

# Material Safety Data Sheet

## 1. Product and company identification

**Product name** : JEFFAMINE® D 2000

**MSDS #** 00011542

**Product Use** : Production of polymers

Huntsman Petrochemical Corporation  
P.O. Box 4980  
The Woodlands, TX 77387-4980

### TELEPHONE NUMBERS

Transportation Emergency

Company: (800) 328-8501

CHEMTREC: (800) 424-9300

Medical Emergency: (409) 722-9673 (24 Hour)

General MSDS Assistance: (281) 719-6000

Technical Information: (281) 719-7780

E-MAIL: MSDS@huntsman.com

**Validation date** : 11/16/2007.

### In Case of Emergency

Spills Leaks Fire or Exposure Call Chemtrec: (800) 424-9300

Medical Emergency Information: (800) 328-8501

In Mexico: 01 800 00 214 00

## 2. Hazards identification

**Physical state** : Liquid. (Liquid.)

**Odor** : Ammoniacal.

**OSHA/HCS status** : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

**Emergency overview** : Danger!

CAUSES EYE AND SKIN BURNS.

HARMFUL IF SWALLOWED.

CAUSES RESPIRATORY TRACT IRRITATION.

Toxic if swallowed. Corrosive to eyes and skin. Causes burns. Irritating to respiratory system. Do not breathe vapor or mist. Do not ingest. Do not get in eyes or on skin or clothing. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.

**GENERAL INFORMATION** : Read the entire MSDS for a more thorough evaluation of the hazards.

## 3. Composition/information on ingredients

**Name**  
Polyoxypropylenediamine

**CAS number**  
9046-10-0

**%**  
60 - 100

## 4 . First aid measures

<b>Eye contact</b>	Get medical attention immediately. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Chemical burns must be treated promptly by a physician.
<b>Skin contact</b>	Get medical attention immediately. Flush contaminated skin with plenty of water. Continue to rinse for at least 10 minutes. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing or wear gloves. Chemical burns must be treated promptly by a physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.
<b>Inhalation</b>	Get medical attention immediately. Move exposed person to fresh air. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
<b>Ingestion</b>	Get medical attention immediately. Wash out mouth with water. Move exposed person to fresh air. Do not induce vomiting unless directed to do so by medical personnel. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person.
<b>Notes to physician</b>	: Symptomatic treatment and supportive therapy as indicated. Administer oxygen if necessary. Following severe exposure the patient should be kept under medical review for at least 48 hours as delayed pulmonary oedema may develop.

## 5 . Fire-fighting measures

<b>Flash point</b>	: Closed cup: 185°C (365°F).
<b>Extinguishing media</b>	
<b>Suitable</b>	: Use an extinguishing agent suitable for the surrounding fire.
<b>Not suitable</b>	: None known.
<b>Special exposure hazards</b>	: No specific hazard.
<b>Special protective equipment for fire-fighters</b>	: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## 6 . Accidental release measures

<b>Personal precautions</b>	: Immediately contact emergency personnel. Keep unnecessary personnel away. Use suitable protective equipment.
<b>Environmental precautions</b>	: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.
<b>Methods for cleaning up</b>	: If emergency personnel are unavailable, contain spilled material. For small spills, add absorbent (soil may be used in the absence of other suitable materials), scoop up material and place in a sealable, liquid-proof container for disposal. For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway. Place spilled material in an appropriate container for disposal.

## 7 . Handling and storage

<b>Handling</b>	: Put on appropriate personal protective equipment (see section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
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## 7 . Handling and storage

- Storage** : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

## 8 . Exposure controls/personal protection

Consult local authorities for acceptable exposure limits.

- Preventive Measures** : Conditions of use, adequacy of engineering or other control measures, and actual exposures will dictate the need for specific protective devices at your workplace.

- Engineering Controls** : Use local exhaust ventilation to maintain airborne concentrations below the TLV. Suitable respiratory equipment should be used in cases of insufficient ventilation or where operational procedures demand it. For guidance on engineering control measures refer to publications such as the ACGIH current edition of 'Industrial Ventilation, a manual of Recommended Practice.'

### Personal protection

- Eyes** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts.

- Skin** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

- Respiratory** : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

- Hands** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

## 9 . Physical and chemical properties

### General information

#### Appearance

- Physical state** : Liquid. (Liquid.)  
**Color** : Colorless to light yellow.  
**Odor** : Ammoniacal.  
**Odor threshold** : Not available.

### Important health, safety and environmental information

- pH** : 10.5  
**Boiling point** : Not available.  
**Melting point** : Not available.  
**Flash point** : Closed cup: 185°C (365°F).  
**Oxidizing properties** : Not available.  
**Relative density** : 0.99  
**Solubility** : Partially soluble in the following materials: cold water.  
 Very slightly soluble in the following materials: methanol.  
**Viscosity** : Kinematic: 2.48 cm<sup>2</sup>/s (248 cSt at 25°C)  
**Vapor density** : Not available.

## 9 . Physical and chemical properties

**VOC content** : Not available.

## 10 . Stability and reactivity

**Stability and reactivity** : The product is stable.

**Incompatibility with various substances** : Reactive or incompatible with the following materials: acids.

**Hazardous polymerization** : Not available.

## 11 . Toxicological information

### Toxicity data

#### Acute toxicity

Product/ingredient name	Test	Species	Result	Exposure
Polyoxypropylenediamine	LD50 Dermal	Rabbit	2090 mg/kg	-
	LD50 Oral	Rat	480 mg/kg	-

#### Potential acute health effects

**Ingestion** : Toxic if swallowed. May cause burns to mouth, throat and stomach.

**Inhalation** : Irritating to respiratory system.

**Eyes** : Corrosive to eyes. Causes burns.

**Skin** : Corrosive to the skin. Causes burns.

#### Potential chronic health effects

**Target organs** : None known.

**Carcinogenicity** : No known significant effects or critical hazards.

**Mutagenicity** : No known significant effects or critical hazards.

**Teratogenicity** : No known significant effects or critical hazards.

**Developmental effects** : No known significant effects or critical hazards.

**Fertility effects** : No known significant effects or critical hazards.

## 12 . Ecological information

### Aquatic ecotoxicity

Product/ingredient name	Test	Result	Species	Exposure
Polyoxypropylenediamine	-	Acute EC50 15 mg/L	Daphnia	48 hours
	-	Acute IC50 135 mg/L	Algae	72 hours
	-	Acute LC50 >100 mg/L	Fish	96 hours

### Biodegradability





**Environmental effects** : Harmful to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

## 13 . Disposal considerations

**Waste disposal** : The generation of waste should be avoided or minimized wherever possible. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.

## 14 . Transport information

**Transportation Emergency Number 1-800-424-9300 (CHEMTREC).**

Regulatory information	UN number	Proper shipping name	Class	PG*	Label	Additional information
<b>DOT Classification</b>	UN2735	Amines, liquid, corrosive, N.O.S. (Polyoxypropylenediamine)	8	III		
<b>TDG Classification</b>	UN2735	Amines, liquid, corrosive, N.O.S. (Polyoxypropylenediamine)	8	III		-
<b>IMDG Class</b>	UN2735	Amines, liquid, corrosive, N.O.S. (Polyoxypropylenediamine)	8	III		<b>Emergency schedules (EmS)</b> F-A, S-B
<b>IATA-DGR Class</b>	UN2735	Amines, liquid, corrosive, N.O.S. (Polyoxypropylenediamine)	8	III		-

PG\* : Packing group

## 15 . Regulatory information

### United States

**HCS Classification** : Toxic material  
Corrosive material

**U.S. Federal regulations** : **United States inventory (TSCA 8b)**: All components are listed or exempted.

**CERCLA: Hazardous substances.** : No ingredients listed.

**SARA 313** : No ingredients listed.

This product does not contain nor is it manufactured with ozone depleting substances.

**California Prop 65** : No ingredients listed.

### Canada

**WHMIS (Canada)** : Class D-1B: Material causing immediate and serious toxic effects (Toxic).  
Class E: Corrosive material

**CEPA** : **Canada inventory**: All components are listed or exempted.

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

## 16 . Other information

**Label requirements** : CAUSES EYE AND SKIN BURNS.  
HARMFUL IF SWALLOWED.  
CAUSES RESPIRATORY TRACT IRRITATION.

<b>Hazardous Material Information System (U.S.A.)</b> :	Health	3
	Fire hazard	1
	Reactivity	0

<b>National Fire Protection Association (U.S.A.)</b> :	Health	3	Flammability	1
			Instability	0

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**Notice to reader**

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**THE PRODUCT MAY PRESENT HAZARDS AND SHOULD BE USED WITH CAUTION. WHILE CERTAIN HAZARDS ARE DESCRIBED IN THIS PUBLICATION, NO GUARANTEE IS MADE THAT THESE ARE THE ONLY HAZARDS THAT EXIST.**

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