

4917 Dawn Avenue
East Lansing, MI 48823-5691

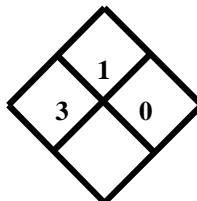
8am to 5pm Phone: (517) 351-5900
24-Hour Emergency Phone: 1-888-354-3323

Effective Date: 12/10/04**Material Safety Data Sheet**

MSDS No: 31808

1. PRODUCT IDENTIFICATION**Trade Name:** RenLam 8100**Chemical Family:** Epoxy

Synonyms:
RP 8100 Resin

Intended Use or Product Type: Unfilled room temperature laminating resin

NFPA RATING

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

HMIS RATING

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				
*	2425-79-8	Oxirane, 2,2'-[1,4-Butanediylbis(Oxymethylene)]bis-Butanediol diglycidyl ether Common Name:	NE	NE	NE	NE	NE	NR	NR	NR
*	25068-38-6	Phenol, 4,4'-(1-methylethylidene)bis-, polymer with (chloromethyl)oxirane Bisphenol A diglycidyl ether polymer Common Name:	NE	NE	NE	NE	NE	NR	NR	NR

* = OSHA Hazardous Ingredient

3. HAZARDS IDENTIFICATION

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

Primary Route(s) of Entry: Dermal; heated product may produce inhalable vapors.**4. FIRST AID MEASURES****Ingestion:** If conscious, give 2 - 4 glasses of water to drink. Do not induce vomiting. Call a physician.

Effective Date: 12/10/04

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 severe skin irritation. Causes eye irritation. May cause skin burns and 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: Danger!

Precautions: Causes severe skin irritation and may cause skin burns. Can cause eye irritation and allergic skin reaction. Do not get on skin or on clothing. Avoid contact with eyes. 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.

Eye Protection: Wear splash-proof chemical goggles.

Effective Date: 12/10/04

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

9. PHYSICAL AND CHEMICAL PROPERTIES

Color:	Clear, light straw
Physical State:	Liquid
Solubility in Water:	Negligible
Vapor Pressure:	psi Not Determined
Specific Gravity:	1.05 (water = 1)
Boiling Point:	Not Determined
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: Severe skin 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.

14. TRANSPORT INFORMATION

DOT: Non-Bulk

Effective Date: 12/10/04

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 product is considered to be a hazardous chemical under the OSHA Hazard Communication Standard (29 CFR 1910.1200).**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: Oxirane, 2,2'-[1,4-Butanediylbis(Oxymethylene)]bis-

Common Name: Butanediol diglycidyl ether

CAS Number: 2425-79-8

Comment: Not on Pennsylvania Hazardous Substance List

16. OTHER INFORMATION**MSDS No:** 31808**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

Effective Date: 12/10/04

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.

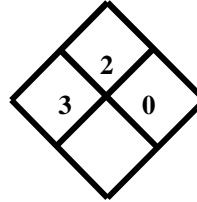


4917 Dawn Avenue
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Effective Date: 8/2/05**Material Safety Data Sheet**

MSDS No: 31809

1. PRODUCT IDENTIFICATION**Trade Name:** Ren 8100 Medium**Chemical Family:** Amine

NFPA RATING

Health:	3
Flammability:	2
Reactivity:	0
Personal Protection:	

HMIS RATING

Synonyms:

RP 8100 Medium Hardener

Intended Use or Product Type: Laminating 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				
*	102-71-6 Common Name:	Ethanol, 2,2',2"-nitrilotris-Triethanol amine	5 mg/m ³	NE	NE	NE	NE	NR	NR	NR
*	10563-29-8 Common Name:	1,3-Propanediamine, N'-(3-aminopropyl)-N,N-dimethyl-Dimethylene Propylene Triamine	NE	NE	NE	NE	NE	NR	NR	NR
*	110-85-0 Common Name:	Piperazine	NE	NE	NE	NE	NE	NR	NR	NR
*	69852-45-5 Common Name:	N-Dimethyl-N'-cyanoethyl-1,3-diaminopropane Dimethylcyanoethyldiaminopropane	NE	NE	NE	NE	NE	NR	NR	NR

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

3. HAZARDS IDENTIFICATION**Emergency Overview:** Combustible. Corrosive - Causes skin and eye burns. May cause allergic skin reaction.**Primary Route(s) of Entry:** Dermal; heated product may produce inhalable vapors.

Effective Date: 8/2/05

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: 194°F (90 °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: Combustible. Keep away from heat and flame. 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.

Effective Date: 8/2/05

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

Appearance:	Amber Liquid
Color:	Amber
Odor:	Amine
Physical State:	Liquid
Solubility in Water:	Moderate
Specific Gravity:	0.9 (water = 1)
Boiling Point:	Not Determined
Evaporation Rate:	Not Determined
Vapor Density:	Not Determined
pH:	Not Determined

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

Effective Date: 8/2/05

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**

Proper Shipping Name:	Polyamines, liquid, corrosive, N.O.S.
Technical Shipping Name (If n.o.s.):	Dimethylcyanoethyl-diaminopropane, Dimethyl dipropyl triamine
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: N-Dimethyl-N'-cyanoethyl-1,3-diaminopropane
Common Name: Dimethylcyanoethyl-diaminopropane
CAS Number: 69852-45-5
Comment: Not on Pennsylvania Hazardous Substance List



Effective Date: 8/2/05

Chemical Name: 1,3-Propanediamine, N'-(3-aminopropyl)-N,N-dimethyl-
Common Name: Dimethylene Propylene Triamine
CAS Number: 10563-29-8
Comment: Not on Pennsylvania Hazardous Substance List

Chemical Name: Ethanol, 2,2',2''-nitrilotris-
Common Name: Triethanol amine
CAS Number: 102-71-6
Comment: Hazardous Substance

Chemical Name: Piperazine
Common Name: Piperazine
CAS Number: 110-85-0
Comment: Hazardous Substance

16. OTHER INFORMATION

MSDS No: 31809
Approved By: Dianne Blessing
Title: EHS 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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