



# SAFETY DATA SHEET

**Product name:** JETSET EPOXY HARDENER (COLD MOUNTING)

**Issue Date:** 01/01/2025

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METLAB CORPORATION encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

## 1. IDENTIFICATION

**Product name:** JETSET EPOXY HARDENER (COLD MOUNTING)

**Recommended use of the chemical and restrictions on use**

**Identified uses:** Curing agent.

### COMPANY IDENTIFICATION

METLAB CORPOATION  
4011 HYDE PARK BLVD.  
NIAGARA FALLS NY 14305

**Customer Information Number:**

### EMERGENCY TELEPHONE NUMBER

**24-Hour Emergency Contact:** 1 800-255-3924

## 2. HAZARDS IDENTIFICATION

### Hazard classification

This material is hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29CFR 1910.1200.

Acute toxicity - Category 2 - Inhalation

Acute toxicity - Category 4 - Dermal

Skin corrosion - Category 1B

Serious eye damage - Category 1

Skin sensitisation - Category 1

Reproductive toxicity - Category 2

Specific target organ toxicity - single exposure - Category 3

**Label elements**

**Hazard pictograms**



Signal word: **DANGER!**

**Hazards**

Harmful in contact with skin.  
Causes severe skin burns and eye damage.  
May cause an allergic skin reaction.  
Fatal if inhaled.  
May cause respiratory irritation.  
Suspected of damaging fertility or the unborn child.

**Precautionary statements**

**Prevention**

Obtain special instructions before use.  
Do not handle until all safety precautions have been read and understood.  
Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.  
Wash skin thoroughly after handling.  
Use only outdoors or in a well-ventilated area.  
Contaminated work clothing should not be allowed out of the workplace.  
Wear protective gloves/ protective clothing/ eye protection/ face protection.  
Wear respiratory protection.

**Response**

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.  
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.  
IF exposed or concerned: Get medical advice/ attention.  
If skin irritation or rash occurs: Get medical advice/ attention.  
Wash contaminated clothing before reuse.

**Storage**

Store in a well-ventilated place. Keep container tightly closed.  
Store locked up.

**Disposal**

Dispose of contents/ container to an approved waste disposal plant.

**Other hazards**

No data available

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

This product is a mixture.

Component	CASRN	Concentration
Diethylenetriamine	111-40-0	60.0 - 70.0 %
Bisphenol A	80-05-7	30.0 - 40.0 %
Aminoethylpiperazine	140-31-8	< 0.8 %
Ethylenediamine	107-15-3	< 0.2 %

#### 4. FIRST AID MEASURES

##### Description of first aid measures

**General advice:** First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.

**Inhalation:** Move person to fresh air. If not breathing, give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask, etc). If breathing is difficult, oxygen should be administered by qualified personnel. Call a physician or transport to a medical facility.

**Skin contact:** Immediate continued and thorough washing in flowing water for at least 30 minutes is imperative while removing contaminated clothing. Prompt medical consultation is essential. Wash clothing before reuse. Properly dispose of leather items such as shoes, belts, and watchbands. Suitable emergency safety shower facility should be immediately available.

**Eye contact:** Wash immediately and continuously with flowing water for at least 30 minutes. Remove contact lenses after the first 5 minutes and continue washing. Obtain prompt medical consultation, preferably from an ophthalmologist. Suitable emergency eye wash facility should be immediately available.

**Ingestion:** Do not induce vomiting. Give one cup (8 ounces or 240 ml) of water or milk if available and transport to a medical facility. Do not give anything by mouth unless the person is fully conscious.

**Most important symptoms and effects, both acute and delayed:** Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

##### Indication of any immediate medical attention and special treatment needed

**Notes to physician:** May cause respiratory sensitization or asthma-like symptoms. Bronchodilators, expectorants and antitussives may be of help. May cause asthma-like (reactive airways) symptoms. Bronchodilators, expectorants, antitussives and corticosteroids may be of help. Respiratory symptoms, including pulmonary edema, may be delayed. Persons receiving significant exposure should be observed 24-48 hours for signs of respiratory distress. Maintain adequate ventilation and oxygenation of the patient. Chemical eye burns may require extended irrigation. Obtain prompt consultation, preferably from an ophthalmologist. If burn is present, treat as any thermal burn, after decontamination. Due to irritant properties, swallowing may result in burns/ulceration of mouth, stomach and lower gastrointestinal tract with subsequent stricture. Aspiration of vomitus may cause

lung injury. Suggest endotracheal/esophageal control if lavage is done. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient. Excessive exposure may aggravate preexisting asthma and other respiratory disorders (e.g. emphysema, bronchitis, reactive airways dysfunction syndrome).

## **5. FIREFIGHTING MEASURES**

**Suitable extinguishing media:** Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam. Alcohol resistant foams (ATC type) are preferred. General purpose synthetic foams (including AFFF) or protein foams may function, but will be less effective.

**Unsuitable extinguishing media:** Do not use direct water stream. May spread fire.

### **Special hazards arising from the substance or mixture**

**Hazardous combustion products:** During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Phenolic compounds. Nitrogen oxides. Carbon monoxide. Carbon dioxide.

**Unusual Fire and Explosion Hazards:** Violent steam generation or eruption may occur upon application of direct water stream to hot liquids.

### **Advice for firefighters**

**Fire Fighting Procedures:** Keep people away. Isolate fire and deny unnecessary entry. Do not use direct water stream. May spread fire. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage.

**Special protective equipment for firefighters:** Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). Avoid contact with this material during fire fighting operations. If contact is likely, change to full chemical resistant fire fighting clothing with self-contained breathing apparatus. If this is not available, wear full chemical resistant clothing with self-contained breathing apparatus and fight fire from a remote location. For protective equipment in post-fire or non-fire clean-up situations, refer to the relevant sections.

## **6. ACCIDENTAL RELEASE MEASURES**

**Personal precautions, protective equipment and emergency procedures:** Evacuate area. Only trained and properly protected personnel must be involved in clean-up operations. Ventilate area of leak or spill. Keep upwind of spill. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection. Refer to section 7, Handling, for additional precautionary measures.

**Environmental precautions:** Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

**Methods and materials for containment and cleaning up:** Contain spilled material if possible. Absorb with materials such as: Sand. Avoid contact with absorbent materials such as: Ground corn cobs. Moist organic absorbents. Peat moss. Sawdust. Collect in suitable and properly labeled containers. See Section 13, Disposal Considerations, for additional information.

## 7. HANDLING AND STORAGE

**Precautions for safe handling:** Do not get in eyes, on skin, on clothing. Avoid prolonged or repeated contact with skin. Avoid breathing vapor or mist. Do not swallow. Keep container closed. Use with adequate ventilation. Wash thoroughly after handling. Spills of these organic materials on hot fibrous insulations may lead to lowering of the autoignition temperatures possibly resulting in spontaneous combustion. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

**Conditions for safe storage:** Store in a cool, dry place. Avoid contact with metals such as: Brass. Bronze. Copper. Copper alloys.

### Storage stability

**Storage temperature:** 2 - 43 °C (36 - 109 °F)      **Shelf life: Use within** 24 Month

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

Exposure limits are listed below, if they exist.

Component	Regulation	Type of listing	Value/Notation
Diethylenetriamine	ACGIH	TWA	1 ppm
	ACGIH	TWA	Absorbed via skin
Bisphenol A	Dow IHG	TWA Inhalable	2 mg/m3
		fraction and vapor	
Ethylenediamine	Dow IHG	TWA	5 ppm
	Dow IHG	TWA	SKIN, DSEN, RSEN
	ACGIH	TWA	10 ppm
	ACGIH	TWA	Absorbed via skin
	OSHA Z-1	TWA	25 mg/m3 10 ppm

### Exposure controls

**Engineering controls:** Use engineering controls to maintain airborne level below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, use only with adequate ventilation. Local exhaust ventilation may be necessary for some operations.

### Individual protection measures

**Eye/face protection:** Use chemical goggles.

#### Skin protection

**Hand protection:** Use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: Chlorinated polyethylene. Polyethylene. Ethyl vinyl alcohol laminate ("EVAL"). Examples of acceptable glove barrier materials include: Butyl rubber. Natural rubber ("latex"). Viton. Neoprene. Polyvinyl chloride ("PVC" or "vinyl"). Nitrile/butadiene rubber ("nitrile" or "NBR"). Polyvinyl alcohol ("PVA"). NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

**Other protection:** Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task.

**Respiratory protection:** Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, use an approved respirator. 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 conditions, use an approved positive-pressure self-contained breathing apparatus.

The following should be effective types of air-purifying respirators: Organic vapor cartridge with a particulate pre-filter.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Appearance

Physical state	Liquid.
Color	Yellow
Odor	Amine.
Odor Threshold	No test data available
pH	No test data available
Melting point/range	Not applicable
Freezing point	No test data available
Boiling point (760 mmHg)	207 °C ( 405 °F) <i>Literature</i>
Flash point	<b>closed cup</b> 107 °C ( 225 °F) <i>PMCC</i>
Evaporation Rate (Butyl Acetate = 1)	No test data available
Flammability (solid, gas)	Not Applicable
Lower explosion limit	2 % vol <i>Literature</i>
Upper explosion limit	6.7 % vol <i>Literature</i>
Vapor Pressure	< 0.1 mmHg at 20 °C (68 °F) <i>Literature</i>
Relative Vapor Density (air = 1)	No test data available
Relative Density (water = 1)	1.02 <i>Literature</i>
Water solubility	Slightly soluble
Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature	No test data available
Decomposition temperature	No test data available
Dynamic Viscosity	85 - 130 mPa.s at 25 °C (77 °F) <i>ASTM D 445</i>
Kinematic Viscosity	No test data available
Explosive properties	No data available
Oxidizing properties	No data available
Molecular weight	No data available

NOTE: The physical data presented above are typical values and should not be construed as a specification.

## 10. STABILITY AND REACTIVITY

**Reactivity:** No data available

**Chemical stability:** Thermally stable at typical use temperatures. Hygroscopic

**Possibility of hazardous reactions:** Polymerization will not occur.

**Conditions to avoid:** Exposure to elevated temperatures can cause product to decompose. Avoid moisture. Reaction with carbon dioxide may form an amine carbamate. Smoke may be generated depending on vapor pressure of mixture. Product absorbs carbon dioxide from the air.

**Incompatible materials:** Avoid contact with oxidizing materials. Avoid contact with: Acids. Acrylates. Alcohols. Aldehydes. Halogenated hydrocarbons. Ketones. Nitrites. Avoid contact with metals such as: Brass. Bronze. Copper. Copper alloys. Avoid contact with absorbent materials such as: Ground corn cobs. Moist organic absorbents. Peat moss. Sawdust.

**Hazardous decomposition products:** Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: Ammonia. Ethylenediamine. Phenolics. Volatile amines.

## 11. TOXICOLOGICAL INFORMATION

*Toxicological information appears in this section when such data is available.*

### Acute toxicity

#### Acute oral toxicity

Very low toxicity if swallowed. Swallowing may result in gastrointestinal irritation or ulceration. Swallowing may result in burns of the mouth and throat.

LD50, Rat, > 2,000 mg/kg

#### Acute dermal toxicity

Prolonged or widespread skin contact may result in absorption of harmful amounts.

As product: The dermal LD50 has not been determined. Based on information for component(s):

LD50, Rabbit, > 1,000 mg/kg Estimated.

#### Acute inhalation toxicity

Prolonged exposure to aerosol/mist may cause serious adverse effects, even death. Excessive exposure may cause severe irritation to upper respiratory tract (nose and throat) and lungs.

As product: The LC50 has not been determined.

### Skin corrosion/irritation

Brief contact may cause skin burns. Symptoms may include pain, severe local redness and tissue damage.

Classified as corrosive to the skin according to DOT guidelines.



**Serious eye damage/eye irritation**

May cause severe irritation with corneal injury which may result in permanent impairment of vision, even blindness. Chemical burns may occur.

**Sensitization**

A component in this mixture has caused allergic skin reactions in humans.

A component in this mixture may cause an allergic respiratory response.

**Specific Target Organ Systemic Toxicity (Single Exposure)**

Contains component(s) which are classified as specific target organ toxicant, single exposure, category 3.

**Specific Target Organ Systemic Toxicity (Repeated Exposure)**

Liver effects and questionable kidney and bladder effects were observed in animals fed bisphenol A.

**Carcinogenicity**

Contains component(s) which did not cause cancer in laboratory animals.

**Teratogenicity**

Contains component(s) which have been toxic to the fetus in lab animal tests.

**Reproductive toxicity**

Bisphenol A affected reproduction in rats and mice, but only at high exposure levels that exceeded the body's capacity to metabolize and deactivate the chemical. Maintaining exposures below appropriate workplace exposure limits should avoid these and other effects.

**Mutagenicity**

In vitro genetic toxicity studies were negative in some cases and positive in other cases. Genetic toxicity studies in animals were negative for component(s) tested.

**Aspiration Hazard**

Based on physical properties, not likely to be an aspiration hazard.

**COMPONENTS INFLUENCING TOXICOLOGY:**

**Diethylenetriamine**

**Acute inhalation toxicity**

LC50, Rat, 4 Hour, dust/mist, > 0.07 - < 0.3 mg/l

Prolonged exposure to aerosol/mist may cause serious adverse effects, even death. Excessive exposure may cause severe irritation to upper respiratory tract (nose and throat) and lungs.

**Bisphenol A**

**Acute inhalation toxicity**

The LC50 has not been determined.

**Aminoethylpiperazine**

**Acute inhalation toxicity**

The LC50 has not been determined. 8 Hour, vapour, No deaths occurred following exposure to a saturated atmosphere.

**Ethylenediamine**



**Acute inhalation toxicity**

Vapor concentrations are attainable which could be hazardous on single exposure. Excessive exposure may cause irritation to upper respiratory tract (nose and throat) and lungs.

LC50, Rat, male, 4 Hour, vapour, 14.7 mg/l Estimated.

**12. ECOLOGICAL INFORMATION**

*Ecotoxicological information appears in this section when such data is available.*

**Toxicity****Diethylenetriamine****Acute toxicity to fish**

Material is slightly toxic to aquatic organisms on an acute basis (LC50/EC50 between 10 and 100 mg/L in the most sensitive species tested).

LC50, Poecilia reticulata (guppy), semi-static test, 96 Hour, 430 mg/l

**Acute toxicity to aquatic invertebrates**

EC50, Daphnia magna (Water flea), static test, 48 Hour, 16 mg/l, DIN 38412

**Acute toxicity to algae/aquatic plants**

ErC50, Pseudokirchneriella subcapitata (green algae), static test, 72 Hour, Growth rate inhibition, 1,164 mg/l, OECD Test Guideline 201 or Equivalent

**Toxicity to bacteria**

EC50, Bacteria, static test, 16 Hour, > 5,000 mg/l

**Chronic toxicity to fish**

NOEC, Fish, semi-static test, 28 d, growth, > 10 mg/l

**Chronic toxicity to aquatic invertebrates**

NOEC, Daphnia magna (Water flea), semi-static test, 21 d, number of offspring, 5.6 mg/l  
MATC (Maximum Acceptable Toxicant Level), Daphnia magna (Water flea), semi-static test, 21 d, number of offspring, 7.95 mg/l

**Bisphenol A****Acute toxicity to fish**

Material is moderately toxic to aquatic organisms on an acute basis (LC50/EC50 between 1 and 10 mg/L in the most sensitive species tested).

LC50, Fathead minnow (Pimephales promelas), 96 Hour, 4.6 mg/l

LC50, Atlantic silverside (Menidia menidia), 96 Hour, 9.4 mg/l

**Acute toxicity to aquatic invertebrates**

EC50, Daphnia magna (Water flea), 48 Hour, 10.2 mg/l

EC50, saltwater mysid Mysidopsis bahia, 96 Hour, 1.1 mg/l

**Acute toxicity to algae/aquatic plants**

EC50, Skeletonema costatum (marine diatom), static test, 96 Hour, Growth rate inhibition, 1.1 mg/l

**Toxicity to bacteria**

EC50, Bacteria, 96 Hour, Respiration rates., > 320 mg/l

**Chronic toxicity to fish**

NOEC, Fathead minnow (*Pimephales promelas*), 164 d, mortality, 0.160 mg/l

NOEC, *Pimephales promelas* (fathead minnow), 444 d, number of offspring, 0.016 mg/l

NOEC, *Cyprinodon variegatus* (sheepshead minnow), 116 d, number of offspring, 0.066 mg/l

**Chronic toxicity to aquatic invertebrates**

NOEC, saltwater mysid *Mysidopsis bahia*, 28 d, number of offspring, 0.17 mg/l

NOEC, *Marisa cornuarietis* (Giant Ramshorn Snail), 328 d, growth, 0.025 mg/l

**Aminoethylpiperazine****Acute toxicity to fish**

Material is slightly toxic to aquatic organisms on an acute basis (LC50/EC50 between 10 and 100 mg/L in the most sensitive species tested).

LC50, *Pimephales promelas* (fathead minnow), static test, 96 Hour, 2,190 mg/l, OECD Test Guideline 203 or Equivalent

**Acute toxicity to aquatic invertebrates**

EC50, *Daphnia magna* (Water flea), static test, 48 Hour, 58 mg/l, OECD Test Guideline 202 or Equivalent

**Acute toxicity to algae/aquatic plants**

ErC50, *Pseudokirchneriella subcapitata* (green algae), 72 Hour, Growth rate inhibition, > 1,000 mg/l, OECD Test Guideline 201 or Equivalent

**Ethylenediamine****Acute toxicity to fish**

Material is slightly toxic to aquatic organisms on an acute basis (LC50/EC50 between 10 and 100 mg/L in the most sensitive species tested).

LC50, *Poecilia reticulata* (guppy), semi-static test, 96 Hour, 640 mg/l

**Acute toxicity to aquatic invertebrates**

EC50, *Daphnia magna* (Water flea), static test, 48 Hour, 16.7 mg/l

**Acute toxicity to algae/aquatic plants**

EC50, *Pseudokirchneriella subcapitata* (green algae), static test, 72 Hour, Growth rate inhibition, 645 mg/l

EbC50, *Pseudokirchneriella subcapitata* (green algae), 96 Hour, Biomass, 151 mg/l, Method Not Specified.

**Toxicity to bacteria**

EC50, Bacteria, 16 Hour, 500 - 1,000 mg/l

**Chronic toxicity to fish**

NOEC, Fish, 28 d, survival, > 10 mg/l

**Chronic toxicity to aquatic invertebrates**

NOEC, *Daphnia magna* (Water flea), semi-static test, 21 d, number of offspring, 0.16 mg/l

**Persistence and degradability****Diethylenetriamine**

**Biodegradability:** Material is ultimately biodegradable (reaches > 70% mineralization in OECD test(s) for inherent biodegradability). Based on stringent OECD test guidelines, this material cannot be considered as readily biodegradable; however, these results do not necessarily mean that the material is not biodegradable under environmental conditions.

10-day Window: Not applicable

**Biodegradation:** > 80 %

**Exposure time:** 30 d

**Method:** OECD Test Guideline 302A or Equivalent

**Theoretical Oxygen Demand:** 3.42 mg/mg

**Biological oxygen demand (BOD)**

Incubation Time	BOD
5 d	23.000 %
10 d	46.000 %
20 d	70.000 %

**Photodegradation**

**Sensitizer:** OH radicals

**Atmospheric half-life:** 0.87 Hour

**Method:** Estimated.

#### **Bisphenol A**

**Biodegradability:** Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.

10-day Window: Pass

**Biodegradation:** 93.1 %

**Exposure time:** 28 d

**Method:** OECD Test Guideline 301F or Equivalent

10-day Window: Not applicable

**Biodegradation:** 87 - 95 %

**Exposure time:** 28 d

**Method:** OECD Test Guideline 302A or Equivalent

**Theoretical Oxygen Demand:** 2.52 mg/mg

**Photodegradation**

**Test Type:** Half-life (direct photolysis)

**Method:** Measured

#### **Aminoethylpiperazine**

**Biodegradability:** Material is not readily biodegradable according to OECD/EEC guidelines.

10-day Window: Fail

**Biodegradation:** 0 %

**Exposure time:** 28 d

**Method:** OECD Test Guideline 301F or Equivalent

**Theoretical Oxygen Demand:** 3.34 mg/mg

**Chemical Oxygen Demand:** 1.84 mg/mg

**Photodegradation**

**Atmospheric half-life:** 0.05 d

**Method:** Estimated.

**Ethylenediamine**

**Biodegradability:** Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.

10-day Window: Not applicable

**Biodegradation:** 95 %

**Exposure time:** 28 d

**Method:** OECD Test Guideline 301C or Equivalent

**Theoretical Oxygen Demand:** 3.47 mg/mg

**Bioaccumulative potential**

**Diethylenetriamine**

**Bioaccumulation:** Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

**Partition coefficient: n-octanol/water(log Pow):** -1.58 at 20 °C Estimated.

**Bioconcentration factor (BCF):** < 0.3 Measured

**Bisphenol A**

**Bioaccumulation:** Bioconcentration potential is low (BCF less than 100 or log Pow greater than 7).

**Partition coefficient: n-octanol/water(log Pow):** 3.4 at 21.5 °C OECD Test Guideline 107 or Equivalent

**Bioconcentration factor (BCF):** 5.1 - 13.3 Cyprinus carpio (Carp) 42 d

**Aminoethylpiperazine**

**Bioaccumulation:** Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

**Partition coefficient: n-octanol/water(log Pow):** -1.48 Measured

**Ethylenediamine**

**Bioaccumulation:** Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

**Partition coefficient: n-octanol/water(log Pow):** -1.6 at 20 °C Measured

**Bioconcentration factor (BCF):** 0.07 Fish Estimated.

**Mobility in soil**

**Diethylenetriamine**

Expected to be relatively immobile in soil (Koc > 5000).

Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process.

**Partition coefficient (Koc):** 19111 Estimated.

**Bisphenol A**

Potential for mobility in soil is low (Koc between 500 and 2000).

**Partition coefficient (Koc):** 636 - 931 Measured

**Aminoethylpiperazine**

Expected to be relatively immobile in soil (Koc > 5000).

**Partition coefficient (Koc):** 37000 Estimated.

**Ethylenediamine**

Potential for mobility in soil is very high (Koc between 0 and 50).  
Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process.  
**Partition coefficient (Koc):** 4766 Measured

### 13. DISPOSAL CONSIDERATIONS

**Disposal methods:** DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. All disposal practices 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. AS YOUR SUPPLIER, WE HAVE NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION: Composition Information. FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: Incinerator or other thermal destruction device.

### 14. TRANSPORT INFORMATION

#### DOT

<b>Proper shipping name</b>	Diethylenetriamine solution
<b>UN number</b>	UN 2079
<b>Class</b>	8
<b>Packing group</b>	II

#### Classification for SEA transport (IMO-IMDG):

<b>Proper shipping name</b>	DIETHYLENETRIAMINE SOLUTION
<b>UN number</b>	UN 2079
<b>Class</b>	8
<b>Packing group</b>	II
<b>Marine pollutant</b>	Bisphenol A
<b>Transport in bulk according to Annex I or II of MARPOL 73/78 and the IBC or IGC Code</b>	Consult IMO regulations before transporting ocean bulk

#### Classification for AIR transport (IATA/ICAO):

<b>Proper shipping name</b>	Diethylenetriamine solution
<b>UN number</b>	UN 2079
<b>Class</b>	8
<b>Packing group</b>	II

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service

representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

## 15. REGULATORY INFORMATION

### OSHA Hazard Communication Standard

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

### Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312

Acute Health Hazard  
Chronic Health Hazard

### Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313

This product contains the following substances which are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and which are listed in 40 CFR 372.

#### Components

Bisphenol A

#### CASRN

80-05-7

### Pennsylvania Worker and Community Right-To-Know Act:

The following chemicals are listed because of the additional requirements of Pennsylvania law:

#### Components

Diethylenetriamine  
Aminoethylpiperazine

#### CASRN

111-40-0  
140-31-8

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

WARNING: This product contains a chemical(s) known to the State of California to cause birth defects or other reproductive harm.

#### Components

Bisphenol A

#### CASRN

80-05-7

### United States TSCA Inventory (TSCA)

All components of this product are in compliance with the inventory listing requirements of the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

## 16. OTHER INFORMATION

### Other information

Explanation of difference in environmental hazardousness between hazardous substance and hazardous goods labeling:

With hazardous goods, the transitional provisions for land and sea transport will be used up to the end of 2013. For this reason, hazardous goods labeling as environmentally hazardous for ADR/RID/ADN and IMDG code will only come into effect on January 1, 2014.

**Product Literature**

Additional information on this product may be obtained by calling your sales or customer service contact. Ask for a product brochure. Additional information on this and other products may be obtained by visiting our web page.

**Hazard Rating System****NFPA**

Health	Fire	Reactivity
3	1	0

**Revision**

Identification Number: 101199420 / A476 / Issue Date: 07/18/2016 / Version: 9.0

Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

**Legend**

Absorbed via skin	Absorbed via skin
ACGIH	USA. ACGIH Threshold Limit Values (TLV)
Dow IHG	Dow Industrial Hygiene Guideline
OSHA Z-1	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
SKIN, DSEN, RSEN	Absorbed via Skin, Skin Sensitizer, Respiratory sensitizer
TWA	8-hour time weighted average

**Information Source and References**

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