

Section 1. Identification

Product Name: CMF-1™ Resin
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 solution
Product Use: Reinforcement for pipe repair

Section 2. Hazard Identification**Classification of the substance or mixture**

Skin corrosion / irritation – Category 2

Sensitization / Skin – Category 1

Eye damage / irritation – Category 2

Hazardous to the aquatic environment – long-term (chronic) hazard – 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:

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

P264 Wash hands thoroughly after handling.

P302 + P352 IF ON SKIN: Wash with plenty of 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.

P337 + P313 If eye irritation persists: Get medical advice/attention.

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P272 Contaminated work clothing should not be allowed out of the workplace.

P273 Avoid release to the environment.

P501 Dispose of contents/container in accordance with local/regional/national regulations.

Other hazards: Spills of this product present a serious slipping hazard.**Section 3. Composition/ Information on Ingredients****Substances:** Not applicable**Mixture:**

Component	CAS #	% Composition
phenol,4,4'-(1-methylethylidene)bis-, polymer with 2- (chloromethyl)oxirane	68123-18-2	80 - 90
Bisphenol-A-(Epichlorhydrin); epoxy resin	25068-38-6	5 - 8
Phenol, polymer with formaldehyde, glycidyl ether	28064-14-4	3 - 5

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

Inhalation: Remove person to fresh air and keep comfortable for breathing. IF exposed or concerned: Get medical advice/attention.

Skin contact: Rinse skin with plenty of water. Take off contaminated clothing, shoes and leather goods (e.g. watchbands, belts). Wash with plenty of lukewarm, gently flowing water for 15-20 minutes. Continue washing with soap and water. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before re-use.

Eye contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing for several minutes, while holding the eyelids open. If eye irritation persists, get medical advice/attention.

Ingestion: If swallowed, rinse mouth with water (only if the person is conscious). Do not induce vomiting. Obtain emergency medical attention. Call a POISON CENTER or doctor/physician.

Most important symptoms and effects, both acute and delayed: No additional information available

Indication of any immediate medical attention and special treatment needed, if necessary: Treat symptomatically. Contact poison center immediately if large quantities have been ingested or inhaled. If it is suspected that fumes are still presented, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing breathing mouth to mouth resuscitation.

Section 5. Fire Fighting Measures

Suitable extinguishing media: Use fire-extinguishing media appropriate for surrounding materials, such as: foam, dry powder, carbon dioxide, water spray, and sand. Simultaneous use of foam and water on the same surface is to be avoided as water destroys the foam.

Unsuitable extinguishing media: Do not use a solid water stream as it may scatter and spread fire.

Special hazards arising from the substance or mixture: Hazardous thermal decomposition products: Thermal decomposition products may contain carbon monoxide, carbon dioxide, halogenated compounds.

Special protective actions for fire-fighters: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment. Do not enter fire area without proper protective equipment, including respiratory protection. Other information: Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks).

Section 6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures: Isolate immediate hazard area and keep unauthorized personnel out. Stop leak if safe to do so. Special danger of slipping by leaking/spilling

product. Avoid contact with eyes and skin. Avoid breathing mist and vapors.

For non-emergency personnel: 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 touch or walk through spilled material. Provide adequate ventilation. Avoid breathing mist or vapors.

For emergency responders: Put on appropriate personal protective equipment. If specialized clothing is required to deal with the spillage, take note of any information in section 8 of suitable and unsuitable materials.

Environmental precautions: Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters. Avoid disposal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Methods and material for containment and cleaning up: Small spill: Stop leak if possible to do so without risk. Move containers from spill area. Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect all waste in suitable and labelled containers and dispose according to local legislation. Store away from other materials. Ensure all national/local regulations are observed. Large spill: Stop leak if possible to do so without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, watercourses, basements or confined areas.

Section 7. Handling and Storage

Precautions for safe handling: Read label before use. Ensure good ventilation of the workstation. Avoid contact with skin and eyes. Avoid breathing mist, vapors and spray. Wear personal protective equipment. Use only with adequate ventilation to control air contaminants to their exposure limits. The use of local ventilation is recommended to control emissions near the source. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

Conditions for safe storage, including any incompatibilities: Storage conditions: Keep only in the original container in a cool well-ventilated place. Keep container tightly closed when not in use. Keep away from incompatible materials. Keep away from sources of heat and protect from physical damage. Indoor storage should meet OSHA standards and appropriate fire codes. Containers that have been opened must be carefully resealed to prevent leakage. Empty container retain residue and may be dangerous. Incompatible materials include the following: strong oxidizing agents, strong acids and aliphatic amines.

Section 8. Exposure Controls / Personal Protection

Control parameters: No additional information available.

Appropriate engineering controls: Ensure good ventilation of the workstation. Use only with adequate ventilation. Local exhaust or ventilation or other engineering controls must be provided to keep worker exposure to airborne containment below recommended levels. Emergency eye wash fountains should be available in the immediate vicinity of any potential exposure.

Individual protection measures:

Eye protection: Wear eye protection with side shields or goggles. Wear indirect-vent, impact and splash resistant goggles when working with liquids. If additional protection is needed for the entire face, use in combination with a face shield.

Skin and body protection: Use of an apron and boots of chemically impervious materials such as neoprene or nitrile rubber is recommended to avoid skin sensitization. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection: If engineering controls do not maintain airborne concentrations to a level which is adequate to protect the worker, a respiratory protection program that meets or is equivalent to OSHA 29 CFR 1910.134 and ANSI Z88.2 should be followed. Check with respiratory protective equipment suppliers.

Hand protection: Wear gloves. Use of gloves approved to relevant standards made from the following materials may provide suitable chemical protection: PVC, neoprene or nitrile rubber gloves. Suitability and durability of gloves are dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, glove thickness, and dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced.

Other information: Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

Section 9. Physical and Chemical Properties

Physical state:	Viscous Liquid
Color:	Light yellow
Odor:	No data available
Odor threshold:	No data available
Melting point:	No data available
Freezing point:	No data available
Boiling point:	No data available
Flammability (solid, gas):	Not applicable
Flash point:	~ 400 °F
Auto-ignition temperature:	No data available
Decomposition temperature:	No data available
pH:	No data available
Viscosity, kinematic:	No data available
Viscosity:	No data available
Solubility:	Negligible
Vapor pressure:	No data available
Density:	~ 1.17 (water=1)
Relative vapor density at 20 °C:	No data available
Relative evaporation rate (butyl acetate=1):	No data available
Explosive properties:	No data available
Oxidizing properties:	No data available
Explosive limits:	No data available

Section 10. Stability and Reactivity

Reactivity: The product is stable at normal handling and storage conditions.

Chemical stability: The product is stable at normal handling and storage condition.

Possibility of hazardous reactions: Hazardous polymerization will not occur.

Conditions to avoid: Extremes of temperature and direct sunlight.

Incompatible materials: Strong oxidizing agents. Strong acids. Aliphatic amines.

Hazardous decomposition products: Under normal conditions of storage and use, hazardous decomposition products should not be produced. Thermal decomposition products may contain carbon monoxide, carbon dioxide, halogenated compounds. Some curing agents react with significant heat release. Some cure reaction may drive char and decompose the resin system, generating unidentified fumes, and vapors, which may be toxic. Heating this substance above 300 °F in the presence of air may cause slow oxidative decomposition. Above 500 °F polymerization may occur. Some combination of resin and curing agent can produce the exothermic reaction, which in large masses can cause runaway polymerization and charring of the reactants.

Section 11. Toxicological Information

Acute toxicity: Not classified (Based on available data, the classification criteria are not met).

Skin corrosion/irritation: Causes skin irritation. No test data available. Irritation properties are evaluated according to the criteria of the third revision of the GHS.

Serious eye damage/irritation: Causes serious eye irritation. No test data available. Irritation properties are evaluated according to the criteria of the third revision of the GHS.

Respiratory or skin sensitization: May cause an allergic skin reaction. No test data available. Irritation properties are evaluated according to the criteria of the third revision of the GHS.

Germ cell mutagenicity: Not classified (Based on available data, the classification criteria are not met).

Carcinogenicity: Not classified (Based on available data, the classification criteria are not met).

Reproductive Toxicity: Not classified (Based on available data, the classification criteria are not met).

Developmental Toxicity: Not classified (Based on available data, the classification criteria are not met)

STOT - single exposure: May cause respiratory irritation.

STOT - repeated exposure: Not classified (Based on available data, the classification criteria are not met).

Aspiration Hazard: Not classified. (Based on available data, the classification criteria are not met).

Information on the likely route of exposure:

Inhalation: May cause respiratory irritation.

Eye Contact: May irritate the eyes.

Skin Contact: May irritate the skin.

Ingestion: May be harmful if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics: No specific data available.

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

Short term exposure: No specific data available.

Long term exposure: No specific data available.

Numerical measures of toxicity: No specific data available.

Section 12. Ecological Information

Toxicity: The product is toxic to aquatic life with long lasting effects.

Persistence and degradability: No additional information available.

Bioaccumulative potential: No additional information available.

Mobility in soil: No additional information available.

Other adverse effects: No additional information available.

Section 13. Disposal Considerations

Waste treatment methods: Under RCRA it is the responsibility of the user of the product to determine at the time of disposal whether the product meets RCRA criteria for hazardous waste. Waste management should be in full compliance with federal, state and local laws. Empty Containers retain product residue which may exhibit hazards of material, therefore do not pressurize, cut, glaze, weld or use for any other purposes. Return drums to reclamation centers for proper cleaning and reuse. Avoid release to the environment. DO NOT FLUSH TO SEWER, WATERSHED, OR WATERWAY.

Section 14. Transport Information

DOT: Not regulated for transport.

IMDG / IATA / ICAO:

UN Number:	3082
UN Proper shipping name:	Environmentally hazardous substance, liquid, n.o.s. (phenol,4,4'-(1-methylethylidene)bis-, polymer with 2-(chloromethyl)oxirane)
Transport hazard class:	9
Packing group:	III
Environmental hazards:	Yes
Special precautions for user:	None known

Section 15. Regulatory Information

Safety, health and environmental regulations/legislation specific for the substance or mixture:

US federal regulations:

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory. This product or mixture does not contain a toxic chemical or chemicals in excess of the applicable concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

US state regulations:

California Proposition 65 - This product does not contain substances known to the state of California to cause cancer, developmental and/or reproductive harm at low concentration.

Section 16. Other Information

Abbreviations and acronyms used:

ANSI:	American Nation Standards Institute
CAS:	Chemical Abstracts Service
CFR:	Code of Federal Regulation
DOT:	Department of Transportation
GHS:	Globally Harmonized System
IATA:	International Air Transport Association
ICAO:	International Civil Aviation Organization
IMDG:	International Maritime Dangerous Goods
OSHA:	Occupational Safety and Health Administration
PVC:	Polyvinyl Chloride
RCRA:	Resource Conservation and Recovery Act
TSCA:	Toxic Substances Control Act

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