Section 1. Product and Company Identification

Product Name: EPN 242 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: Resin
Product Use: Intended to repair pipes

Section 2. Hazards Identification

Classification of the substance or mixture
Skin corrosion/irritation – Category 2
Eye damage/irritation – Category 2A
Sensitization - Skin – Category 1
Chronic aquatic toxicity – Category 2

Hazard pictograms:

Signal word: Warning
Hazard statements:
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H411 Toxic to aquatic life with long lasting effects.

Precautionary statements:
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P264 Wash skin thoroughly after handling.
P273 Avoid release to the environment.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P337 + P313 If eye irritation persists: Get medical advice/ attention.
P362 Take off contaminated clothing and wash before reuse.
P391 Collect spillage.
P403 + P233 Store in a well - ventilated place. Keep container tightly closed.
Other hazards: None known.

Section 3. Composition/Information on Ingredients

Substance/Mixture: Preparation
Chemical nature: Epoxy constituents
Hazardous components:

Component	CAS #	% Composition
Aluminum oxide	1344-28-1	30 – 50
phenol, 4, 4'-(1-methylethylidene) bis-polymer with (chloromethyl) oxirane	25068-38-6	20 – 30
Phenol, polymer with formaldehyde, glycidyl ether	28064-14-4	20 – 30
Neopentyl Glycol Diglycidyl Ether	17557-23-2	1 – 5
Titanium Dioxide	13463-67-7	0.1 – 1

Section 4. First Aid Measures

First Aid Measures for Accidental:
Eye Contact: Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.
Skin Contact: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.
Ingestion: Do not induce vomiting. Drink plenty of water. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.
Inhalation: Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.
Most important symptoms/effects, acute and delayed: Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. May cause respiratory irritation. Suspected of causing cancer.
Indication of immediate medical attention and special treatment needed: Treat symptomatically.

Section 5. Fire-fighting Measures

Suitable Extinguishing Media: Carbon dioxide, foam, dry chemical, water fog.
Unsuitable Extinguishing Media: Do not use high volume water jet on the fire as this may spread the area of the fire.
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: Approach release from upwind. Prevent entry into sewers, water courses, basements, or confined areas.
Methods and Materials 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		
	ACGIH	NIOSH	OSHA-PELs
Aluminum oxide			10 mg/m^3 TWA (total dust) 5 mg/m^3 TWA (respirable fraction)
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 case of inadequate ventilation wear respiratory protection. Use respirators when exposure to vapors from heated material.
Eye / Face Protection: Wear safety glasses with side shields or chemical splash goggles when exposure is more likely.
Skin Protection: Wear chemical resistant gloves (nitrile-butyl rubber, neoprene, butyl rubber or natural rubber) and full body-covering clothing.
Additional protective measures: Wash hands, forearms, and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Section 9. Physical and Chemical Properties

Physical State: Paste

Colour:	Gray
Odour:	Slight
pH:	Neutral
Melting Point/ Freezing Point:	No data available
Boiling point:	No data available
Flash Point:	>150 °C (Closed cup)
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:	0.9075 at 75 ^{0}F
Solubilities:	Practically insoluble in water
Partition coefficient (n-octanol/water):	No data available
Auto-ignition temperature:	No data available
Decomposition Temperature:	No data available
Viscosity:	1,910,000 cP (Rheomether RheoStress RS150)
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. Hazardous polymerization will not occur by itself.
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.

Oral: Acute toxicity estimate: > 5,000 mg/kg Method: Calculation method
Dermal: Acute toxicity estimate: > 5,000 mg/kg Method: Calculation method
Skin sensitization: May cause an allergic skin reaction.
Respiratory sensitization: Not classified based on available information.

For Phenol, polymer with formaldehyde, glycidyl ether:

Oral: LD50 (rat): > 2,000 mg/kg
Dermal: LD50 (rabbit): > 2,000 mg/kg
Skin corrosion/irritation: Causes skin irritation.

For Phenol, polymer with formaldehyde, glycidyl ether:

Species: Rabbit

Assessment: Irritating to skin.
Result: Irritating to skin.
Serious eye damage/irritation: Causes serious eye irritation.

For Phenol, polymer with formaldehyde, glycidyl ether:
Species: Guinea pig
Result: Causes sensitisation.
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: 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

Toxicity:
For Phenol, polymer with formaldehyde, glycidyl ether:
Toxicity to fish**:** LC50 (Fish): 1 - 10 mg/l
Exposure time: 96 h
Remarks: Information given is based on data obtained from similar substances.

Persistence and degradability: No additional information available.
Bioaccumulative potential: No additional information available.
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).

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. (Phenol, polymer with formaldehyde, glycidyl ether)
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. (Phenol, polymer with formaldehyde, glycidyl ether)
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. (Phenol, polymer with formaldehyde, glycidyl ether)
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 SOCMI 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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