

4917 Dawn Avenue  
East Lansing, MI 48823-5691

8am to 5pm Phone: (517) 351-5900  
24-Hour Emergency Phone: 1-888-354-3323

**Effective Date:** 9/29/04

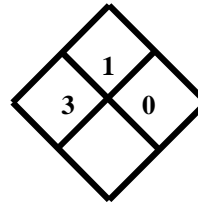
**Material Safety Data Sheet**

MSDS No: 6039

**1. PRODUCT IDENTIFICATION**

**Trade Name:** Ren 286

**Chemical Family:** Amine



NFPA RATING

<b>Health:</b>	<b>3</b>
<b>Flammability:</b>	<b>1</b>
<b>Reactivity:</b>	<b>0</b>
<b>Personal Protection:</b>	

HMIS RATING

**Synonyms:**

RP 286 Hardener

**Intended Use or Product Type:**

Amine hardener

**2. COMPOSITION / INFORMATION ON INGREDIENTS**

O S H A	CAS No.	CHEMICAL IDENTITY	EXPOSURE LIMITS				CARCINOGEN STATUS			
			ACGIH		OSHA		MFR.	IARC	NTP	OSHA
			TWA	STEL	PEL	STEL				
*	112-24-3	1,2-Ethanediamine, N,N'-bis(2-aminoethyl)- Triethylenetetramine	NE	NE	NE	NE	NE	NR	NR	NR
*	26950-63-0	1,2-Ethanediamine, N,N'-bis(2-aminoethyl)-, polymer with methyloxirane Propoxylated Triethylenetetramine	NE	NE	NE	NE	NE	NR	NR	NR
*	90-72-2	Phenol, 2,4,6-tris[(dimethylamino)methyl]-  Common Name: 2,4,6-tris(Dimethylaminomethyl)ph enol	NE	NE	NE	NE	TLV 5 ppm	NR	NR	NR

NE = Not Established NR = Not Reviewed \* = OSHA Hazardous Ingredient

**3. HAZARDS IDENTIFICATION**

**Emergency Overview:** Corrosive - Causes skin and eye burns. May cause allergic skin reaction.

**Primary Route(s) of Entry:** Dermal; heated product may produce inhalable vapors.

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**Acute Exposure:** Corrosive. Causes skin and eye burns.

#### **4. FIRST AID MEASURES**

**Ingestion:** If conscious, give 2 - 4 glasses of water to drink. Do not induce vomiting. Call a physician.

**Skin:** Immediately wash with soap and water. Remove contaminated clothing and launder before reuse. Destroy contaminated shoes.

**Inhalation:** Remove to fresh air. Call a physician.

**Eyes:** Immediately flush eyes with water for at least 15 minutes. Call a physician.

**Overexposure Effects:** Corrosive - causes skin and eye burns. May cause allergic skin reaction.

**Medical Conditions Aggravated by Exposure:** Skin and eye conditions.

**Additional Information:** Referral to a physician is recommended if there is any question about the seriousness of any injury.

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

**Flash Point:** > 200°F (> 93 °C)

**Flash Point Method Used:** Estimated

**Flammable Limits in Air (Lower - % by volume):** Not established

**Flammable Limits in Air (Upper - % by volume):** Not established

**Fire Fighting Extinguishing Media:** Carbon dioxide, dry chemical, foam, water.

**Fire Fighting Equipment:** Use self-contained breathing apparatus.

**Fire and Explosion Hazards:** Decomposition and combustion products may be toxic.

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

**Accidental Release Measures:** Remove spillage by absorbing in absorbent material. Avoid contact.

#### **7. HANDLING AND STORAGE**

**Signal Word:** Danger!

**Precautions:** Corrosive - causes skin and eye burns. Can cause allergic skin reaction. Do not get in eyes, on skin, or on clothing. Avoid breathing vapor or mist. Keep container closed when not in use. Use with adequate ventilation. Wash thoroughly after handling.

**Other Handling Information:** Nuisance dust may be generated when sanding or sawing cured material.

#### **8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

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**Skin Protection:** Impermeable gloves and protective clothing.

**Respiratory Protection:** Use NIOSH approved organic vapor cartridge respirator when vapor/mist exposure is likely.

**Eye Protection:** Wear splash-proof chemical goggles.

**Engineering Controls:** General mechanical and local exhaust in accordance with ACGIH recommendations.

## **9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Color:</b>	Yellow
<b>Odor:</b>	Slight Amine
<b>Physical State:</b>	Liquid
<b>Solubility in Water:</b>	Moderate
<b>Specific Gravity:</b>	0.99 (water = 1)

**Percent Volatile:** Less than 1%.

## **10. STABILITY AND REACTIVITY**

**Conditions to Avoid:** Excessive heat for prolonged periods of time.

**Stability:** Stable.

**Incompatibility:** Strong oxidizers, acids and bases.

**Hazardous Decomposition Products:** Combustion may form toxic materials such as carbon monoxide, carbon dioxide and nitrogen oxides.

**Hazardous Polymerization:** Will not occur.

## **11. TOXICOLOGICAL INFORMATION**

**Sensitization:** Possible in susceptible individuals.

**Skin Irritation:** Corrosive. Causes burns.

**Eye Irritation:** Corrosive. Causes burns.

## **12. ECOLOGICAL INFORMATION**

## **13. DISPOSAL CONSIDERATIONS**

**Waste Disposal Method:** Consult qualified local or corporate personnel for method that will comply with local, state and federal health and environmental regulations.

## **14. TRANSPORT INFORMATION**

**DOT: Non-Bulk**

<b>Proper Shipping Name:</b>	Polyamines, liquid, corrosive, N.O.S.
<b>Technical Shipping Name (If n.o.s.):</b>	Triethylene tetramine, 2,4,6-Tris(dimethylaminomethyl)phenol
<b>Hazard Class:</b>	8
<b>ID Number:</b>	UN 2735
<b>Packing Group:</b>	PG II
<b>Label:</b>	Corrosive

**15. REGULATORY INFORMATION****US Federal Regulations:**

**Occupational Safety and Health Act (OSHA):** This Material Safety Data Sheet (MSDS) has been prepared in compliance with the federal OSHA Hazard Communication Standard 29 CFR 1910.1200. This product is considered to be a hazardous chemical under that standard.

**Resource Conservation and Recovery Act (RCRA):** Not a hazardous waste under RCRA (40 CFR 261) but handle with care due to corrosive effect on skin and eyes.

**SARA Title III: Section 313 Toxic Chemical List (TCL):** This product does not contain any chemicals for routine annual toxic chemical release reporting under Section 313 (40 CFR 372).

**TSCA Section 8(b) - Inventory Status:** All chemical components of this product are in compliance with TSCA inventory requirements.

**TSCA Section 12(b) - Export Notification:** This product does not contain any chemical(s) that are subject to a Section 12(b) export notification.

**State Regulations:**

**California Proposition 65:** This product does not contain any chemicals currently on the California list of Known Carcinogens and Reproductive Toxins.

**Pennsylvania Right-to-Know:** The following is required composition information:

Chemical Name: 1,2-Ethanediamine, N,N'-bis(2-aminoethyl)-, polymer with methyloxirane  
Common Name: Propoxylated Triethylenetetramine  
CAS Number: 26950-63-0  
Comment: Not on Pennsylvania Hazardous Substance List

Chemical Name: 1,2-Ethanediamine, N,N'-bis(2-aminoethyl)-  
Common Name: Triethylenetetramine  
CAS Number: 112-24-3  
Comment: Hazardous Substance

Chemical Name: Phenol, 2,4,6-tris[(dimethylamino)methyl]-  
Common Name: 2,4,6-tris(Dimethylaminomethyl)phenol  
CAS Number: 90-72-2  
Comment: Not on Pennsylvania Hazardous Substance List

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**16. OTHER INFORMATION**

**MSDS No:** 6039  
**Approved By:** Dianne Blessing  
**Title:** EH&S Specialist

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