


ADVANCED POLYMERS FOR HIGH TECH APPLICATIONS

**1. MATERIAL IDENTIFICATION**

Product Name:


**ANGSTRÖMBOND® 9320 HARDENER**

Emergency Phone:

 For product emergencies involving spill, leak, fire, exposure, or accident call CHEMTREC at (800) 424-9300. For all other inquiries call **Fiber Optic Center™, Inc.** at (800) 473-4237.

**2. COMPOSITION**
**Exposure Limits**

Hazardous Components	CAS No.	Percent	ACGIH TLV-TWA	OSHA PEL
ISOPHORONE DIAMINE	2855-13-2	N.E.	N.E.	N.E.

Abbreviations: N.E. = Not Established

**3. HEALTH HAZARDS IDENTIFICATION**
**Primary Routes of Exposure:** Eyes: No      Skin: Yes      Inhalation: No

**Eye Contact:** Strong caustic effect.

**Skin Contact:** Caustic effect on skin and mucous membranes. May cause sensitization.

**Inhalation:** Caustic effect on mucous membranes.

**Ingestion:** Swallowing will lead to a strong caustic effect on mouth and throat and danger of perforation of esophagus and stomach.

**Other:** Preexisting skin and eye disorders may be aggravated by exposure to this product. Individuals with preexisting skin or lung allergies may experience increased allergy symptoms upon exposure to this product.

**4. FIRST AID MEASURES**
**Eyes:** Flush eyes thoroughly with water for 15 minutes while holding eyelids open. Seek medical attention.

**Skin:** Immediately remove soiled clothing. Immediately wash with water and soap and rinse thoroughly.

**Inhalation:** Remove to fresh air, and provide oxygen or artificial respiration if needed. Obtain medical attention.

**Ingestion:** Drink copious amounts of water and provide fresh air. Immediately call a doctor.

**5. FIRE FIGHTING MEASURES**
**FLAMMABLE PROPERTIES**

<b>Flash Point:</b>	> 230°F (110°)
<b>Explosive Limits:</b>	Not determined
<b>Auto – Ignition Temperature:</b>	Not determined
<b>Hazardous Decomposition Products:</b>	nitrogen oxides, irritant gases/vapors

**EXTINGUISHING MEDIA and FIRE FIGHTING INSTRUCTIONS**

When sufficiently large quantities are present, firefighters should be equipped with full bunker gear, including a positive pressure, NIOSH approved, self-contained breathing apparatus.

**Extinguishing Media:** Use carbon dioxide, extinguishing powder, water spray, alcohol resistant foam.

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**6. ACCIDENTIAL RELEASE MEASURES**

Ensure adequate ventilation, absorb with liquid binding material(sand, diatomite, acid binders, universal binders, sawdust.). Use neutralizing agent, Wear protective equipment. Dilute with plenty of water. Do not allow to enter sewers/surface or ground water. Must not be disposed of with household garbage. Dispose of according to official regulations.

**7. HANDLING AND STORAGE**

Store in a cool, dry place in tightly closed receptacles. Use only in well ventilated areas. Do not allow product to reach sewage system.

**8. EXPOSURE CONTROLS AND PERSONAL PROTECTION**

**Engineering / Ventilation Controls:** General ventilation may be acceptable under most conditions, although local ventilation is required to control exposure whenever vapors, mists, or dusts are generated.

**Respiratory Protection:** When local ventilation is unavailable and airborne limits are exceeded, a NIOSH-approved respirator for organic vapors, a supplied-air respirator, or a self-contained breathing apparatus is required.

**Skin Protection:** Impermeable protective gloves.

**Eye Protection:** Tightly sealed goggles.

**9. STABILITY AND REACTIVITY**

**Chemical Stability:** Stable under normal conditions and use.

**Conditions and Materials to Avoid:** Reacts with strong acids

**Hazardous Decomposition Products:** nitrogen oxides, irritant gases/vapors.

**Hazardous Polymerization:** Will not occur.

**10. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Appearance / State:</b>	light yellow liquid	<b>Boiling Point:</b>	477°F(247°C)
<b>Odor:</b>	ammonia like	<b>Freezing Point:</b>	Not determined
<b>pH:</b>	Not determined	<b>Specific Gravity:</b>	.92 g/cm3
<b>Vap. Pressure (mmHG):</b>	Not determined	<b>Solubility in Water:</b>	fully miscible
<b>Vap. Density (air = 1):</b>	Not determined		

**11. TOXICOLOGICAL INFORMATION**

Isophorone Diamine CAS# 2855-13-2

Oral LD50 1030mg/kg (rat)  
Dermal LD50 2.2 mg/ka (rabbit)

**12. ECOLOGICAL INFORMATION**

Harmful to fish and aquatic organisms. Do not allow undiluted product or large quantities to reach ground water, water course or sewage system. Water Hazard Class 1(Assessment by list) slightly hazardous for water.

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**13. TRANSPORTATION INFORMATION**

DOT/IATA Proper Shipping Name: Isophoronediamine, mixture  
ID Number: UN 2289  
Hazard Class: 8  
Packing Group: III  
Label: 8  
ADR/RID ( cross border): 8 Corrosive Substance  
Danger Code(Kemler) 80  
IMDG: 8  
EMS #: F-A,S-B  
Marine Pollutant: No

**14. REGULATORY INFORMATION****TSCA**

The chemical components of this product are included in the TSCA Chemical Substance Inventory, as required.

**SARA Title III**

Section 311/312 Hazard Categorization:

Isophorone Diamine 2855-13-2 Acute Health hazard

HMIS Ratings: Safety: 3 Reactivity: 1 Flammability: 0

**Fiber Optic Center™, Inc.** urges each customer or recipient of this MSDS to study it carefully in order to become aware of and understand the hazards associated with the product. The reader should consider consulting reference works or individuals who are experts in ventilation, toxicology, and/or fire prevention, as necessary to use and understand the data contained in this MSDS.

To promote safe handling, customers and recipients should: 1 – notify their employees, agents, contractors, and others whom they know or suspect will use this material or the information in this MSDS and any other information regarding hazards or safety; 2 – furnish this same information to each of their customers for the product; and 3 – request their customers to notify their employees, customers and other users of the product of this information.

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Rev. C 12/2005

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