

## Section 1. Product and Company Identification

**Product Name:** EPN-101 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 resin  
**Product Use:** Intended to repair pipes  
**Chemical Name or Synonym:** N/A

## Section 2. Hazards Identification

### Classification of the substance or mixture:

Acute toxicity/oral – Category 4  
 Acute toxicity/dermal – Category 4  
 Skin corrosion/irritation – Category 1B  
 Skin sensitization - Category 1  
 Eye damage/irritation – Category 1  
 STOT (SE) – Category 3  
 Mutagenicity – Category 2  
 Reproductive toxicity – Category 1  
 Hazardous to the aquatic environment – Long Term (Chronic) Hazard – Category 3

### Label Elements:



### Hazard Statements:

H302 Harmful if swallowed  
 H312 Harmful in contact with skin  
 H314 Causes skin irritation.  
 H317 May cause an allergic skin reaction  
 H318 Causes serious eye damage  
 H335 May cause respiratory irritation  
 H341 Suspected of causing genetic defects  
 H360 May damage fertility or the unborn child.  
 H412 Harmful to aquatic life with long lasting effects

**Signal Word:** Danger

### Precautionary Statement:

P102: Keep out of reach of children.  
 P202: Do not handle until all safety precautions have been read and understood.  
 P260: Do not breathe dust/fumes/gas/mist/vapours/spray.  
 P301+312: IF SWALLOWED: Call a POISON CENTER/doctor/ 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



P280: Wear protective gloves/protective clothing/eye protection/face protection.

P302+352: IF ON SKIN: Wash with plenty of water/.

P501: Dispose of contents/container to hazardous or special waste collection point

### Section 3. Composition/ Information on Ingredients

Chemical Name	CAS-No	Weight %
Formaldehyde, oligomeric reaction products with phenol and triethylenetetramine	32610-77-8	10 – 30
2,2'-iminodiethylamine	111-40-0	1 – 20
4,4'-isopropylidenediphenol	80-05-7	1 – 20
3,6-diazaoctanethylenediamine	112-24-3	1 – 20
Phenol	108-95-2	1 – 20

### 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:** Wash out mouth with water. Do not induce vomiting. Give 1 cup of water to drink every 10 minutes. If unconscious, check for breathing and apply artificial respiration if necessary. If unconscious and breathing is OK, place in the recovery position. Transfer to hospital as soon as possible.

**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:**

**Skin contact:** Blistering may occur. Progressive ulceration will occur if treatment is not immediate.

**Eye contact:** Corneal burns may occur. May cause permanent damage

**Ingestion:** Corrosive burns may appear around the lips. Blood may be vomited. There may be bleeding from the mouth or nose.

**Inhalation:** There may be shortness of breath with a burning sensation in the throat. Exposure may cause coughing or wheezing.

**Delayed / immediate effects:** Immediate effects can be expected after short-term exposure.

**Indication of immediate medical attention and special treatment needed:** No information available

### Section 5. Fire Fighting Measures

**Suitable Extinguishing Media:** Suitable extinguishing media for the surrounding fire should be used. Use water spray to cool containers.

**Unsuitable Extinguishing Media:** No information available.

**Special Protective Equipment and Precautions for Fire-fighters:** Wear self-contained breathing apparatus. Wear protective clothing to prevent contact with skin and eyes

**Specific Hazards Arising from the Chemical (Under Fire Conditions):** Corrosive. In combustion emits toxic fumes.



## 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 entry into sewers, water courses, basements or confined areas.

**Methods and Materials for Containment and Cleaning Up:** Clean-up should be dealt with only by qualified personnel familiar with the specific substance. Transfer to a closable, labelled salvage container for disposal by an appropriate method.

## 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. 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:** None established

**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. Self-contained breathing apparatus must be available in case of emergency. Respiratory protective device with particle filter.

**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

<b>Physical State:</b>	Paste
<b>Colour:</b>	Pale grey
<b>Odour:</b>	Ammoniacal
<b>Melting Point/ Freezing Point:</b>	No data available
<b>Boiling point:</b>	No data available



<b>Flammability (solid, gas):</b>	No data available
<b>Lower and Upper Explosion limits/ Flammability Limits:</b>	No data available
<b>Flash Point:</b>	No data available
<b>Auto-ignition Temperature:</b>	No data available
<b>Decomposition Temperature:</b>	No data available
<b>pH:</b>	No data available
<b>Solubility:</b>	No data available
<b>Evaporation rate (ether=1):</b>	No data available
<b>Flammability Limits in Air:</b>	No data available
<b>Solubility in other solvents:</b>	No data available
<b>Partition coefficient (n-octanol/water):</b>	No data available
<b>Vapour Pressure:</b>	No data available
<b>Viscosity:</b>	No data available
<b>Density and/or Relative Density:</b>	1.70 (water = 1)
<b>Relative Vapour Density:</b>	No data available
<b>Particle Characteristics:</b>	No data available

#### Section 10. Stability and Reactivity

**Reactivity:** Stable under recommended transport or storage conditions.

**Chemical Stability:** Stable under standard normal conditions.

**Possibility of Hazardous reactions:** Hazardous reactions will not occur under normal transport or storage conditions. Decomposition may occur on exposure to conditions or materials listed below

**Conditions to Avoid:** Heat.

**Incompatible Materials / Chemicals:** Strong acids. Strong oxidising agents.

**Hazardous Decomposition Products:** In combustion emits toxic fumes.

#### Section 11. Toxicological Information

**Information in the likely route of exposure:**

**Potential Acute Health Effects:**

**Acute toxicity:** Hazardous (Calculated basis). Route: Ingestion

**Corrosivity:** Hazardous (Calculated basis). Route: Dermal

**Sensitization:** Hazardous (Calculated basis). Route: Dermal

**Symptoms related to the physical, chemical and toxicological characteristics:**

**Irritation effect:** Hazardous (Calculated basis)

**Skin contact:** Blistering may occur. Progressive ulceration will occur if treatment is not immediate.

**Eye contact:** Corneal burns may occur. May cause permanent damage.

**Ingestion:** Corrosive burns may appear around the lips. Blood may be vomited. There may be bleeding from the mouth or nose.

**Inhalation:** There may be shortness of breath with a burning sensation in the throat. Exposure may cause coughing or wheezing.

**Potential Chronic Health Effects:**

**Sensitization:** No information available.

**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:** Immediate effects can be expected

after short-term exposure.

**Numerical measures of toxicity:**

Product	Endpoint	Species	Results	Exposure
2,2'-iminodiethylamine	LD50 Oral	Rat	970 mg/kg	-
	LD50 Oral	Mus	970 mg/kg	
	LD50 Intraperitoneal	Rat	74 mg/kg	
4,4'-isopropylidenediphenol	LD50 Oral	Mus	2,400 mg/kg	-
	LD50 Oral	Rat	3,250 mg/kg	
3,6-diazaoctanethylenediamine	LD50 Intravenous	Mus	350 mg/kg	-
	LD50 Oral	Mus	1,600 mg/kg	
	LD50 Oral	Rat	2,500 mg/kg	
Phenol	LD50 Oral	Mus	270 mg/kg	-
	LD50 Oral	Rat	317 mg/kg	
	LD50 Subcutaneous	Rat	460 mg/kg	

**Section 12. Ecological Information**

Ingredient	Species	Test	Value
Formaldehyde, oligomeric reaction products with phenol and triethylenetetramine	Fish	96hrs LC50	8.8 mg/L

**Ecotoxicity Effects:**

**Persistence and degradability:** Biodegradable.

**Bioaccumulative potential:** No Bioaccumulation potential.

**Mobility in soil:** No data available

**Results of PBT and vPvB assessment:** This product is not identified as a PBT/vPvB substance.

**Other adverse effects:** Negligible ecotoxicity.

**Section 13. Disposal Considerations**

**Waste treatment methods:** Transfer to a suitable container and arrange for collection by specialized disposal company. Mixed material, once fully cured, can be disposed as solid waste. The user's attention is drawn to the possible existence of regional or national regulations regarding disposal.

**Uncleaned packaging:** Dispose in a regulated landfill site or other method for hazardous or toxic wastes.

**Section 14. Transport Information**

**DOT / IMDG / IATA**

UN-Number: UN2735

Proper Shipping Name: Amine, liquid, corrosive, n.o.s (2,2'-iminodiethylamine)

Hazard Class: 8

Packing Group: III

Environmental hazard: No

**Section 15. Regulatory Information**

**Safety, health and environmental regulations/legislation specific for the substance or mixture:** No information available.

**Chemical Safety Assessment:** A chemical safety assessment has not been carried out for the substance or the mixture by the supplier.

**Section 16. Other Information**

This Safety Data Sheet in accordance with Regulation No. 2015/830.

**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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