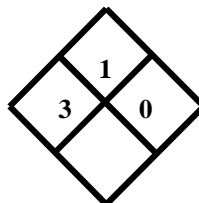


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Effective Date: 4/23/08**Material Safety Data Sheet**

MSDS No: 11254

1. PRODUCT IDENTIFICATION**Trade Name:** Ren 4037**Chemical Family:** Amine

NFPA RATING

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

HMIS RATING

Synonyms:

DT 177-147 Hardener
RP 4037 Hardener

Intended Use or Product Type:

High heat casting system 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				
*	111-40-0	1,2-Ethanediamine, N-(2-aminoethyl)- Diethylenetriamine Common Name: Concentration 1.00 - 5.00 % by wt	1 ppm	NE	NE	NE	NE	NR	NR	NR
*	1477-55-0	1,3-Benzenedimethanamine m-Xylenediamine Common Name: Concentration 3.00 - 7.00 % by wt	NE	0.1 mg/m3	NE	NE	NE	NR	NR	NR
*	2855-13-2	Cyclohexanemethanamine, 5-Amino-1,3,3-Trimethyl- Isophorone diamine Common Name: Concentration 10.00 - 30.00 % by wt	NE	NE	NE	NE	NE	NR	NR	NR
*	68479-98-1	Benzenediamine, ar,ar-diethyl-ar-methyl- Diethyltoluenediamine Common Name: Concentration 30.00 - 60.00 % by wt	NE	NE	NE	NE	NE	NR	NR	NR
*	80-05-7	Phenol, 4,4'-(1-methylethylidene)bis-	NE	NE	NE	NE	TLV 5 mg/m3	NR	NR	NR

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Common Name:	Bisphenol A								
Concentration	1.00 - 5.00 % by wt								

* = OSHA Hazardous Ingredient

3. HAZARDS IDENTIFICATION

Emergency Overview: Corrosive - Causes skin and eye burns. Harmful if swallowed or if absorbed through skin. May cause allergic skin and respiratory reactions.

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

Acute Exposure: Corrosive. Causes skin and eye burns.

Chronic: Overexposure may have effects on developing fetus.

4. FIRST AID MEASURES

Ingestion: Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Seek immediate medical attention.

Skin: Immediately wash with soap and water. Remove contaminated clothing and launder before reuse. Destroy contaminated shoes. Seek immediate medical attention.

Inhalation: Remove to fresh air. Seek immediate medical attention.

Eyes: Immediately flush eyes with water for at least 15 minutes. Seek immediate medical attention.

Overexposure Effects: Corrosive - causes skin and eye burns. Harmful if swallowed or if absorbed through skin. May cause allergic skin and respiratory reactions.

Medical Conditions Aggravated by Exposure: Skin, eye and pulmonary 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.

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6. ACCIDENTAL RELEASE MEASURES

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

7. HANDLING AND STORAGE

Signal Word: Danger!

Precautions: Corrosive. Causes skin and eye burns. Harmful if swallowed or if absorbed through skin. May cause allergic skin and respiratory reactions. Do not get in eyes, on skin, on clothing. Avoid breathing vapor or mist. Keep container closed. Use with adequate ventilation. Wash thoroughly after handling. Notice! Overexposure may have effects on developing fetus.

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.

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

9. PHYSICAL AND CHEMICAL PROPERTIES

Color:	Dark Amber
Odor:	Amine
Physical State:	Liquid
Solubility in Water:	Slight
Vapor Pressure:	< 0.1 mm Hg at 25°C (77 °F)
Specific Gravity:	1.01 (water = 1)
Boiling Point:	Not Determined
Melting Point:	Not Determined
Evaporation Rate:	Not Determined
Density:	Not Determined
Vapor Density:	Not Determined
pH:	Not Determined
Coefficient of water/oil:	Not Determined

Percent Volatile: Not determined.

10. STABILITY AND REACTIVITY

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

Stability: Stable.

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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****Acute Oral Effects (LD50):** Component(s) are toxic, 50 - 500 mg/kg (rat).

Diethyltoluenediamine= 485 mg/kg (rat)

1,3-Benzenedimethanamine= 930 mg/kg (rat)

Isophorone diamine= 1030 mg/kg (rat)

Diethylenetriamine= 1080 - 2330 mg/kg (rat)

Acute Dermal Toxicity (LD50): Component(s) are toxic, 200 - 1000 mg/kg (rabbit).

Diethylenetriamine= 672 - 1240 mg/kg (rabbit)

Diethyltoluenediamine= 700 mg/kg (rabbit)

Sensitization: May cause allergic skin reaction and respiratory sensitivity in some people.**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**

Proper Shipping Name:	Polyamines, liquid, corrosive, N.O.S.
Technical Shipping Name (If n.o.s.):	Metaxylenediamine, Diethylene triamine
Hazard Class:	8
ID Number:	UN 2735
Packing Group:	PG II
Label:	Corrosive

IATA: Non-Bulk

Proper Shipping Name:	Polyamines, liquid, corrosive, N.O.S.
Technical Shipping Name (If n.o.s.):	Metaxylenediamine, Diethylene triamine
Hazard Class:	8
ID Number:	UN 2735
Packing Group:	PG II
Label:	Corrosive

IMDG: Non-Bulk

Proper Shipping Name:	Polyamines, liquid, corrosive, N.O.S.
Technical Shipping Name (If n.o.s.):	Metaxylenediamine, Diethylene triamine

Effective Date: 4/23/08

Hazard Class:	8
ID Number:	UN 2735
Packing Group:	PG II
Label:	Corrosive
TDG: Non-Bulk	
Proper Shipping Name:	Polyamines, liquid, corrosive, N.O.S.
Technical Shipping Name (If n.o.s.):	Metaxylenediamine, Diethylene 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 contains a toxic chemical(s) for routine annual toxic chemical release reporting under section 313 (40 CFR 372). This information must be included in all MSDS's copied or distributed for this material.

Chemical Name: Phenol, 4,4'-(1-methylethylidene)bis-
Common Name: Bisphenol A
Percent in Composition: 1 - 5 % by wt
Comment:

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.

International Regulations:

Canadian Inventory Status: This product contains one or more chemicals currently not on the Canadian Domestic Substance List.

Canadian WHMIS: This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations. D1B D2A D2B E

State Regulations:

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

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

Chemical Name: Benzenediamine, ar,ar-diethyl-ar-methyl-

Common Name: Diethyltoluenediamine

CAS Number: 68479-98-1

Comment: Not on Pennsylvania Hazardous Substance List

Chemical Name: Cyclohexanemethanamine, 5-Amino-1,3,3-Trimethyl-

Common Name: Isophorone diamine

CAS Number: 2855-13-2

Comment: Not on Pennsylvania Hazardous Substance List

Chemical Name: Polymer of Benzenediamine, AR,AR-Diethyl-AR-Methyl and Phenol, Polymer with Formaldehyde, Glycidyl Ether

Common Name: Amine adduct

CAS Number: 63548

Comment: Not on Pennsylvania Hazardous Substance List

Chemical Name: 1,3-Benzenedimethanamine

Common Name: m-Xylenediamine

CAS Number: 1477-55-0

Comment: Hazardous Substance

Chemical Name: 1,2-Ethanediamine, N-(2-aminoethyl)-

Common Name: Diethylenetriamine

CAS Number: 111-40-0

Comment: Hazardous Substance

Chemical Name: Phenol, 4,4'-(1-methylethylidene)bis-

Common Name: Bisphenol A

CAS Number: 80-05-7

Comment: Environmental Hazardous Substance

16. OTHER INFORMATION**MSDS No:** 11254**Approved By:** Product EHS

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