

Section 1. Product and Company Identification

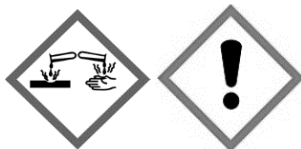
Product Name: EPN 242 Part B
Supplier: CSNRI | 621 Lockhaven Drive. Houston, TX 77073 | +1 281.590.8491
Emergency Phone Number: 800.424.9300 (CHEMTREC)
 +1 703.741.5970 (Outside the US)
Product Description: Hardener for epoxy resin
Product Use: Intended to repair pipes

Section 2. Hazards Identification

Classification of the substance or mixture

Acute toxicity / oral – Category 4
 Acute toxicity / dermal – Category 4
 Skin corrosion / irritation – Category 1
 Sensitization / Skin – Category 1
 Eye damage / irritation – Category 1
 Acute toxicity / inhalation – Category 4
 Hazardous to the aquatic environment – long term (Chronic) hazard – Category 3

Hazard pictograms:



Signal word: Danger

Hazard statements:

H302 Harmful if swallowed
 H312 Harmful in contact with skin
 H314 Causes severe skin burns and eye damage.
 H317 May cause an allergic skin reaction.
 H318 Causes serious eye damage
 H332 Harmful if inhaled
 H412 Harmful to aquatic life with long lasting effects.

Precautionary statements:

P201 Obtain special instructions before use.
 P202 Do not handle until all safety precautions have been read and understood.
 P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
 P264 Wash skin thoroughly after handling.
 P272 Contaminated work clothing should not be allowed out of the workplace.
 P273 Avoid release to the environment.
 P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
 P301 + P330 + P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
 P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
 P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P305 + P351 + P338 + P310 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.

P308 + P313 IF exposed or concerned: Get medical advice/ attention.

P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.

P363 Wash contaminated clothing before reuse.

P405 Store locked up.

P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards: None known.

Section 3. Composition/Information on Ingredients

Substance/Mixture: Preparation

Chemical nature: Epoxy constituents

Hazardous components:

Component	CAS #	% Composition
m-phenylenebis(methylamine)	1477-55-0	20 – 50
Triethylenetetramine	112-24-3	20 – 50
Titanium Dioxide	13463-67-7	0.1 – 1

Section 4. First Aid Measures

First Aid Measures for Accidental:

General advice: Move out of dangerous area. Consult a physician. Show this safety data sheet to the doctor in attendance. Do not leave the victim unattended.

Inhalation: Call a physician or poison control center immediately. If unconscious place in recovery position and seek medical advice.

Skin contact: Immediate medical treatment is necessary as untreated wounds from corrosion of the skin heal slowly and with difficulty. If on skin, rinse well with water. If on clothes, remove clothes.

Eye contact: Small amounts splashed into eyes can cause irreversible tissue damage and blindness. In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Continue rinsing eyes during transport to hospital. Remove contact lenses. Protect unharmed eye. Keep eye wide open while rinsing. If eye irritation persists, consult a specialist.

Ingestion: Clean mouth with water and drink afterwards plenty of water. Keep respiratory tract clear. Do NOT induce vomiting. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Take victim immediately to hospital.

Most important symptoms and effects, both acute and delayed: May cause an allergic skin reaction. Causes serious eye damage. Suspected of causing cancer. Causes severe burns.

Section 5. Fire-fighting Measures

Suitable Extinguishing Media: Carbon dioxide, foam, dry chemical, water fog.

Unsuitable extinguishing media: High volume water jet.

Specific Hazards Arising from the Chemical (Under Fire Conditions): No data available.



Special Protective Equipment and Precautions for Fire-fighters: Use personal protective equipment. Wear self-contained breathing apparatus for firefighting if necessary, with a full face-piece operated in positive pressure mode to protect against potential harmful and/or irritating fumes. Use water to keep fire exposed containers cool.

Section 6. Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).

Environmental Precautions: Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.

Methods and Material for Containment and Cleaning Up: Move containers from spill area. Dike and absorb with inert absorbent material (e.g., sand) and collect in a suitable, closed and labeled container. Wash the spill area with water and detergent. Dispose of in accordance with applicable local and federal environmental control regulations.

Section 7. Handling and Storage

Precautions for Safe Handling: Put on appropriate personal protective equipment (see Section 8). Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Do not reuse empty container.

Conditions for safe storage including any incompatibilities: Store in a cool, dry place with adequate ventilation. Keep in original containers. Store in tightly closed containers to prevent moisture absorption and loss of volatiles. Store away from heat and open flame.

Section 8. Exposure Controls/Personal Protection

Exposure Limits:

Component	Exposure limits			US WEEL
	ACGIH	NIOSH	OSHA-PELs	
m-phenylenebis(methylamine)	0.1 mg/m ³	0.1 mg/m ³	0.1 mg/m ³	-
Triethylenetetramine	-	-	-	1 ppm
Titanium Dioxide	10 mg/m ³ – TWA	-	10 mg/m ³ (total dust) TWA	-

Appropriate Engineering Controls: Ventilation must be adequate for most operations.

Personal Protective Equipment:

Respiratory protection: In the case of dust or aerosol formation use respirator with an approved filter. Dust safety masks are recommended when the dust concentration is more than 10 mg/m³.

Hand protection: The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Eye protection: Eye wash bottle with pure water. Tightly fitting safety goggles. Wear face-shield and protective suit for abnormal processing problems.

Skin and body protection: Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures: When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.

Section 9. Physical and Chemical Properties

Physical State:	Paste
Colour:	Black
Odour:	Ammoniacal
pH:	>10
Melting Point/ Freezing Point:	No data available
Boiling point:	No data available
Flash Point:	122 °C
Evaporation rate (ether=1):	No data available
Flammability (solid, gas):	No data available
Lower and Upper Explosion limits/ Flammability Limits:	No data available
Vapour Pressure:	No data available
Relative Vapour Density:	No data available
Relative Density:	0.92
Solubilities:	Soluble in water
Partition coefficient (n-octanol/water):	No data available
Auto-ignition temperature:	No data available
Decomposition Temperature:	No data available
Viscosity:	No data available
Explosive properties:	No data available
Oxidizing properties:	No data available

Section 10. Stability and Reactivity

Reactivity: Stable

Chemical Stability: Stable under standard normal conditions.

Possibility of Hazardous reactions: None under normal processing.

Conditions to Avoid: To avoid thermal decomposition, do not overheat. Incompatible products.

Incompatible Materials / Chemicals: Keep uncured material away from strong acids, strong bases, oxidizing agents.

Hazardous Decomposition Products: Uncontrolled exothermic reaction of resin releases carbon monoxide, carbon dioxide, phenols.

Section 11. Toxicological Information

Acute toxicity: Not classified based on available information.

Dermal: Acute toxicity estimate: 4,326 mg/kg. Calculation method



Skin corrosion/irritation: Causes severe burns. Extremely corrosive and destructive to tissue.

Serious eye damage/irritation: Causes serious eye damage. May cause irreversible eye damage.

Skin sensitization: May cause an allergic skin reaction.

Respiratory sensitization: Not classified based on available information.

Germ cell mutagenicity: Not classified based on available information.

Carcinogenicity:

OSHA No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

NTP No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive Toxicity: Not classified based on available information.

STOT - single exposure: Not classified based on available information.

STOT - repeated exposure: Not classified based on available information.

Aspiration Toxicity: Not classified based on available information.

Section 12. Ecological Information

Toxicity: No additional information available.

Persistence and degradability: No additional information available.

Bioaccumulative potential:

For m-phenylenebis(methylamine): Partition coefficient: n-octanol/water: log Pow: 0.18 (25 °C)

Mobility in soil: No additional information available.

Other adverse effects: Ozone-Depletion Potential: Regulation: 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances. Remarks: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B). Additional ecological information: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Harmful to aquatic life with long lasting effects.

Section 13. Disposal Considerations

Waste treatment methods: Do not dump to ground, sewers or watercourses. Dispose of at a licensed waste disposal facility utilizing methods that are in compliance with all applicable federal, state and local laws regulations. Waste characterization and compliance with applicable laws are the responsibility solely of the waste generator.

Uncleaned packaging: Empty containers should be taken to an approved waste handling site for recycling or disposal.

Section 14. Transport Information

International Regulation

IATA-DGR

UN/ID No.: UN 2735

Proper shipping name: Amines, liquid, corrosive, n.o.s. (Triethylenetetramine)

Class: 8

Packing group: III

Labels: Corrosive

Packing instruction (cargo aircraft): 856

Packing instruction (passenger aircraft): 852

**IMDG-CODE**

UN/ID No.: UN 2735

Proper shipping name: Amines, liquid, corrosive, n.o.s. (Triethylenetetramine)

Class: 8

Packing group: III

Labels: 8

EmS Code: F-A, S-B

Marine pollutant: No

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: Not applicable for product as supplied.

National Regulations**49 CFR**

UN/ID No.: UN 2735

Proper shipping name: Amines, liquid, corrosive, n.o.s. (Triethylenetetramine)

Class: 8

Packing group: III

Labels: Corrosive

ERG Code: 154

Marine pollutant: No

Section 15. Regulatory Information**EPCRA - Emergency Planning and Community Right - to - Know Act****CERCLA Reportable Quantity:** This material does not contain any components with a CERCLA RQ.**SARA 304 Extremely Hazardous Substances Reportable Quantity:** This material does not contain any components with a section 304 EHS RQ.**SARA 311/312 Hazards:** Chronic Health Hazard. Acute Health Hazard.**SARA 302:** No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.**SARA 313:** This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.**Clean Air Act:** This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B). This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 12 (40 CFR 61). This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F). This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCMII Intermediate or Final VOC's (40 CFR 60.489).**Clean Water Act:** This product does not contain any Hazardous Substances listed under the U.S. Clean Water Act, Section 311, Table 116.4A. This product does not contain any Hazardous Chemicals listed under the U.S. Clean Water Act, Section 311, Table 117.3. This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307.**California Prop 65:** This product contains a chemical known to the State of California to cause cancer: Titanium Dioxide (13463-67-7)

**Section 16. Other Information**

The information contained herein is based on the data available to us and is believed to be accurate. The data is offered in good faith as typical values and not as product specification. The information in this data sheet was compiled from information supplied by the vendors of the components of this compound. CSNRI makes no warranty either expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof. The recommended industrial hygiene and safe handling procedures are believed to be genuinely applicable. However, each user should review these recommendations in the specific context of the intended use and determine whether they are appropriate. CSNRI assumes no responsibility for injury from the use of the product described herein. The information is intended only to assist in the safe handling of this material. CSNRI DISCLAIMS ALL EXPRESS AND IMPLIED WARRANTIES INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, OR FREEDOM FROM PATENT INFRINGEMENT. CSNRI WILL NOT BE LIABLE FOR ANY SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES.

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