

Material Safety Data Sheet

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Section 1: Product and Company Identification

Product Name: Terroxy® Resin Systems — Iso-Crack Epoxy Membrane, Part B

Product Use Description: Curing Agent, Epoxy

Company: Terrazzo & Marble Supply Companies
77 South Wheeling Road
Wheeling, Illinois 60090

Telephone: 847.353.8000

Emergency Telephone Number: 800.424.9300 USA
01.703.527.3887 International

Section 2: Composition / Information on Ingredients

| Components | CAS # | OSHA PEL | ACGIH TLV | Concentration (Weight) |
|------------------|------------|----------|-----------|------------------------|
| Nonylphenol | 25154-52-3 | N/E | N/E | 45-55 |
| Aliphatic Amines | 1761-71-3 | N/E | N/E | 5-15 |

- N/E - Not Established
- ALL ingredients are registered on TSCA

The remaining components are trade secret.

Substances listed are present in concentration of 1% or greater, or 0.1% if cited as a potential Carcinogen in the OSHA Hazards communication Standard. Where proprietary ingredient is listed, the identity is available as provided in 29 CFR 1910.1200.

Section 3: Hazards Identification

Emergency Overview: Vapors can cause severe irritation of respiratory tract.
Vapors can cause irritation and burns to the eyes.
Can cause burns to skin
Can cause severe damage to mouth and throat.

Potential Health Effects:

- Inhalation : Can cause severe eye, skin and respiratory tract burns.
- Eye contact : Causes eye burns. May cause blindness. Severe eye irritation.
- Skin contact : Harmful in contact with skin. Causes skin burns. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.
- Ingestion : Harmful if swallowed. If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the oesophagus and the stomach.
- Chronic Health Hazard : This product contains no listed carcinogens according to IARC, ACGIH, NTP and/or OSHA in concentrations of 0.1 percent or greater. Prolonged contact may result in chemical burns and permanent damage. Repeated or prolonged contact causes sensation, asthma and eczemas.

Section 3: Hazards Identification (continued)

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| Carcinogenicity: | NTP CARCINOGEN: No IARC MONOGRAPHS: No OSHA REGULATED: No |
| Exposure Guidelines: | Target Organs: Skin, Eyes |
| Aggravated Medical Conditions: | Skin contact may aggravate existing dermatitis (skin condition). Over exposure to vapor or mist may aggravate existing respiratory conditions such as asthma, bronchitis or fibrotic respiratory disease. |

Section 4: First Aid Measures

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| General advice: | Seek medical advice. If breathing has stopped or is labored, give assisted respirations. Supplemental oxygen may be indicated. If the heart has stopped, trained personnel should begin cardiopulmonary resuscitation immediately. |
| Eye contact : | Hold eyelids apart, initiate and maintain gentle and continuous irrigation until the patient receives medical care. If medical care is not promptly available, continue to irrigate for one hour. |
| Skin contact : | Immediately remove contaminated clothing, and any extraneous chemical, if possible to do so without delay. Initiate and maintain gentle and continuous irrigation until the patient receives medical care. If medical care is not promptly available, continue to irrigate for one hour. Cover wound with sterile dressing. Take off contaminated clothing and shoes immediately. NOTE TO PHYSICIANS: Application of corticosteroid cream has been effective in treating skin irritation. |
| Ingestion : | Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Prevent aspiration of vomit. Turn victim's head to the side. |
| Inhalation : | Move to fresh air. |

Section 5: Fire Fighting Measures

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| Suitable extinguishing media : | Alcohol-resistant foam. Carbon dioxide (CO ₂). Dry chemical. Dry sand. Limestone powder. |
| Specific hazards : | May generate ammonia gas. May generate toxic nitrogen oxide gases. Use of water may result in the formation of very toxic aqueous solutions. Do not allow run-off from fire fighting to enter drains or water courses. Incomplete combustion may form carbon monoxide. Downwind personnel must be evacuated. Burning produces obnoxious and toxic fumes. |
| Special protective equipment for fire-fighters: | Avoid contact with the skin. A face shield should be worn. Use personal protective equipment. Wear self contained breathing apparatus for fire fighting if necessary. |
| Further information : | Do not allow run-off from fire fighting to enter drains or water courses. OSHA Flamability Class: Combustible Class III B |

Section 6: Accidental Release Measures

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| Personal precautions: | Use self-contained breathing apparatus and chemically protective clothing. Wear suitable protective clothing, gloves and eye/face protection. Evacuate personnel to safe areas. |
| Environmental precautions: | Construct a dike to prevent spreading. |
| Methods for cleaning up: | Approach suspected leak areas with caution. Contact Terrazzo and Marble Response Center for advice. Place in appropriate chemical waste container. |
| Additional advice: | If possible, stop flow of product. Avoid contact. Allow only personnel wearing goggles, neoprene or rubber gloves and protective clothing to clean up spill. In confined areas a full face respirator is recommended. Absorb spill with clay, diatomaceous earth or other absorbent materials. Place in disposal containers. |

Section 7: Handling and Storage

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| Handling: | Avoid contact with eyes. Avoid contact with skin and eyes. Emergency showers and eye wash stations should be readily accessible. Adhere to work practice rules established by government regulations. Use personal protective equipment. When using, do not eat, drink or smoke. |
| Storage: | Do not store near acids. Keep containers tightly closed in a dry, cool and well-ventilated place. Do not remove labels from empty containers. If mixtures of Part B and Part A are allowed to remain in the mixing container past the pot life deadline, heat and a strong reaction will result. |
| Technical measures/Precautions: | Do not store in reactive metal containers. |

Section 8: Exposure Controls / Personal Protection

Engineering Measures:

Provide readily accessible eye wash stations and safety showers. Provide natural or explosion-proof ventilation adequate to ensure concentrations are kept below exposure limits.

Personal Protective Equipment:

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| Respiratory Protection: | If vapor or mist is generated and the occupational exposure limit is exceeded, use appropriate NIOSH/MSHA approved self contained breathing equipment or a full face respirator. Respirators should be selected by and used following requirements found in OSHA's respirator standards (29 CFR 1910.134). Not required for properly ventilated areas. |
| Ventilation: | Mechanical ventilation required if TLV is expected to be exceeded in confined areas. |
| Hand Protection: | Neoprene gloves. Butyl-rubber gloves. Nitrile rubber. Impervious gloves. The breakthrough time of the selected glove(s) must be greater than the intended use period. |
| Eye Protection: | Wear splash-proof chemical resistant goggles Full face shield with goggles underneath. |
| Skin and Body Protection: | Avoid skin contact by wearing chemically resistant gloves and long sleeved shirt. An apron may be appropriate if splashing can occur. |
| Environmental Exposure Controls: | Construct a dike to prevent spreading. |
| Special Instructions for Protection and Hygiene: | Discard contaminated leather articles. Remove contaminated clothing. Drench affected area with water for at least 15 minutes Provide readily accessible eye wash stations and safety showers. Wash at the end of each workshift and before eating, smoking or using the toilet. |

Section 9: Physical and Chemical Properties

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| Color: | Light yellow. |
| Odor: | Amine-like. Sharp amonia odor. |
| Relative density: | 0.98 (H ₂ O = 1) |
| Vapor pressure: | < 2.00 mmHg at 70 °F (21 °C) |
| VOC: | 0.00 |
| Density: | 61.179 lb/ft ³ (0.98 g/cm ³) at 70 °F (21 °C) |
| pH: | 10 |
| Boiling point/Range: | > 430 °F |
| Flash point: | 303 °F (150.56 °C) |
| Water solubility: | Partial |

Section 10: Physical and Chemical Properties

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| Stability : | Stable under normal conditions. |
| Conditions to Avoid: | Contact with acids such as Hydrochloric or Sulfuric. |
| Materials to Avoid : | Sodium hypochlorite. Organic acids (i.e. acetic acid, citric acid etc.). Mineral acids. Product slowly corrodes copper, aluminum, zinc and galvanized surfaces. Reaction with peroxides may result in violent decomposition of peroxide possibly creating an explosion. Reactive metals (e.g. sodium, calcium, zinc etc.). Materials reactive with hydroxyl compounds. Oxidizing agents. Epoxy resins under uncontrolled conditions. |
| Hazardous Decomposition Products: | Nitric acid. Ammonia Nitrogen oxides (NOx). Nitrogen oxide can react with water vapors to form corrosive nitric acid. Carbon monoxide. Carbon dioxide (CO2). Aldehydes Flammable hydrocarbon fragments (e.g., acetylene). When exposed to fire, oxides of Carbon and Nitrogen will be generated. |
| Hazardous Polymerization: | Will not occur. |

Section 11: Toxicological Information

Acute Health Hazard

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| Ingestion: | LD50 : > 1,620 mg/kg |
| Species: | Rat |
| Method: | Estimated |
| Inhalation: | LC50 (1 h) : > 20 mg/l |
| Species: | Rat |
| Method: | Estimated |
| Skin. : | LD50 : > 1,000 mg/kg |
| Species: | Rabbit. |
| Method: | Estimated. |
| Eye irritation/corrosion: | Severe eye irritation. |
| Acute dermal irritation/corrosion: | Severe skin irritation. Corrosive to the skin of a rabbit. |
| Sensitization: | May cause sensitization by skin contact. |

Chronic Health Hazard

The product or a component may be mutagenic, the data is inconclusive.

Section 12: Ecological Information

Ecotoxicity effects

Aquatic toxicity: *No data available.*

Toxicity to fish - Components:

Nonylphenol LC50 (96 h) : 0.128 mg/l Species : Fathead Minnow (Pimephales Promelas).
Methylenebis(cyclohexanamine, 4,4') LC50 (96 h) : 46 - 100 mg/l Species : Golden Orfe (Leuciscus idus).

Toxicity to daphnia - Components:

Nonylphenol EC50 (48 h) : 0.0848 mg/l Species : Daphnia
Nonylphenol EC50 (48 h) : 0.19 mg/l Species : Daphnia
Methylenebis(cyclohexanamine, 4,4') EC50 (48 h) : 6.84 mg/l Species : Daphnia magna.

Toxicity to algae - Components:

Methylenebis(cyclohexanamine, 4,4') EC50 (72 h) : 140 - 200 mg/l Species : Algae.

Toxicity to other organisms:

No data available.

Persistence and degradability

Mobility: *No data available.*

Bioaccumulation: *No data is available on the product itself.*

Bioaccumulation - Components:

Nonylphenol: Moderate bioaccumulation potential.

Section 13: Disposal Considerations

Waste from residues / unused products: Dispose in an approved incinerator or an approved landfill. Contact supplier if guidance is required.

Contaminated packaging: Dispose of container and unused contents in accordance with federal, state, and local requirements.

Section 14: Transport Information

CFR

Proper shipping name: Amines, liquid, corrosive, n.o.s. (4,4'-Methylenebis(cyclohexanamine, Nonylphenol)
Class: 8
UN/ID No.: UN2735
Packing group: III
NAERG No.: 153

IATA

Proper shipping name: Amines, liquid, corrosive, n.o.s. (4,4'-Methylenebis(cyclohexanamine, Nonylphenol)
Class: 8
UN/ID No.: UN2735
Packing group: III

IMDG

Proper shipping name: AMINES, LIQUID, CORROSIVE, N.O.S. (4,4'-Methylenebis(cyclohexanamine, Nonylphenol)
Class: 8
UN/ID No.: UN2735
Packing group: III

CTC

Proper shipping name: AMINES, LIQUID, CORROSIVE, N.O.S. (4,4'-Methylenebis(cyclohexanamine, Nonylphenol)
Class: 8
UN/ID No.: UN2735
Packing group: III

Section 15: Regulatory Information

OSHA Hazard Communication Standard (29 CFR 1910.1200) Hazard Class(es) Corrosive, Sensitizer.

| Country | Regulatory List | Notification |
|-------------|-----------------|---|
| USA | TSCA | Included on Inventory |
| EU | EINECS | Included on EINECS inventory or polymer substance, monomers included on EINECS inventory are no longer polymer. |
| Canada | DSL | Included on Inventory |
| Australia | AICS | Included on Inventory |
| Japan | ENCS | Included on Inventory |
| South Korea | ECL | Included on Inventory |
| China | SEPA | Included on Inventory |
| Philippines | PICCS | Included on Inventory |

EPA SARA Title III Section 312 (40 CFR 370) Hazard Classification:
Acute Health Hazard

EPA SARA Title III Section 313 (40 CFR 372) Component(s) above 'de minimus' level:
None.

US. California Safe Drinking Water & Toxic Enforcement Act (Proposition 65):
This product does not contain any chemicals known to State of California to cause cancer, birth defects or any other harm.

WHMIS Hazard Classification:
Toxic Material Causing Other Toxic Effects, Corrosive Material

Section 16: Other Information

HMIS Rating

Health: 3
Flammability: 1
Reactivity: 0
Physical hazard : C

Prepared by Terrazzo & Marble Supply Companies.

Data and recommendations presented herein are based upon ours and other researchers and are believed to be accurate. The products discussed are distributed without warranty (expressed or implied) and the customer shall make his own determination of suitability for his particular purpose.