



## MATERIAL SAFETY DATA SHEET

### HEPA-S140

#### 1. CHEMICAL PRODUCT & COMPANY IDENTIFICATION

**Chemical Name:** Amine Blend

**Manufacturer Information:**

Delamine B.V.

Barchman Wuytierslaan 10

3818 LH Amersfoort

PO Box 473

3800 AL Amersfoort, The Netherlands

Tel: +31 33 4676897

**FOR EMERGENCIES, CONTACT CHEMTREC 1-800-424-9300 OR 1-703-527-3887**

#### 2. COMPOSITION/INGREDIENT DESCRIPTION

<u>Chemical Name</u>	<u>CAS #</u>	OSHA	<u>Concentration (%)</u>
		<u>Hazardous(Y/N)</u>	
Polyethylene amines	68131-73-7	Y	100

#### 3. HAZARDS IDENTIFICATION

**EMERGENCY OVERVIEW:** CAUSES BURNS. CORROSIVE TO EYES, SKIN AND RESPIRATORY TRACT. MAY BE TOXIC BY INHALTION OF AEROSOL. MAY CAUSE SENSITIZATION BY INHALATION AND SKIN CONTACT.

**Physical Appearance and Odor:** Dark yellow liquid, ammonia-like odor

#### **POTENTIAL HEALTH EFFECTS:**

**Acute Eye:** Corrosive to eyes.

**Acute Skin:** Corrosive to skin. May cause sensitization.

**Acute Inhalation:** Aerosol may be toxic if inhaled. Corrosive to respiratory tract. May cause sensitization.

**Acute Ingestion:** Corrosive to gastrointestinal tract.

**Chronic Effects:** None known.

#### 4. FIRST AID MEASURES

**Eye Contact:** Hold eyelids open and flush with a steady, gentle stream of water for at least 15 minutes. Seek immediate medical attention.

**Skin Exposure:** Immediately wash with plenty of soap and water, while removing contaminated clothing and shoes. Seek medical attention if irritation develops or persists. Launder contaminated clothing before re-use. Destroy contaminated shoes, if made of leather.



#### **4. FIRST AID MEASURES (continued)**

---

**Inhalation:** If respiratory irritation or distress occurs, remove victim to fresh air. Seek medical attention if respiratory irritation or distress continues.

**Ingestion:** Do not induce vomiting. If victim is conscious and alert, give 1-2 glasses of water to drink. Do not give anything by mouth to an unconscious person. Seek immediate medical attention. Do not leave victim unattended. Do not give anything by mouth to an unconscious person.

**Medical Conditions Possibly Aggravated by Exposure:** Skin contact may aggravate existing skin disease.

**Notes to Physician:** All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred. Treat symptomatically. If burns are present, treat as any thermal burn after decontamination. If necessary, evacuation of the stomach contents should be undertaken by means carrying the least likelihood of aspiration (e.g. gastric lavage in combination with endotracheal intubation). No specific antidote available.

#### **5. FIRE FIGHTING MEASURES**

---

**Flash point:** Approx. 184C (363F)

**Autoignition Temperature:** >300C (572F)

**Flammability limits (vol/vol%):** Lower: Not determined Upper: Not determined

**Extinguishing Media:** water spray, dry chemical, foam, CO<sub>2</sub>

**Special Fire Fighting Procedures:** Firefighters should wear NIOSH/MSHA-approved self-contained breathing apparatus and full protective clothing. Cool containers exposed to fire with water. Water used to extinguish fires should not be allowed to enter the drainage system.

**Unusual Fire and Explosion Hazards:** Closed containers may rupture due to buildup of pressure when exposed to extreme heat. Do not direct a steady stream of water or foam onto burning material; this may cause splattering and spread of the fire.

**Hazardous Decomposition Materials Under Fire Conditions:** Oxides of carbon, oxides of nitrogen, ammonia

#### **6. ACCIDENTAL RELEASE MEASURES**

---

**Evacuation Procedures and Safety:** Wear appropriate protective gear for the situation. (See Personal Protection information in Section 8).

**Cleanup and Disposal of Spill:** Absorb with an inert absorbent. Sweep up and place in an appropriate closed container for disposal and/or incineration. Clean up residual material by washing area with water. Collect washings for disposal.

**Environmental and Regulatory Reporting:** Do not flush to drain. Spills may be reportable to the National Response Center (800-424-8802) and to state and/or local agencies.



## 7. HANDLING AND STORAGE

---

**Maximum Storage Temperatures:** Store at <50C (<122F)

**Handling:** Persons with a history of dermal or respiratory sensitization should not work with, or near, this material. Avoid breathing vapors. Avoid direct or prolonged contact with skin and eyes. Transfer and handle product only in a closed system. Do not use copper, nickel and cobalt-containing alloys in process equipment.

**Storage:** Store in tightly-closed, original container under nitrogen. Store in an area that is cool, dry, dark and well-ventilated.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

---

**Introductory Remarks:** These recommendations provide general guidance for handling this product. Because specific work environments and material handling practices vary, safety procedures should be developed for each intended application.

**Exposure Guidelines:** The following limits apply to components of this material.

Chemical

None

**Engineering Controls:** General area dilution/exhaust ventilation. Use only in closed systems.

**Respiratory Protection:** When respirators are required, select NIOSH/MSHA approved equipment based on actual or potential airborne concentrations and in accordance with regulatory standards and/or industrial recommendations. Self-contained or supplied-air respiratory equipment is recommended, or a respirator with an organic vapor cartridge. When aerosols may be present, a combined organic vapor cartridge/HEPA should be used.

**Eye/Face Protection:** Tightly-fitting safety goggles are recommended.

**Skin Protection:** Skin contact should be minimized through the use of neoprene gloves and boots, and suitable protective clothing.

**Work Practice Controls:** The following general measures should be taken when working or handling this material: 1) Do not store, use, and/or consume foods, beverages, tobacco products, or cosmetics in areas where this material is stored. 2) Wash hands and face carefully before eating, drinking, using tobacco, applying cosmetics, or using the toilet. 3) Wash exposed skin promptly to remove accidental splashes of contact with this material.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

---

Physical and Chemical properties here represent typical properties of this product. Contact the manufacturer for exact specifications.

**Physical Appearance:** Dark yellow liquid

**Odor:** Ammonia-like odor

**pH:** Approx 12 (100 g/L at 20C, 68F)

**Specific Gravity:** Approx 1.01 g/ml (at 20C, 68F)

**Water Solubility:** Miscible



## 9. PHYSICAL AND CHEMICAL PROPERTIES (Continued)

---

**Melting Point Range:** Not available

**Boiling Point Range:** Approx >350C (662F)

**Freezing Point Range:** Not available

**Vapor Pressure:** Approx <0.001kPa

**Vapor Density:** Not available

**Viscosity:** 600 mPa (at 40C, 104F)

## 10. STABILITY AND REACTIVITY

---

**Chemical Stability:** This material is stable under normal handling and storage conditions described in Section 7.

**Conditions to be Avoided:** Combustible materials, heat, open flame, sparks. Avoid formation of an aerosol.

**Materials/Chemicals to be Avoided:** Strong oxidizing agents, acids, chlorinated hydrocarbons, copper and copper alloys, nickel, cobalt.

**Hazardous Decomposition Products:** Oxides of carbon, oxides of nitrogen, ammonia.

**Hazardous Polymerization:** Not applicable

## 11. TOXICOLOGICAL INFORMATION

---

**Acute Eye Irritation:** Corrosive.

**Acute Skin Irritation:** Corrosive. Positive dermal sensitizer.

**Acute Dermal Toxicity:** No data available.

**Acute Respiratory Irritation:** Highly irritating. Positive respiratory sensitizer.

**Acute Inhalation Toxicity:** No data available. However, this material, like many corrosive substances, when present in an aerosol form, may present a risk of pulmonary edema, which may be fatal.

**Acute Oral Toxicity:** LD50>2000 mg/kg, rat (male), LD50=1350-2000 mg/kg, rat (female)

**Chronic Toxicity:** Negative in the Ames test. (Data for ethanolamine). This product does not contain any substances that are considered by OSHA, NTP, IARC or ACGIH to be "probable" or "suspected" human carcinogens. No additional test data found for product.

## 12. ECOLOGICAL INFORMATION

---

**Ecotoxicological Information:** 96hr LC50 = 100 mg/L (guppy). 48hr EC50 = 2 mg/L (daphnia.) 72hr IC50 = 0.2mg/L (algae.) EC50 = 5 mg/L (bacteria = pseudomonas putida) EC50 = 319 mg/L (bacteria = nitrifying bacteria).

**Chemical Fate Information:** Not readily biodegradable. EC50=3200 mg/L (activated sludge).

## 13. DISPOSAL CONSIDERATIONS

---

**Waste disposal Method:** Chemical additions, processing or otherwise altering this material may make the waste management information presented in this MSDS incomplete, inaccurate or otherwise inappropriate.



### **13. DISPOSAL CONSIDERATIONS (continued)**

---

Please be advised that state and local requirements for waste disposal may be more restrictive or otherwise different from Federal laws and regulations. Consult state and local regulations regarding the proper disposal of this material.

**Container Handling and Disposal:** Rinse containers before disposal. Do not allow rinsate to enter the water systems. **EPA Hazardous Waste = YES**

**EPA RCRA Hazardous Waste Codes:** "C" = Corrosive

### **14. TRANSPORTATION INFORMATION**

---

**Note:** The listed transportation classification does not address regulatory variations due to changes in package size, mode of shipment or other regulatory descriptors.

**US Department of Transportation:**

Shipping name: Polyamines, liquid, corrosive, n.o.s.

Hazard Class: 8

ID#: UN2735

Packing Group: III

Labels: Corrosive

Emergency Guide#: 153

### **15. REGULATORY INFORMATION**

---

**Inventory Status:**

US (TSCA): Yes

Canada (DSL): Yes

Europe (EINECS/ELINCS): Yes

Australia (AICS): Yes

Japan (MITI): No

Korea (KECL): No

Philippines (PICCS): No

Where: Yes = all ingredients are listed on the inventory, Exempt = All ingredients are either on the inventory or exempt from the requirements of listing, No = Not determined, or one or more ingredients are not on the inventory and are not exempt from listing

**SARA Title III Hazard Classes:**

Fire Hazard: Yes

Reactive Hazard: No

Release of Pressure: No

Acute Health Hazard: Yes

Chronic Health Hazard: No



## **15. REGULATORY INFORMATION (continued)**

---

**SARA Extremely Hazardous Substances/CERCLA Hazardous Substances:** Unlisted Hazardous Wastes – Characteristic of Corrosivity (CERCLA/SARA RQ = 100 lbs)

**California Proposition 65:** This product does not contain any components that are regulated under Proposition 65.

## **16. OTHER INFORMATION**

---

### **National Fire Protection Association (“NFPA”) Hazard Ratings:**

Health: 3 (Severe)

Flammability: 1 (Minimal)

Instability: 0 (Minimal)

### **National Paint and Coatings Hazardous Materials Identification System (“HMIS”) Hazard Ratings:**

Health: 3 (Severe)

Flammability: 1 (Minimal)

Reactivity: 0 (Minimal)

### **Reason for Revision(s):** New MSDS

**Disclaimer:** The information set forth herein has been gathered from standard reference materials and/or Delamine and its related, subsidiary and affiliated companies’ test data and is to the best knowledge and belief of Delamine and its related, subsidiary and affiliated companies, accurate and reliable. Such information is offered solely for your consideration, investigation, and verification, and is not suggested or guaranteed that the hazard precautions or procedures mentioned are the only ones that exist. Delamine and its related, subsidiary and affiliated companies make no warranties, express or implied, and expressly disclaim any and all such warranties with respect to the use of such information or the use of specific material identified herein in combination with any other material or process, and assume no responsibility therefor. Delamine and its related, subsidiary and affiliated companies make no representation or warranty, express or implied, and EXPRESSLY DISCLAIM ANY AND ALL SUCH WARRANTIES, as to the usefulness, sufficiency, MERCHANTABILITY or FITNESS FOR ANY PURPOSE whatsoever of the materials identified herein. The purchaser bears sole responsibility for testing, evaluating and determining the suitability of these materials for whatever use(s), manufacturing and refining processes, and any other such application(s) for which it intends or ultimately makes of these materials. Purchaser bears sole responsibility for obtaining any and all regulatory, legal and governmental approval necessary for such use(s).

**END OF MATERIAL SAFETY DATA SHEET**