

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: 11/11/04

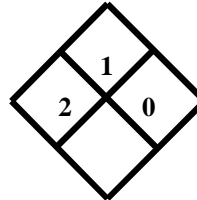
Material Safety Data Sheet

MSDS No: 6038

1. PRODUCT IDENTIFICATION

Trade Name: RenLam 286

Chemical Family: Epoxy



NFPA RATING

Health:	2
Flammability:	1
Reactivity:	0
Personal Protection:	

HMIS RATING

Synonyms:
RP 286 Resin

Intended Use or Product Type:

Filled epoxy

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				
*	25068-38-6	Phenol, 4,4'-(1-methylethylidene)bis-, polymer with (chloromethyl)oxirane Bisphenol A diglycidyl ether polymer	NE	NE	NE	NE	NE	NR	NR	NR
*	68609-97-2	Oxirane, mono[(C12-14-alkyloxy)methyl] derivs. C12 and C14 Alkyl Glycidyl Ethers	NE	NE	NE	NE	NE	NR	NR	NR

* = OSHA Hazardous Ingredient

3. HAZARDS IDENTIFICATION

Emergency Overview: Causes skin and eye irritation. May cause allergic skin reaction.

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

4. FIRST AID MEASURES



Effective Date: 11/11/04

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: Causes skin and eye irritation. 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.

7. HANDLING AND STORAGE

Signal Word: Warning!

Precautions: Can cause skin irritation, eye irritation, and allergic skin reaction. Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling.

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

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Skin Protection: Wear impermeable gloves.

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

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Eye Protection: Wear splash-proof chemical goggles.

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

9. PHYSICAL AND CHEMICAL PROPERTIES

Color:	White
Odor:	Mild
Physical State:	Viscous Liquid
Solubility in Water:	Insoluble
Vapor Pressure:	Not Determined
Specific Gravity:	1.4 (water = 1)
Boiling Point:	> 500°F (> 260 °C)
Evaporation Rate:	Not Determined
Vapor Density:	Not Determined
pH:	Not Determined

Percent Volatile: Negligible.

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 dioxide, carbon monoxide.

Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Sensitization: Possible in susceptible individuals.

Skin Irritation: Irritant.

Eye Irritation: Irritant.

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.

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14. TRANSPORT INFORMATION**DOT: Non-Bulk****Proper Shipping Name:** Resin compounds, N.O.I.**Department of Transportation:** Not regulated as a hazardous material by the U.S. Dept. of Transportation (DOT) 49 CFR 172.101 hazardous materials table.**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).**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: Phenol, 4,4'-(1-methylethylidene)bis-, polymer with (chloromethyl)oxirane

Common Name: Bisphenol A diglycidyl ether polymer

CAS Number: 25068-38-6

Comment: Not on Pennsylvania Hazardous Substance List

Chemical Name: Limestone

Common Name: Calcium carbonate

CAS Number: 1317-65-3

Comment: Hazardous Substance

Chemical Name: Oxirane, mono[(C12-14-alkyloxy)methyl] derivs.

Common Name: C12 and C14 Alkyl Glycidyl Ethers

CAS Number: 68609-97-2

Comment: Not on Pennsylvania Hazardous Substance List

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Chemical Name: Titanium Oxide
Common Name: Titanium dioxide
CAS Number: 13463-67-7
Comment: Hazardous Substance

16. OTHER INFORMATION

MSDS No: 6038
Approved By: Dianne Blessing
Title: EH&S Specialist

Disclaimer: The information and recommendations contained herein are based upon tests in controlled laboratory conditions, are believed to be correct, and are provided for the sole purpose of hazard communication as part of Huntsman's product safety program. This product has not been tested for, and therefore is not recommended or suitable for, uses for which prolonged contact with mucous membranes, abraded skin, or blood is intended or likely, or for uses for which implantation within the human body is intended, and Huntsman assumes no liability for any such uses.

The information and recommendations contained herein are not intended to constitute performance information concerning the product, which is available in separate technical data sheets available from Huntsman upon request. Users are urged, and are urged to urge others who may come in contact with the product, to obtain and consult data sheets prior to purchase, use, transportation or storage of the product.

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USER SHOULD CONSULT A LEGAL ADVISOR OR THE APPROPRIATE GOVERNMENTAL AGENCY TO DETERMINE THE APPLICABILITY OR EFFECT OF ANY LAW OR REGULATION WITH RESPECT TO THE PRODUCT. HUNTSMAN DOES NOT UNDERTAKE TO FURNISH ADVICE ON SUCH MATTERS.

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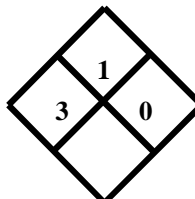
Material Safety Data Sheet

MSDS No: 6039

1. PRODUCT IDENTIFICATION

Trade Name: Ren 286

Chemical Family: Amine



NFPA RATING

Health:	3
Flammability:	1
Reactivity:	0
Personal Protection:	

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 Common Name:	1,2-Ethanediamine, N,N'-bis(2-aminoethyl)-Triethylenetetramine	NE	NE	NE	NE	NE	NR	NR	NR
*	26950-63-0 Common Name:	1,2-Ethanediamine, N,N'-bis(2-aminoethyl)-, polymer with methyloxirane Propoxylated Triethylenetetramine	NE	NE	NE	NE	NE	NR	NR	NR
*	90-72-2 Common Name:	Phenol, 2,4,6-tris[(dimethylamino)methyl]- 2,4,6-tris(Dimethylaminomethyl)phenol	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.

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8. EXPOSURE CONTROLS / PERSONAL PROTECTION**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**

Color:	Yellow
Odor:	Slight Amine
Physical State:	Liquid
Solubility in Water:	Moderate
Specific Gravity:	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**

Effective Date: 9/29/04

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

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

Effective Date: 9/29/04

CAS Number: 112-24-3
Comment: Hazardous SubstanceChemical 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**16. OTHER INFORMATION****MSDS No:** 6039
Approved By: Dianne Blessing
Title: EH&S Specialist

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The information and recommendations contained herein are not intended to constitute performance information concerning the product, which is available in separate technical data sheets available from Huntsman upon request. Users are urged, and are urged to urge others who may come in contact with the product, to obtain and consult data sheets prior to purchase, use, transportation or storage of the product.

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