

# Material Safety Data Sheet

Revision Date: 03/2011

Print Date: 03/2011

## Section 1: Product and Company Identification

**Product Name:** Terroxy® Resin Systems — Primer, 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 Number	OSHA PEL	ACGIH TLV	WT%
Nonylphenol	25154-52-3	N/E	N/E	25-40
Formaldehyde, Polymer with Benzeneamine Hydrogenated	135108-88-2	N/E	N/E	20-30
Benzyl Alcohol	100-51-6	N/E	N/E	5-15
Tetraethylenepentamine (TEPA)	112-57-2	N/E	N/E	3-8
Tris-2,4,6 (Dimethylaminomethyl) Phenol	90-72-2	N/E	N/E	1-5

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

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 irritation to skin  
Can cause severe damage to mouth and throat.

### Potential Health Effects

**Inhalation :** Headache, nausea, respiratory tract irritant.

**Eye contact :** Can cause irritation, burning, tearing, redness, swelling and possible chemical burns to the eyes.

**Skin contact :** Severe irritation and possible skin sensitizer.

**Ingestion :** Abdominal pain, nausea, vomiting, diarrhea, throat and mouth burns.

**Chronic Health Hazard :** 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 3: Hazards Identification (continued)

Carcinogenicity:	NTP CARCINOGEN: No IARC MONOGRAPHS: No OSHA REGULATED: No
Exposure Guidelines:	Target Organs: Skin, Eyes
Aggravated Medical	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

General advice:	Swallowing this corrosive material may result in severe ulceration, inflammation and possible perforation of the upper alimentary tract, with hemorrhage and fluid loss. Aspiration of this product during induced emesis can result in severe lung injury. If evacuation of stomach is necessary, use method least likely to cause aspiration, such as gastric lavage after endotracheal intubation. Contact a Poison Control Center for additional treatment information.
Eye contact :	Flush at once with potable water for at least 15 minutes. DO NOT attempt to neutralize with chemical agents. Get medical attention.
Skin contact :	Flush at once with potable water for at least 15 minutes. DO NOT attempt to neutralize with chemical agents. Get immediate medical attention. Remove contaminated clothes. Wash before reuse. Destroy contaminated shoes. Get medical attention if swelling and/or irritation occurs.
Ingestion :	Give water to dilute stomach contents. DO NOT induce vomiting. If vomiting occurs, give fluids again. Get immediate medical attention. Do not give anything by mouth to an unconscious or convulsing person.
Inhalation :	Move to fresh air. Get medical attention if effects persist.

### Section 5: Fire Fighting Measures

Suitable extinguishing media :	Alcohol-resistant foam. Carbon dioxide (CO <sub>2</sub> ). 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	Avoid contact with the skin. A face shield should be worn. Use personal protective equipment. Wear positive pressure self contained breathing equipment. Use water to cool containers exposed to fire. Water may be an ineffective extinguishing agent.
Further information :	Vapors are heavier than air and may travel along the ground or be moved by ventilation to ignition sources at locations distant from material handling point. Pressure may build up in containers and create an explosion hazard. OSHA Flamability Class: Combustible Class III B

### Section 6: Accidental Release Measures

Personal precautions:	Use positive pressure self contained breathing equipment 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 Air Products' Emergency 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

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:

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

Color:	Dark amber liquid with slight ammoniacal odor
Odor:	Amine-like. Sharp amonia odor.
Relative density:	0.99 (H <sub>2</sub> O = 1)
Vapor pressure:	< 2.00 mmHg at 70 °F (21 °C)
VOC:	0.00
Density:	61.179 lb/ft <sup>3</sup> (0.99 g/cm <sup>3</sup> ) at 70 °F (21 °C)
pH:	10
Boiling point/Range:	> 300 °F (148 °C)
Flash point:	>200 °F (93 °C)
Water solubility:	Slight

## Section 10: Physical and Chemical Properties

Stability :	Stable under normal conditions.
Conditions to Avoid:	Not Applicable
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

Ingestion:	LD50 : > 500 mg/kg Species: Rat Method: Estimated
Inhalation:	LC50 (1 h) : > 20 mg/l Species: Rat Method: Estimated
Skin. :	LD50 : > 2,000 mg/kg Species: Rabbit Method: Estimated
Eye irritation/corrosion:	Severe eye irritation
Acute dermal irritation/corrosion:	Severe skin irritation.
Sensitization:	May cause sensitization by skin contact. Sensitization has occurred in laboratory animals after repeated exposures.

### Chronic Health Hazard

The product or a component may be mutagenic, the data is inconclusive. Mixed Polycycloaliphatic amines was tested in rats for systemic effects in a subchronic (28 day) oral study at doses ranging from 15 to 300 mg/kg/day. Effects seen at 300 mg/kg/day included decreased survival, decreased body weight gain, increased liver, kidney, and adrenal weights and histological changes in the liver, kidney, adrenals and spleen. The No-Observed-Adverse-Effect-Level (NOAEL) was 15 mg/kg/day. Rats exposed orally to 800 mg/kg benzyl alcohol for thirteen weeks exhibited CNS depression and histopathological changes in the brain, thymus and skeletal muscles. The No-Observed-Adverse-Effect-Level (NOAEL) was 400 mg/kg. No evidence of carcinogenicity was seen in a two-year study with rats and mice.

## Section 12: Ecological Information

### Ecotoxicity effects

Aquatic toxicity: *No data available on the product itself.*

#### Toxicity to fish - Components:

Nonylphenol LC50 (96 h) : 0.128 mg/l Species : Fathead Minnow (Pimephales Promelas).

#### Toxicity to daphnia - Components:

Nonylphenol EC50 (48 h) : 0.0848 mg/l Species : Daphnia

Nonylphenol EC50 (48 h) : 0.19 mg/l Species : Daphnia

#### Toxicity to other organisms:

*No data available on the product itself.*

### Persistence and degradability

Mobility: *No data available.*

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

#### Bioaccumulation - Components:

Formaldehyde, polymer with benzeneamine, hydrogenated: Does not bioaccumulate.

Nonylphenol: Moderate bioaccumulation potential.

## Section 13: Disposal Considerations

Waste from residues / unused products: 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. (Cycloaliphatic Amine/Nonylphenol)  
 Class: 8  
 UN/ID No.: UN2735  
 Packing group: III  
 NAERG No.: 153

### IATA

Proper shipping name: Amines, liquid, corrosive, N.O.S. (Cycloaliphatic Amine/Nonylphenol)  
 Class: 8  
 UN/ID No.: UN2735  
 Packing group: III

### IMDG

Proper shipping name: Amines, liquid, corrosive, N.O.S. (Cycloaliphatic Amine/Nonylphenol)  
 Class: 8  
 UN/ID No.: UN2735  
 Packing group: III

### CTC

Proper shipping name: Amines, liquid, corrosive, N.O.S. (Cycloaliphatic Amine/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.