

Section 1. Product and Company Identification

Product Name: EPN-331 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
Chemical Name or Synonym: N/A

Section 2. Hazards Identification

Classification of the substance or mixture:

Skin corrosion/irritation – Category 2
 Eye damage/eye irritation – Category 2A
 Skin sensitization - Category 1
 Chronic Aquatic Toxicity – Category 2

Label Elements:



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

Signal Word: Warning

Precautionary Statement:

P362 - Take off contaminated clothing and wash before reuse
 P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 P280 - Wear protective gloves/ protective clothing/ eye protection/ face protection
 P302 + P352 - IF ON SKIN: Wash with plenty of soap and water
 P273 - Avoid release to the environment
 P391 - Collect spillage

Section 3. Composition/ Information on Ingredients

Chemical Name	CAS-No	Weight %
Phenol-formaldehyde polymer, glycidyl ether	28064-14-4	40 – 55
Trimethylolpropane triglycidyl ether polymer	30499-70-8	5 – 10
Siloxanes and silicones, di-Me, reaction products with silica	67762-90-7	3 – 10



Propane 2,2 bis [p-2,3 epoxypropoxy) phenyl]-polymers	25085-99-8	1 – 5
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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: Itching. Rashes. Eye irritation/reactions. Skin irritation.

Indication of immediate medical attention and special treatment needed: May cause sensitization of susceptible persons. 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.

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.

Specific Hazards Arising from the Chemical (Under Fire Conditions): Combustion products may include, but are not limited to: phenols, carbon monoxide, carbon dioxide.

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). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. 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 Guidelines: No data available.

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:	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:	0.9075 at 75 °F
Solubilities:	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 (Rheometer 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. Reacts with amines.

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

Section 11. Toxicological Information

Information in the likely route of exposure:

Potential Acute Health Effects:

Inhalation: No known effect.

Ingestion: May cause irritation

Skin contact: Irritating to skin. May cause sensitization.

Eye contact: Irritating to eyes.

Symptoms related to the physical, chemical and toxicological characteristics:

Sensitization: May cause sensitization of susceptible persons. May cause sensitization by skin contact.

Mutagenic Effects: No information available.

Carcinogenic Effects: No information available.

Reproductive Toxicity: No information available.

Developmental Toxicity: No information available.

STOT- single exposure: No information available.

STOT- repeated exposure: No information available.

Target Organ Effects: No information available.

Aspiration Hazard: No information available.

Delayed and immediate effects and also chronic effects from short- and long-term exposure:

Short term exposure: No information available.

Long term exposure: No information available.

Numerical measures of toxicity:

**Acute toxicity:**

Product	Endpoint	Species	Results	Exposure
Phenol-formaldehyde polymer, glycidyl ether	LD50 Oral LD50 Dermal	Rat Rabbit	>2000 mg/kg >2000 mg/kg	-
Trimethylolpropane triglycidyl ether (30499-70-8)	LD50 Oral LD50 Dermal	Rat Rabbit	>2000 mg/kg >2000 mg/kg	-

Section 12. Ecological Information**Ecotoxicity Effects:****Data for components:**

Propane 2,2 bis[p-2,3 epoxypropoxy) phenyl]-polymers: Material is moderately toxic to aquatic organisms on an acute basis (LC50/EC50 between 1 and 10 mg/L in the most sensitive species tested). Fish Acute & Prolonged toxicity: For similar material: LC50, Oncorhynchus mykiss (rainbow trout), semi-static test, 96h: 2 mg/l

Aquatic Invertebrate Acute Toxicity: EC50, Daphnia (water flea), static test 48h, immobilization; 1.8 mg/l
Aquatic Plant Toxicity: ErC50, Scenedesmus capricornutum (freshwater algae), static test, Growth rate inhibition, 72h: 11 mg/l

Toxicity to Microorganisms: IC50; bacteria, 18h: >42.6 mg/l

Aquatic Invertebrate Chronic Toxicity Value: Daphnia magna (water flea), semi-static test, 21d, NOEC: 0.3mg/l.

Phenol-formaldehyde polymer, glycidyl ether: Acute LC50 (Leuciscus idus): 5.7 mg/L
Acute EC50 (Daphnia Magna): 3.5 mg/L

Trimethylolpropane triglycidyl ether: LC50 (Freshwater fish): 10 – 100 mg/L.
EC50 (Algae): > 100 mg/L

Persistence and degradability:

Propane 2,2 bis[p-2,3 epoxypropoxy)phenyl]-polymers: Based on stringent OECD test guidelines, this material cannot be considered as readily biodegradable; however, these results do not necessarily mean that the material is not biodegradable under environmental conditions.

OECD Biodegradation Tests:

Biodegradation	Exposure Time	Method	10 Day Window
12%	28d	OECD 302B Test	Not applicable

Bioaccumulative potential: Bioconcentration potential is moderate.

Mobility in soil: Adsorbs on soil.

Other adverse effects: No information available

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

DOT: Not Regulated

IATA

UN-Number: UN3082

Proper Shipping Name: Environmentally hazardous substance, liquid, n.o.s. (Phenol-formaldehyde polymer, glycidyl ether)

Hazard Class: 9

Packing Group: III

Note: When packed with non-DG materials Special Provision A197 applies for inner container quantities of 5L or less.

ERG Code: 9L

IMDG/IMO

UN-Number: UN3082

Proper Shipping Name: Environmentally hazardous substance, liquid, n.o.s. (Phenol-formaldehyde polymer, glycidyl ether)

Hazard Class: 9

Packing Group: III

Marine Pollutant: Product is a marine pollutant according to the criteria set by IMDG/IMO.

Environmental hazard: Yes

Special Provisions: None.

EmS No.: F-A, S-F

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: No information available.

Section 15. Regulatory Information

SARA Title III Section 311/312 (40CFR370): Acute health hazard

SARA Title III Section 313 (40CFR372): No reportable components.

CERCLA Status (40CFR302): No reportable quantity components.

California Proposition 65: This product contains trace amounts of Epichlorohydrin CAS 106-89-8.

TSCA Status: All components are listed on TSCA Inventory or otherwise comply with TSCA requirements.

Section 16. Other Information

Key Legend Information:

N/A – Not Applicable

ND – Not Determined

OSHA – Occupational Safety and Health Administration

NIOSH – National Institute for Occupational Safety and Health

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SAFETY DATA SHEET

EPN-331 PART A

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Date of issue: 02.25.19

Revision date: 08.11.22

Supersedes: 10.29.20

Version: 4