

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**

<b>Eye Contact</b>	Immediately flush eyes with water for 30 minutes while lifting the upper and lower lids. Seek immediate medical attention/advice.
<b>Skin Contact</b>	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.
<b>Inhalation</b>	Remove to fresh air. Call a physician immediately.
<b>Ingestion</b>	Do not induce vomiting. Drink plenty of water or milk immediately. Call a physician or poison control center immediately.

**Most important symptoms and effects**

<b>Symptoms</b>	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.
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**Indication of any immediate medical attention and special treatment needed**

<b>Notes to Physician</b>	Treat symptomatically.
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**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**

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

**Methods and material for containment and cleaning up**

<b>Methods for Containment</b>	Prevent further leakage or spillage if safe to do so.
<b>Methods for Clean-Up</b>	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 <sup>3</sup>	Ceiling: 0.1 mg/m <sup>3</sup>	Ceiling: 0.1 mg/m <sup>3</sup>

**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  
**Appearance** Pale mobile liquid  
**Color** Not determined  
**Odor** Amine  
**Odor Threshold** Not determined

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
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

<b>Eye Contact</b>	Causes severe eye damage.
<b>Skin Contact</b>	Causes severe skin burns. May cause an allergic skin reaction.
<b>Inhalation</b>	Harmful if inhaled.
<b>Ingestion</b>	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-Dimethaneamine)  
 Hazard Class 8  
 Packing Group II

**IATA**

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

**IMDG**

UN/ID No UN1760  
 Proper Shipping Name Corrosive liquid, n.o.s. (Benzene-1,3-Dimethaneamine)  
 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**

<u>NFPA</u>	<b>Health Hazards</b> 3	<b>Flammability</b> 1	<b>Instability</b> 0	<b>Special Hazards</b> Not determined
<u>HMIS</u>	<b>Health Hazards</b> Not determined	<b>Flammability</b> Not determined	<b>Physical Hazards</b> Not determined	<b>Personal Protection</b> Not determined

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**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