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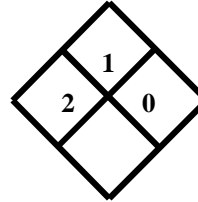
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Effective Date: 3/21/08**Material Safety Data Sheet**

MSDS No: 6249

1. PRODUCT IDENTIFICATION**Trade Name:** Ren 178-87**Chemical Family:** Amine**Synonyms:**

TDT 178-87 Hardener

Intended Use or Product Type: Amine hardener

NFPA 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				
*	19900-65-3	Benzenamine, 4,4'-methylenebis[2-ethyl- Common Name: Diethyl methylene dianiline (Diethyl MDA) Concentration: 30.00 - 60.00 % by wt	NE	NE	NE	NE	TWA 0.08 mg/m3	NR	NR	NR
*	84-74-2	1,2-Benzenedicarboxylic acid, dibutyl ester Dibutyl phthalate Concentration: 30.00 - 60.00 % by wt	5 mg/m3	NE	5 mg/m3	NE	NE	NR	NR	NR

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

3. HAZARDS IDENTIFICATION**Emergency Overview: CAUTION !**

MAY BE HARMFUL IF ABSORBED THROUGH SKIN OR IF SWALLOWED.

MAY CAUSE TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA.

A POSSIBLE ANIMAL CARCINOGEN AND SHOULD BE TREATED WITH CAUTION

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

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Chronic: Prolonged or repeated exposure can cause liver and kidney damage, central nervous system effects and blood abnormalities. Repeated overexposure may cause delayed and serious injury. May cause birth defects and reproductive disorders. Substance can cause allergic reaction.

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: Causes eye, skin, and respiratory irritations. May cause allergic skin reaction. May have effect on the liver.

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:	> 360°F (> 182 °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: Causes eye, skin, and respiratory irritations. May cause allergic skin reaction. Avoid contact with eyes, skin, and clothing. Avoid breathing vapor or mist. Avoid prolonged or repeated contact with skin. Keep container closed. Use with adequate ventilation. Wash thoroughly after handling. Notice! Overexposure may have effects on liver.

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

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Personal Protective Equipment: Wear appropriate protective equipment to avoid personal contact and exposure.

Exposure Guidelines: Treat this product as if regulated under OSHA standard: MDA, 29 CFR 1910.1050. This standard has many provisions which are beyond the scope of this MSDS to include in its entirety.

These provisions include medical surveillance and recordkeeping, emergency procedures plan, area regulation, respiratory protection and training. This MSDS contains a summary of the requirements for safe handling; we advise consulting the OSHA standard governing MDA before/during the development of a plan to handle this material in accordance with the regulation

Skin Protection: Wear neoprene gloves for intermittent contact. Wear Silver Shield gloves when long term exposure is expected.

Wear full coverage garment if bodily contact is possible, disposable is preferred. Contaminated clothing and equipment must be removed before leaving a regulated area. No contaminated clothing can be removed from the change room except for disposal or laundering and must be stored and transported in closed containers with labels warning of the hazards of DeMDA. Laundry service must be informed of the hazards if handling contaminated clothing.

Respiratory Protection: Wear appropriate respirator when ventilation is inadequate.

Wear a NIOSH/MSHA-approved full-face organic vapor cartridge respirator when vapor/mist exposure is expected. If handling a solid, add a particulate filter to the respirator. If handling in molten form, add protection against acid gases.

Eye Protection: Chemical safety goggles. If there is potential for splash, use a full face shield.

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.

9. PHYSICAL AND CHEMICAL PROPERTIES

Color:	Black
Physical State:	Thin Liquid
Solubility in Water:	Slight
Vapor Pressure:	Not Determined
Specific Gravity:	1.06 (water = 1)
Boiling Point:	Not Determined
Evaporation Rate:	Not Determined
Vapor Density:	Not Determined
pH:	Not Determined
Coefficient of water/oil:	Not Determined

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.

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Hazardous Polymerization: Will not occur.**11. TOXICOLOGICAL INFORMATION****Acute Inhalation Exposure Effects:** Respiratory irritant.**Sensitization:** Possible in susceptible individuals.**Carcinogenicity:** Contains DeMDA which is a possible animal carcinogen and should be treated with caution.**Skin Irritation:** Irritant.**Eye Irritation:** Irritant.**Mutagenicity:** Test for Benzenamine, 4,4'-methylenebis[2-ethyl-:

Ames Test - inactive without S9 and active with S9 activation

BALB/C3T3 Transformation Assay - inactive

BALB/C3T3 Transformation Assay with S9 activation - inactive

Chinese Hamster Ovary HGPRT Assay with activation - negative

Chinese Hamster Ovary Chromosomal Aberration:

without S9 activation - negative

with S9 activation - positive

Rat Hepatocyte DNA Repair Assay - positive

In Vitro Liver Microsome N-Hydroxylation Assay - positive

Chronic Exposure Effects: For Benzenamine, 4,4'-methylenebis[2-ethyl-:

There is experimental evidence that analogous substances have caused tumors in rodents.

Analogous substances have caused damage to liver and thyroid in test animals.

Additional Information: This product contains dibutyl phthalate which may cause adverse reproductive effects in laboratory animals. The relevance to humans is not known.**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:**

Environmentally hazardous substance, liquid, n.o.s.

Technical Shipping Name (If n.o.s.):

dibutyl phthalate, Diethyl methylene dianiline

Hazard Class:

9

ID Number:

UN 3082

Packing Group:

PG III

Marine Pollutant:

Marine Pollutant

IATA: Non-Bulk

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Proper Shipping Name:	Not Regulated
IMDG: Non-Bulk	
Proper Shipping Name:	Environmentally hazardous substance, liquid, n.o.s.
Technical Shipping Name (If n.o.s.):	dibutyl phthalate, Diethyl methylene dianiline
Hazard Class:	9
ID Number:	UN 3082
Packing Group:	PG III
Marine Pollutant:	Marine Pollutant
TDG: Non-Bulk	
Proper Shipping Name:	Environmentally hazardous substance, liquid, n.o.s.
Technical Shipping Name (If n.o.s.):	dibutyl phthalate, Diethyl methylene dianiline
Hazard Class:	9
ID Number:	UN 3082
Packing Group:	PG III
Marine Pollutant:	Marine Pollutant

Department of Transportation: Under 49 CFR 171.4 (c) NONBULK shipments of marine pollutants are not regulated for transport by motor vehicles, rail cars or aircraft. NONBULK shipments of marine pollutants are regulated when transported by vessel (ship).

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): This product is considered to be a hazardous waste under RCRA (40 CFR 261).
U069

SARA Title III: Section 304 - CERCLA: This product contains the following chemicals regulated under Section 304 (40 CFR 302) as hazardous substance(s) for emergency release notification ("CERCLA" List):

Chemical Name: 1,2-Benzenedicarboxylic acid, dibutyl ester
Common Name: Dibutyl phthalate
CAS Number: 84-74-2
Percent in Composition: 30 - 60 % by wt
Component RQ: 10

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: 1,2-Benzenedicarboxylic acid, dibutyl ester
Common Name: Dibutyl phthalate
Percent in Composition: 30 - 60 % by wt
Comment:

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

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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:

Australian Inventory Status: This product contains only chemicals which are currently listed on the Australian Inventory of Chemical Substances.

Canadian Inventory Status: This product contains only chemicals that are currently listed 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. D2A, D2B

European Inventory Status (EINECS): This product contains only chemicals that are currently listed on the European Inventory of Existing Commercial Chemical Substances (EINECS).

Japanese Inventory Status: This product contains only chemicals currently listed on the Japanese Ministry of International Trade and Industry List of Existing and New Chemical Substances.

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-Benzenedicarboxylic acid, dibutyl ester
Common Name: Dibutyl phthalate
CAS Number: 84-74-2
Comment: Environmental Hazardous Substance

Chemical Name: Benzenamine, 4,4'-methylenebis[2-ethyl-
Common Name: Diethyl methylene dianiline (Diethyl MDA)
CAS Number: 19900-65-3
Comment: Not on Pennsylvania Hazardous Substance List

16. OTHER INFORMATION

MSDS No: 6249
Reason Issued: add WHMIS & DeMDA warnings
Title: EHS Specialist

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