	4 [1]
		STEL	-	-
4,4'-Isopropylidenediphenol	OSHA PEL	TWA	-	-
		STEL	-	-
	ACGIH TLV	TWA	-	-
		STEL	-	-
	NIOSH REL	TWA	-	-
		STEL	-	-

Footnotes: 1. Skin

**ENGINEERING CONTROLS:** Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

**PERSONAL PROTECTIVE EQUIPMENT**

**EYES AND FACE**

Safety goggles or glasses are recommended. Plastic face shields should be used for complete face protection to protect against possible splashing or spraying of material. ANSI Z87.1 or approved equivalent.

**SKIN**

Chemical-resistant gloves and chemical goggles, face-shield, and synthetic apron or coveralls should be used to prevent contact with eyes, skin, or clothing. Wear nitrile or neoprene gloves. Chemical resistant gloves lined with polyethylene offer maximum protection.

**RESPIRATORY**

Exhaust ventilation recommended. An organic vapor cartridge or fresh air supplied respirator (NIOSH approved) may be necessary for certain applications. Consider the type of application, environmental concentrations, and other materials being used concurrently when determining respirator use and selection. Observe OSHA regulations for respirator use (29 CFR 1910.134).

**PROTECTIVE CLOTHING**

Protective clothing should be selected and used in accordance with 'Guidelines for the Selection of Chemical Protective Clothing' published by ACGIH.

**WORK HYGIENIC PRACTICES**

Contaminated clothing should be changed and washed before reuse. Eating, drinking and smoking in immediate work area should be prohibited. Wash hands before eating.

**OTHER USE PRECAUTIONS**

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Training is important. Follow all label precautions.





**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES (Based on typical material)**

PHYSICAL STATE	Viscous liquid
ODOR	Irritating
COLOR	Light yellow
pH	Alkaline
FLASH POINT AND METHOD	110°C (230°F)
VAPOR PRESSURE	No data available
VAPOR DENSITY	No data available
BOILING POINT	No data available
SOLUBILITY IN WATER	Soluble
SPECIFIC GRAVITY	1.08 (water=1) at 25°C (77°F)
VISCOSITY #1 (VOC)	3500 Centipoise at 25°C (77°F) Nil

**SECTION 10: STABILITY AND REACTIVITY DATA**

**REACTIVITY**

Hazardous reactions will not occur under normal transport or storage conditions.

**STABILITY**

This product is stable under normal ambient conditions of temperature and pressure.

**CONDITIONS TO AVOID**

No data available

**POSSIBILITY OF HAZARDOUS REACTIONS**

No data available

**HAZARDOUS DECOMPOSITION PRODUCTS**

Carbon monoxide, carbon dioxide, nitrogen oxides, nitric acid, ammonia, aldehydes, nitrosamine, and chlorine.

**INCOMPATIBLE MATERIALS**

Sodium hypochlorite, organic acids, mineral acids, oxidizing agents, and nitrous acid.

**SECTION 11: TOXICOLOGICAL INFORMATION**

**ACUTE TOXICITY**

Chemical Name	ORAL LD50	DERMAL LD50	INHALATION LC50
Polyamine adduct	No data available	No data available	No data available
1,2-Ethanediamine, N-(2-aminoethyl)-	1080 mg/kg Rat	1090 mg/kg Rabbit	0.3 mg/l Rat (4 h)
4,4'-Isopropylidenediphenol	> 2000 mg/kg Rat	6400 mg/kg Rabbit	170 mg/m3 Rat (6 h)

**SKIN CORROSION/IRRITATION**

Causes severe skin burns.

**SERIOUS EYE DAMAGE/IRRITATION**

Causes serious eye damage.

**RESPIRATORY OR SKIN SENSITISATION**

May cause sensitization by skin contact.



<b>GERM CELL MUTAGENICITY</b>	No data available
<b>REPRODUCTIVE TOXICITY</b>	May damage fertility or the unborn child.
<b>STOT-SINGLE EXPOSURE</b>	May cause respiratory irritation.
<b>STOT-REPEATED EXPOSURE</b>	No data available
<b>ASPIRATION HAZARD</b>	No data available

**SECTION 12: ECOLOGICAL INFORMATION**

<b>ENVIRONMENTAL DATA</b>	This product may cause risk of hazardous effects to the environment.
<b>ECOTOXICOLOGICAL INFORMATION</b>	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Avoid release to the environment.
<b>BIOACCUMULATION/ACCUMULATION</b>	No data available
<b>DISTRIBUTION</b>	No data available
<b>CHEMICAL FATE INFORMATION</b>	No data available

**SECTION 13: DISPOSAL CONSIDERATIONS**

**DISPOSAL METHOD**  
 The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protections and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

**SECTION 14: TRANSPORT INFORMATION**

<b>DOT (DEPARTMENT OF TRANSPORTATION)</b>	
PROPER SHIPPING NAME	Diethylenetriamine solution
PRIMARY HAZARD CLASS/DIVISION	8
UN/NA NUMBER	UN2079
PACKING GROUP	II
NAERG	154
LABEL	Corrosive

**AIR (ICAO/IATA)**



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SHIPPING NAME	Diethylenetriamine solution
UN/NA NUMBER	UN2079
PRIMARY HAZARD CLASS/DIVISION	8
PACKING GROUP	II
ERG	8L
LABEL	Corrosive

### VESSEL (IMO/IMDG)

SHIPPING NAME	Diethylenetriamine solution
UN/NA NUMBER	UN2079
PRIMARY HAZARD CLASS/DIVISION	8
PACKING GROUP	II
EmS	F-A, S-B
LABEL	Corrosive

## SECTION 15: REGULATORY INFORMATION

### UNITED STATES

#### SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)

**311/312 HEALTH HAZARDS** Refer to Section 2 for hazard classification.

#### 313 REPORTABLE INGREDIENTS

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:

### EPCRA SECTION 313 SUPPLIER NOTIFICATION

Chemical Name	Wt. %	CAS
4,4'-Isopropylidenediphenol	10 - 30	80-05-7

### CERCLA (COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT)

#### CERCLA REGULATORY

This product does not contain any substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302).

### TSCA (TOXIC SUBSTANCE CONTROL ACT)

#### TSCA REGULATORY

This product does not contain any substances subject to TSCA Section 12(b) export notification.

#### TSCA STATUS

This product or its components are listed in or exempt from the TSCA inventory requirements.

### OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) 29 CFR1910.119--- PROCESS SAFETY MANAGEMENT OF HIGHLY HAZARDOUS CHEMICALS

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None of the chemicals in this product are considered highly hazardous by OSHA.

**CALIFORNIA PROPOSITION 65**

**WARNING** This product can expose you to chemicals including [see table below], which is [are] known to the State of California to cause birth defects or other reproductive harm. For more information, go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

Chemical Name	Wt. %	Listed
4,4'-Isopropylidenediphenol	10 - 30	Female Reproductive

**OSHA HAZARD COMM. RULE**

The contents of the SDS comply with the OSHA Hazard Communication Standard 29 CFR 1910.1200.

**CANADA****WHMIS (WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM)**

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

**DOMESTIC SUBSTANCE LIST (INVENTORY)**

All components in this product are listed in or exempted from the Domestic Substances List (DSL) or the Non-Domestic Substances List (NDSL).

**GENERAL COMMENTS**

No data available

**SECTION 16: OTHER INFORMATION****HMIS RATING**

HEALTH	3
FLAMMABILITY	1
PHYSICAL HAZARD	0
PERSONAL PROTECTION	X

**NFPA CODES**

FLAMMABILITY	1
HEALTH	3
REACTIVITY	0

**HMIS RATINGS NOTES**

Personal Protection: See Section 8

**DISCLAIMER / STATEMENT OF LIABILITY:**

This is a computer-generated document that is valid without a signature.



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