



1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Concrete Crack Repair (Part A – Hardener)
RED LION PART NUMBER: 74508 (Part A)
PRODUCT TYPE: Epoxy Putty
CHEMICAL FAMILY: N/A

DATE PREPARED: 4/1/99

CHROMATE INDUSTRIAL CORPORATION
 100 DaVinci Drive, Bohemia, NY 11716 • (888) 567-2206

2. COMPOSITION / INFORMATION ON INGREDIENTS

CHEMICAL NAME	% BY WEIGHT	OSHA PEL	ACGIH TLV	STEL	CAS #
Benzyl Alcohol	>45	N/D	N/D	N/D	100-51-6
4,4-Methylenebis(cyclohexanamine)	<5	N/D	N/D	N/D	Unknown

* An asterisk (*) indicates the toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 and 40 CFR 372.

3. HAZARDS IDENTIFICATION

PRIMARY ROUTES OF ENTRY: Ingestion, Skin, Eyes

EFFECTS OF OVEREXPOSURE:

INHALATION: Dryness of nasal passages may occur when inhaled over a long period of time.

INGESTION: None known

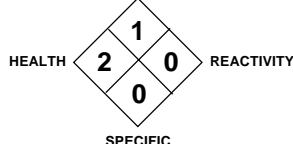
SKIN CONTACT: Dryness, defatting, itching, rash, mild discomfort. Repeated or prolonged contact may cause allergic reaction, sensitization.

EYE CONTACT: Vapor in low concentrations can cause lacrimation, conjunctivitis and corneal edema when absorbed in eye tissue.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Allergies, skin disorders and eye disease.

HAZARD RATINGS

NFR: FLAMMABILITY



HMS:

2	HEALTH
1	FLAMMABILITY
0	REACTIVITY
B	PROTECTION

4. FIRST AID MEASURES

EMERGENCY FIRST AID PROCEDURES:

INHALATION: Remove to fresh air. If breathing is stopped or labored, give assisted respiration. Prevent aspiration of vomit. Seek medical attention.

INGESTION: Call physician immediately. Remove stomach contents by gastric suction or induce vomiting only as directed by medical personnel.

SKIN CONTACT: Wash with soap and water.

EYE CONTACT: Flush with water, consult a physician.

5. FIRE FIGHTING MEASURES

FLASH POINT (METHOD USE): 219°F CC **FLAMMABLE LIMITS:** None **LEL:** N/D **UEL:** N/D

EXTINGUISHING MEDIA: Foam. Ignition will give rise to Class B fire. In case of large fire, use water spray, alcohol foam. In case of small fire, use carbon dioxide (CO₂), dry chemical, dry sand or limestone.

FIRE FIGHTING PROCEDURES: Wear self-contained breathing apparatus and full protective equipment.

UNUSUAL AND EXPLOSION HAZARDS: May generate toxic or irritating combustion productions, carbon monoxide gas and nitrogen oxide gas. Personnel in vicinity and downwind should be evacuated.

6. ACCIDENTAL RELEASE MEASURES

SPILLS OR LEAKS: Stop the leak, if possible. Reduce vapor spreading with water spray. Shut off or remove all ignition sources. Construct a dike to prevent spreading.

7. HANDLING AND STORAGE

SPECIAL PRECAUTIONS: Keep from freezing. Keep away from acids, alkalis, oxidizers. Store in steel containers, above ground. Do not store in iron or other metal reactive containers.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

RESPIRATORY: None required in a well ventilated workplace.

SKIN PROTECTION: Neoprene rubber, cuffed butyl rubber or nitrile rubber gloves.

EYE PROTECTION: Safety glasses

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Long sleeved clothing, safety showers.

WORK HYGIENIC PRACTICES: Wash thoroughly after handling. Launder contaminated clothing before reuse.

EXPOSURE GUIDELINES: General exhaust is not required.

ENGINEERING CONTROLS: No data available.

9. PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT: >431°F

VAPOR PRESSURE (mmHg): 0.70 mm @ 70°F

VAPOR DENSITY (AIR = 1): N/A

SOLUBILITY IN WATER: 0.1 - 1% Slight

APPEARANCE AND ODOR: Amber colored, mobile liquid with ammoniacal odor

SPECIFIC GRAVITY (H₂O = 1): 1.06

MELTING POINT: N/A

pH: Does not apply

EVAPORATION RATE (BUTYL ACETATE = 1): <1

FORM: Putty

10. STABILITY AND REACTIVITY

STABILITY: Stable

CONDITIONS TO AVOID: None

HAZARDOUS POLYMERIZATION: Will not occur

INCOMPATIBILITY (MATERIALS TO AVOID): Mineral acids, alkalis, organic acids, reducing agents, oxidizing agents, reactive metals, sodium or calcium hypochlorite. N-Nitrosamines, many of which are known to be carcinogens, may form when in contact with nitrous acid or nitrites.

Product slowly corrodes copper, aluminum, zinc and galvanized surfaces. Reaction with peroxides may result in explosion. A reaction accompanied by large heat release occurs when mixed with acids. Heat generated may cause boiling.

HAZARDOUS DECOMPOSITION OR BYPRODUCTS: Under fire - carbon monoxide, carbon dioxide, nitrogen oxide, nitric acid. Elevated temperatures - irritating and toxic fumes.

11. TOXICOLOGICAL INFORMATION

EYE: No data available. **SKIN:** No data available. **INGESTION:** No data available. **INHALATION:** No data available.

SUBCHRONIC: No data available.

CHRONIC CARCINOGENICITY:

CARCINOGENICITY: NTP: Not Listed

IARC MONOGRAPH: Not Listed

OSHA REGULATED: Not Regulated

TERATOLOGY: No data available.

REPRODUCTION: No data available.

MUTAGENICITY: No data available.

12. ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION: No data available.

CHEMICAL FATE INFORMATION: No data available.

13. DISPOSAL CONSIDERATIONS

RCRA HAZARD CLASS: Not a RCRA Hazardous Waste Material

WASTE DISPOSAL METHOD: If recovery is not feasible, admix with dry soil, sand or non reactive absorbent and place in a container pending disposal. Flush area with water spray. Dispose according to federal, state and local authorities only.

14. TRANSPORT INFORMATION

TRANSPORTATION REQUIREMENTS (49CFR172-101)

D.O.T. CLASSIFICATION: Not regulated

D.O.T. SHIPPING NAME: Not regulated

15. REGULATORY INFORMATION

EXPOSURE LIMITS: No data available.

16. OTHER INFORMATION

The information contained herein is based on data considered accurate. However, no warranty is expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof. Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in this MSDS. Additionally, vendor assumes no responsibility for injury to vendee or third persons proximately caused by abnormal use of the material even if reasonable safety procedures are followed. Furthermore, vendee assumes the risk in his use of the material.

N/D — NOT DETERMINED N/A — NOT APPLICABLE N/R — NOT REGULATED

Conforms to 29 CFR 1910.1200, OSHA

ANSI Z129.1 - 1988 American National Standard for Hazardous Industrial Chemicals



1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Concrete Crack Repair (Part B – Epoxy Resin) **DATE PREPARED:** 4/1/99
RED LION PART NUMBER: 74508 (Part B)
PRODUCT TYPE: Epoxy Putty **CHROMATE INDUSTRIAL CORPORATION**
CHEMICAL FAMILY: N/A 100 DaVinci Drive, Bohemia, NY 11716 • (888) 567-2206

2. COMPOSITION / INFORMATION ON INGREDIENTS

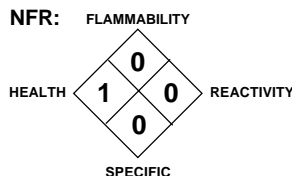
CHEMICAL NAME	% BY WEIGHT	OSHA PEL	ACGIH TLV	STEL	CAS #
Polymer of Epichlorohydrin and Bisphenol A	83-98	N/D	N/D	N/D	025085-99-8
Alkyl Glycidyl Ether	2-17	N/D	N/D	N/D	068609-97-2

* An asterisk (*) indicates the toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 and 40 CFR 372.

3. HAZARDS IDENTIFICATION

PRIMARY ROUTES OF ENTRY: Ingestion, Skin, Eyes
EFFECTS OF OVEREXPOSURE:
INHALATION: Excessive exposure may cause irritation to upper respiratory tract.
INGESTION: Single dose oral toxicity is low.
SKIN CONTACT: Has caused allergic skin reactions in humans. A single prolonged exposure is not likely to result in the material getting absorbed into skin.
EYE CONTACT: May cause temporary eye irritation.
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Allergies

HAZARD RATINGS



HMS:

1	HEALTH
0	FLAMMABILITY
0	REACTIVITY
B	PROTECTION

4. FIRST AID MEASURES

EMERGENCY FIRST AID PROCEDURES:
INHALATION: Remove to fresh air if effects occur. Consult physician.
INGESTION: Seek medical attention. Do not induce vomiting unless directed to do so by physician.
SKIN CONTACT: Wash with soap and water.
EYE CONTACT: Flush with water.

5. FIRE FIGHTING MEASURES

FLASH POINT (METHOD USE): 350-375°F CC **FLAMMABLE LIMITS:** None **LEL** N/D **UEL** N/D
EXTINGUISHING MEDIA: Foam, CO2, dry chemical
FIRE FIGHTING PROCEDURES: Wear positive pressure self-contained breathing apparatus and full protective equipment.
UNUSUAL AND EXPLOSION HAZARDS: None

6. ACCIDENTAL RELEASE MEASURES

SPILLS OR LEAKS: Isolate hazard. Keep spark producing equipment away. Keep out of sewers, storm drains, surface waters and soil. Soak up with absorbent material and collect in suitable containers. Residual resin may be removed with steam or hot soapy water.

7. HANDLING AND STORAGE

SPECIAL PRECAUTIONS: Keep from freezing. Do not contaminate with unknown chemicals.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

RESPIRATORY: Good general ventilation should be sufficient for most conditions. Local exhaust ventilation may be necessary for some operations.

SKIN PROTECTION: Impermeable protective gloves.

EYE PROTECTION: Safety glasses

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Impermeable clothing.

WORK HYGIENIC PRACTICES: Wash thoroughly after handling. Launder contaminated clothing before reuse.

EXPOSURE GUIDELINES: General exhaust is required.

ENGINEERING CONTROLS: No data available.

9. PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT: >300°F

VAPOR PRESSURE (mmHg): 0.06 mm @ 70°F

VAPOR DENSITY (AIR = 1): N/A

SOLUBILITY IN WATER: Complete

APPEARANCE AND ODOR: Clear light yellow liquid

SPECIFIC GRAVITY (H₂O = 1): >1

MELTING POINT: N/A

pH: Does not apply

EVAPORATION RATE (BUTYL ACETATE = 1): <1

FORM: Putty

10. STABILITY AND REACTIVITY

STABILITY: Stable

CONDITIONS TO AVOID: Excessive heating over long periods of time degrades the resin. Freezing may cause a temporary haze to develop. Fire conditions increase viscosity and epoxide equivalent weight.

HAZARDOUS POLYMERIZATION: Will not occur. Polymerization will not occur by itself, but masses of more than 1 pound of product plus aliphatic amine will cause irreversible polymerization with considerable heat build-up.

INCOMPATIBILITY (MATERIALS TO AVOID): Base, acid, amines and oxidizing materials.

HAZARDOUS DECOMPOSITION OR BYPRODUCTS: Under conditions of imperfect combustion and/or pyrolysis various phenolic compounds CO and/or CO₂ may be evolved.

11. TOXICOLOGICAL INFORMATION

EYE: No data available. **SKIN:** No data available. **INGESTION:** No data available. **INHALATION:** No data available.

SUBCHRONIC: No data available.

CHRONIC CARCINOGENICITY:

CARCINOGENICITY: NTP: Not Listed

IARC MONOGRAPH: Not Listed

OSHA REGULATED: Not Regulated

TERATOLOGY: No data available.

REPRODUCTION: No data available.

MUTAGENICITY: No data available.

12. ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION: No data available.

CHEMICAL FATE INFORMATION: No data available.

13. DISPOSAL CONSIDERATIONS

RCRA HAZARD CLASS: Not a RCRA Hazardous Waste Material

WASTE DISPOSAL METHOD: Dispose according to federal, state and local authorities only.

14. TRANSPORT INFORMATION

TRANSPORTATION REQUIREMENTS (49CFR172-101)

D.O.T. CLASSIFICATION: Not regulated

D.O.T. SHIPPING NAME: Not regulated

15. REGULATORY INFORMATION

EXPOSURE LIMITS: No data available.

16. OTHER INFORMATION

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N/D — NOT DETERMINED N/A — NOT APPLICABLE N/R — NOT REGULATED

Conforms to 29 CFR 1910.1200, OSHA

ANSI Z129.1 - 1988 American National Standard for Hazardous Industrial Chemicals



1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Concrete Crack Repair (Part C – Sand)
RED LION PART NUMBER: 74508 (Part C)
PRODUCT TYPE: Epoxy Putty
CHEMICAL FAMILY: N/A

DATE PREPARED: 4/1/99

CHROMATE INDUSTRIAL CORPORATION
 100 DaVinci Drive, Bohemia, NY 11716 • (888) 567-2206

2. COMPOSITION / INFORMATION ON INGREDIENTS

CHEMICAL NAME	OSHA PEL	ACGIH TLV	STEL	CAS #
Silica, Crystalline Quartz*	10 mg/m ³	0.1 mg/m ³	0.5 mg/m ³	14808-60-7
Silicon Dioxide SiO ₂	8 hr TWA		10 hr TWA	

IARC concludes that there is sufficient evidence for the carcinogenicity of crystalline silica to humans. NTP classifies respirable crystalline silica as "reasonably anticipated to be a carcinogen."

* An asterisk (*) indicates the toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 and 40 CFR 372.

3. HAZARDS IDENTIFICATION

PRIMARY ROUTES OF ENTRY: Inhalation
EFFECTS OF OVEREXPOSURE:

INHALATION: Prolonged exposure to respirable crystalline quartz may cause delayed (chronic) lung injury (silicosis). Individuals with silicosis are predisposed to develop tuberculosis.

INGESTION: None

SKIN CONTACT: None

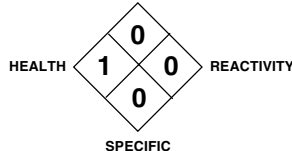
EYE CONTACT: May cause eye irritation.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Respiratory and pulmonary disorders. Anyone prone to eye irritation should not be exposed to respirable quartz dust.

HAZARD RATINGS

NFR: FLAMMABILITY

HMS: 1 HEALTH



1	HEALTH
0	FLAMMABILITY
0	REACTIVITY
B	PROTECTION

4. FIRST AID MEASURES

EMERGENCY FIRST AID PROCEDURES:

INHALATION: For gross inhalation, remove victim to fresh air, give artificial respiration as needed, seek medical attention as needed.

INGESTION: If large amount is swallowed, get immediate medical attention.

SKIN CONTACT: Wash with soap and water.

EYE CONTACT: Irrigate with water. If irritation persists, see physician.

5. FIRE FIGHTING MEASURES

FLASH POINT (METHOD USE): None **FLAMMABLE LIMITS:** None **LEL** N/D **UEL** N/D

EXTINGUISHING MEDIA: None required. Sand will not burn, but is compatible with all extinguishing media.

FIRE FIGHTING PROCEDURES: N/A

UNUSUAL AND EXPLOSION HAZARDS: None

6. ACCIDENTAL RELEASE MEASURES

SPILLS OR LEAKS: Collect, using dustless method and place in appropriate container for use.

7. HANDLING AND STORAGE

SPECIAL PRECAUTIONS: Avoid breakage and dusting.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

RESPIRATORY: Use appropriate respiratory protection for respirable particulates based on consideration of airborne workplace concentrations and duration of exposure arising from intended end use. Use local exhaust as required to maintain exposures below applicable occupational exposure limits.

SKIN PROTECTION: Protective gloves recommended

EYE PROTECTION: Safety glasses

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Optional

WORK HYGIENIC PRACTICES: Avoid creating and breathing dust. Dusty clothing should be laundered before wearing.

EXPOSURE GUIDELINES: Local exhaust required

ENGINEERING CONTROLS: No data available.

9. PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT: 4046°F

VAPOR PRESSURE (mmHg): N/A

VAPOR DENSITY (AIR = 1): N/A

SOLUBILITY IN WATER: Insoluble

APPEARANCE AND ODOR: White or tan sand, granular, odorless

SPECIFIC GRAVITY (H₂O = 1): 2.65

MELTING POINT: 3050°F

pH: Does not apply

EVAPORATION RATE (BUTYL ACETATE = 1): N/A

FORM: Putty

10. STABILITY AND REACTIVITY

STABILITY: Stable

CONDITIONS TO AVOID: None

HAZARDOUS POLYMERIZATION: Will not occur.

INCOMPATIBILITY (MATERIALS TO AVOID): Contact with powerful oxidizing agents such as fluorine may cause fires.

HAZARDOUS DECOMPOSITION OR BYPRODUCTS: Silica will dissolve in hydrofluoric acid and produce a corrosive gas – silicon tetrafluoride.

11. TOXICOLOGICAL INFORMATION

EYE: No data available. **SKIN:** No data available. **INGESTION:** No data available. **INHALATION:** No data available.

SUBCHRONIC: No data available.

CHRONIC CARCINOGENICITY:

CARCINOGENICITY: NTP: Yes **IARC MONOGRAPH:** Yes **OSHA REGULATED:** Not Regulated

IARC concludes that there is sufficient evidence for the carcinogenicity of crystalline silica to experimental animals, and that there is sufficient evidence of the carcinogenicity to humans.

TERATOLOGY: No data available.

REPRODUCTION: No data available.

MUTAGENICITY: No data available.

12. ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION: No data available.

CHEMICAL FATE INFORMATION: No data available.

13. DISPOSAL CONSIDERATIONS

RCRA HAZARD CLASS: Not a RCRA Hazardous Waste Material

WASTE DISPOSAL METHOD: If uncontaminated, dispose as an inert, non-metallic mineral. If contaminated, dispose in accordance with federal, state and local ordinances.

14. TRANSPORT INFORMATION

TRANSPORTATION REQUIREMENTS (49CFR172-101)

D.O.T. CLASSIFICATION: Not regulated

D.O.T. SHIPPING NAME: Not regulated

15. REGULATORY INFORMATION

EXPOSURE LIMITS: No data available.

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