

Section 1. Identification

Product Name: EPN-453 Part A
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: Epoxy resin
Product Use: Intended to repair pipes

Section 2. Hazards Identification**GHS Classification**

Acute toxicity / oral – Category 4
Skin corrosion / irritation – Category 2
Eye damage / irritation – Category 2A
Skin sensitization – Category 1B
Germ cell mutagenicity – Category 2
Specific target organ toxicity (RE) – Category 2
Aquatic chronic – Category 2

Hazard pictograms:

Signal word: Warning

Hazard statements:

H302 Harmful if swallowed.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H341 Suspected of causing genetic defects.
H373 May cause damage to organs (gastrointestinal / oral) through prolonged or repeated exposure.
H411 Toxic to aquatic life with long lasting effects.

Precautionary statements:

P280 Wear protective gloves/ eye protection/ face protection.
P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. Rinse mouth.
P302 + P352 IF ON SKIN: Wash with plenty of soap and water. P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards: None known.

Section 3. Composition/Information on Ingredients**Substance/Mixture:** Preparation**Hazardous components:**

Chemical Name	CAS No.	Weight %
Aluminum oxide	1344-28-1	30 – 50
4,4'-Methylenebis(N,N-diglycidylaniline)	28768-32-3	20 – 30
N,N-Diglycidyl-4-glycidyoxyaniline	5026-74-4	20 – 30
phenol, 4, 4' - (1 - methylethylidene)bis - ,polymer with (chloromethyl)oxirane	25068-38-6	1 – 5

Section 4. First Aid Measures**Description of first-aid measures:**

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

Inhalation: If unconscious place in recovery position and seek medical advice. If symptoms persist, call a physician.

Skin contact: If skin irritation persists, call a physician. If on skin, rinse well with water. If on clothes, remove clothes.

Eye contact: Immediately flush eye(s) with plenty of water. Remove contact lenses. Protect unharmed eye. Keep eye wide open while rinsing. If eye irritation persists, consult a specialist.

Ingestion: Induce vomiting immediately and call a physician. Keep respiratory tract clear. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.

Most important symptoms and effects, both acute and delayed: Harmful if swallowed. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. May cause respiratory irritation.

Section 5. Fire-fighting Measures

Unsuitable extinguishing media: High volume water jet.

Specific hazards during fire-fighting: Do not allow run-off from fire-fighting to enter drains or water courses.

Further information: Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

Special protective equipment for firefighters: Wear self-contained breathing apparatus for fire-fighting if necessary.

Section 6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures: Use personal protective equipment.

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: Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal.

Section 7. Handling and Storage

Advice on protection against fire and explosion: Normal measures for preventive fire protection.

Advice on safe handling: Avoid formation of aerosol. Do not breathe vapours/dust. Avoid exposure - obtain special instructions before use. Avoid contact with skin and eyes. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Provide sufficient air exchange and/or exhaust in work rooms. Dispose of rinse water in accordance with local and national regulations. Persons susceptible to skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.

Conditions for safe storage: Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Observe label precautions. Electrical installations / working materials must comply with the technological safety standards.

Section 8. Exposure Controls/Personal Protection

Exposure limits:

Component	Value type (Form of exposure)	Control parameters / Permissible Concentration	Basis
Aluminum oxide	TWA (total dust)	15 mg/m ³	OSHA Z-1
	TWA (respirable fraction)	5 mg/m ³	OSHA Z-1
	TWA (total dust)	10 mg/m ³	OSHA P0
	TWA (respirable fraction)	5 mg/m ³	OSHA P0

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

Personal protection equipment:

Respiratory protection: In the case of vapour formation use a respirator with an approved filter.

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: Impervious clothing. 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:	No data available
Odour:	Mild
pH:	No data available
Melting Point/ Freezing Point:	No data available
Boiling point:	No data available

Flash Point:	No data available
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:	No data available
Solubilities:	No data available
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: No decomposition if stored and applied as directed.

Chemical stability: No decomposition if stored and applied as directed.

Possibility of hazardous reactions: No decomposition if stored and applied as directed.

Conditions to avoid: No data available.

Incompatible Materials / Chemicals: No data available.

Hazardous Decomposition Products: No data available.

Section 11. Toxicological Information

Acute toxicity: Harmful if swallowed.

Oral: Acute toxicity estimate: 1,808 mg/kg
Method: Calculation method

Skin corrosion/irritation: Causes skin irritation. May cause skin irritation and/or dermatitis.

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

Skin sensitisation: May cause an allergic skin reaction.

Respiratory sensitisation: Not classified based on available information.

Germ cell mutagenicity: Not classified based on available information.

Carcinogenicity: Not classified based on available information.

IARC No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA No component of this product present at levels greater than or equal to 0.1% is identified as a 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: May cause respiratory irritation.

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

Aspiration toxicity: Not classified based on available information.

Section 12. Ecological Information

Ecotoxicity: No data available.

Persistence and degradability: No data available.

Bioaccumulative potential: No data available.

Mobility in soil: No data 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. Toxic 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 3082

Proper shipping name: Environmentally hazardous substance, liquid, n.o.s. (4,4'-Methylenebis(N,N-diglycidylaniline)

Class: 9

Packing group: III

Labels: Miscellaneous Dangerous Goods

Packing instruction (cargo aircraft): 964

Packing instruction (passenger aircraft): 964

IMDG-CODE

UN/ID No.: UN 3082

Proper shipping name: Environmentally hazardous substance, liquid, n.o.s. (4,4'-Methylenebis(N,N-diglycidylaniline)

Class: 9

Packing group: III

Labels: 9

EmS Code: F-A, S-F

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 3082

Proper shipping name: Environmentally hazardous substance, liquid, n.o.s. (4,4'-Methylenebis(N,N-

diglycidylaniline)
Class: 9
Packing group: III
Labels: Class 9
ERG Code: 171

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 SOCM 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 does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

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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