

Part B

Safety Data Sheet

Issue Date: 01-Jan-2005

Revision Date: 25-Apr-2014

Version 1

1. IDENTIFICATION

Product Identifier

Product Name E-R Hardener

Other means of identification

SDS # PRS-003
Product Code E-R Resin Hardener
UN/ID No UN1760

Recommended use of the chemical and restrictions on use

Recommended Use Resin hardener.

Details of the supplier of the safety data sheet

Manufacturer Address

Prosthetics Research Specialists, Inc.
720 E. Southland Avenue
Bushnell, FL USA 33513

Emergency Telephone Number

Company Phone Number 352-793-4477
Emergency Telephone (24 hr) INFOTRAC 1-352-323-3500 (International)
1-800-535-5053 (North America)

2. HAZARDS IDENTIFICATION

Appearance Pale mobile liquid

Physical State Liquid

Odor Amine

Classification

Acute toxicity - Oral	Category 4
Acute toxicity - Inhalation (Dusts/Mists)	Category 4
Skin corrosion/irritation	Category 1 Sub-category B
Serious eye damage/eye irritation	Category 1
Skin sensitization	Category 1

Hazards Not Otherwise Classified (HNOC)

May be harmful in contact with skin

Signal Word

Danger

Hazard Statements

Harmful if swallowed
Harmful if inhaled
Causes severe skin burns and eye damage
May cause an allergic skin reaction



Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Use only outdoors or in a well-ventilated area
Do not breathe dust/fume/gas/mist/vapors/spray
Wear protective gloves/protective clothing/eye protection/face protection
Contaminated work clothing should not be allowed out of the workplace

Precautionary Statements - Response

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
Immediately call a poison center or doctor/physician
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
Wash contaminated clothing before reuse
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
Immediately call a poison center or doctor/physician
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
Rinse mouth
Do not induce vomiting

Precautionary Statements - Storage

Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Other Hazards

Harmful to aquatic life with long lasting effects

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	Weight-%
Paratertiarybutylphenol	98-54-4	<50
m-Xylenediamine	1477-55-0	<30
Trimethylhexanediamine	3236-53-1	>25

If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. FIRST-AID MEASURES

First Aid Measures

Eye Contact	Immediately flush eyes with water for 30 minutes while lifting the upper and lower lids. Seek immediate medical attention/advice.
Skin Contact	Wash off immediately with plenty of water for at least 15 minutes. Take off contaminated clothing. Wash contaminated clothing before reuse. Call a physician immediately.
Inhalation	Remove to fresh air. Call a physician immediately.
Ingestion	Do not induce vomiting. Drink plenty of water or milk immediately. Call a physician or poison control center immediately.

Most important symptoms and effects

Symptoms	In severe cases, burns, corneal damage, and blindness may occur. Repeated exposure may cause sensitization due to an allergic reaction of the skin. Irritation and corrosive burns to mouth, throat, and stomach. May cause irritation to the mucous membranes and upper respiratory tract.
-----------------	---

Indication of any immediate medical attention and special treatment needed

Notes to Physician	Treat symptomatically.
--------------------	------------------------

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Water spray (fog), Alcohol resistant foam, Carbon dioxide (CO₂), Dry chemical.

Unsuitable Extinguishing Media Not determined.

Specific Hazards Arising from the Chemical

None known.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions	Use personal protective equipment as required.
Environmental Precautions	See Section 12 for additional Ecological Information.

Methods and material for containment and cleaning up

Methods for Containment	Prevent further leakage or spillage if safe to do so.
Methods for Clean-Up	Contain and collect with an inert absorbent and place into an appropriate container for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on Safe Handling

Wash thoroughly after handling. Use personal protection recommended in Section 8. Do not breathe dust/fume/gas/mist/vapors/spray. Do not eat, drink or smoke when using this product. Use only in well-ventilated areas.

Conditions for safe storage, including any incompatibilities

Storage Conditions

Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up.

Incompatible Materials

Epoxy resins under uncontrolled conditions.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
m-Xylenediamine 1477-55-0	Ceiling: 0.1 mg/m ³	Ceiling: 0.1 mg/m ³	Ceiling: 0.1 mg/m ³

Appropriate engineering controls

Engineering Controls

Apply technical measures to comply with the occupational exposure limits. Showers. Eyewash stations.

Individual protection measures, such as personal protective equipment

Eye/Face Protection

Goggles.

Skin and Body Protection

Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task.

Respiratory Protection

Use NIOSH approved air-purifying respirator if the potential to exceed established exposure limits exists.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State	Liquid	Odor	Amine
Appearance	Pale mobile liquid	Odor Threshold	Not determined
Color	Not determined		
Property	Values	Remarks • Method	
pH	Not determined		
Melting Point/Freezing Point	Not determined		
Boiling Point/Boiling Range	230 °C / 446 °F		
Flash Point	110 °C / 230 °F		
Evaporation Rate	Not determined		
Flammability (Solid, Gas)	n/a-liquid		
Upper Flammability Limits	Not determined		
Lower Flammability Limit	Not determined		
Vapor Pressure	Not available		
Vapor Density	Not available		
Specific Gravity	1.0		

<u>Property</u>	<u>Values</u>	<u>Remarks - Method</u>
Water Solubility	<1	
Solubility in other solvents	Not determined	
Partition Coefficient	Not determined	
Auto-ignition Temperature	Not determined	
Decomposition Temperature	Not determined	
Kinematic Viscosity	Not determined	
Dynamic Viscosity	Not determined	
Explosive Properties	Not determined	
Oxidizing Properties	Not determined	

10. STABILITY AND REACTIVITY

Reactivity

Not reactive under normal conditions.

Chemical Stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

Can react strongly with epoxy resins at elevated temperatures.

Hazardous Polymerization

Hazardous polymerization does not occur.

Conditions to Avoid

Keep out of reach of children.

Incompatible Materials

Epoxy resins under uncontrolled conditions.

Hazardous Decomposition Products

Nitrogen oxides (NOx).

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Eye Contact

Causes severe eye damage.

Skin Contact

Causes severe skin burns. May cause an allergic skin reaction.

Inhalation

Harmful if inhaled.

Ingestion

Harmful if swallowed.

Component Information

<u>Chemical Name</u>	<u>Oral LD50</u>	<u>Dermal LD50</u>	<u>Inhalation LC50</u>
Parateritarybutylphenol 98-54-4	= 2990 mg/kg (Rat)	= 2318 mg/kg (Rabbit)	-
m-Xylenediamine 1477-55-0	= 930 mg/kg (Rat)	= 2000 mg/kg (Rabbit)	= 700 ppm (Rat) 1 h

Information on physical, chemical and toxicological effects

Symptoms

Please see section 4 of this SDS for symptoms.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization May cause an allergic skin reaction.

Carcinogenicity This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.

Numerical measures of toxicity

Not determined

12. ECOLOGICAL INFORMATION**Ecotoxicity**

Harmful to aquatic life with long lasting effects.

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Paratertiarybutylphenol 98-54-4	11.2: 72 h Desmodesmus subspicatus mg/L EC50	4.71 - 5.62: 96 h Pimephales promelas mg/L LC50 flow-through 6.9: 96 h Cyprinus carpio mg/L LC50 static		3.9: 48 h Daphnia magna mg/L EC50 3.4 - 4.5: 48 h Daphnia magna mg/L EC50 Static

Persistence/Degradability

Not determined.

Bioaccumulation

Not determined.

Mobility

Chemical Name	Partition Coefficient
Paratertiarybutylphenol 98-54-4	2.44

Other Adverse Effects

Not determined

13. DISPOSAL CONSIDERATIONS**Waste Treatment Methods**

Disposal of Wastes Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated Packaging Disposal should be in accordance with applicable regional, national and local laws and regulations.

US EPA Waste Number

Chemical Name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
Paratertiarybutylphenol 98-54-4		Included in waste stream: K060		

14. TRANSPORT INFORMATION**Note**

Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.

DOT

UN/ID No UN1760
Proper Shipping Name Corrosive liquid, n.o.s. (Benzene-1,3-Dimethanamine)
Hazard Class 8
Packing Group II

IATA

UN/ID No UN1760
Proper Shipping Name Corrosive liquid, n.o.s. (Benzene-1,3-Dimethanamine)
Hazard Class 8
Packing Group II

IMDG

UN/ID No UN1760
Proper Shipping Name Corrosive liquid, n.o.s. (Benzene-1,3-Dimethanamine)
Hazard Class 8
Packing Group II
Marine Pollutant This material may meet the definition of a marine pollutant

15. REGULATORY INFORMATION**International Inventories**

TSCA Listed

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances

US Federal Regulations**SARA 311/312 Hazard Categories**

Acute Health Hazard	Yes
Chronic Health Hazard	Yes
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

US State Regulations**U.S. State Right-to-Know Regulations**

Chemical Name	New Jersey	Massachusetts	Pennsylvania
m-Xylenediamine 1477-55-0	X	X	X

16. OTHER INFORMATION

NFPA

Health Hazards

3

Flammability

1

Instability

0

Special Hazards

Not determined

HMIS

Health Hazards

Not determined

Flammability

Not determined

Physical Hazards

Not determined

Personal Protection

Not determined

Issue Date:

01-Jan-2005

Revision Date:

25-Apr-2014

Revision Note:

New format

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet