Material Safety Data Sheet

ITW Consumer - Devcon/Versachem

HIGH STRENGTH PLASTIC STEEL EPOXY HARDENER

This product appears in the following stock number(s):
52345

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Tradename: HIGH STRENGTH PLASTIC STEEL EPOXY HARDENER

General use: The following health hazard data pertain to the hardener only. When fully cured, the mixed product is non-hazardous

Chemical family: Amidoamine

MANUFACTURER
ITW Consumer - Devcon/Versachem
2107 West Blue Heron Blvd.
Riviera Beach, Florida 33404

EMERGENCY INFORMATION
Emergency telephone number
(CHEMTEL): (800) 255-3924
(CHEMTEL International): (+01) 813-248-0585
Other Calls: (561) 845-2425

2. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Component</th>
<th>Abbr.</th>
<th>Weight%</th>
<th>ACGIH; TLV-TWA</th>
<th>OSHA PEL:</th>
<th>Other Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIMESTONE</td>
<td>1317-65-3</td>
<td>n/e</td>
<td>50-70</td>
<td>10 mg/m³</td>
<td>n/e</td>
</tr>
<tr>
<td>POLYAMIDE OF TALL-OIL FATTY ACID DIMERS AND TETRAETHYLENEPENTAMINE 88953-36-6</td>
<td>n/e</td>
<td>10-30</td>
<td>n/e</td>
<td>n/e</td>
<td></td>
</tr>
<tr>
<td>PACM OLIGOMERS 135108-88-2</td>
<td>n/e</td>
<td>&lt;10</td>
<td>n/e</td>
<td>n/e</td>
<td></td>
</tr>
<tr>
<td>BENZYL ALCOHOL 100-51-6</td>
<td>BZOH</td>
<td>&lt;5</td>
<td>n/e</td>
<td>10 ppm AIHA</td>
<td></td>
</tr>
<tr>
<td>TETRAETHYLENEPENTAMINE 112-57-2</td>
<td>TEPA</td>
<td>&lt;5</td>
<td>n/e</td>
<td>n/e</td>
<td></td>
</tr>
<tr>
<td>4-NONYL-PHENOL 84852-15-3</td>
<td>NPHOH</td>
<td>&lt;5</td>
<td>n/e</td>
<td>n/e</td>
<td></td>
</tr>
<tr>
<td>2,4,6-TRIS(DIMETHYLAMINOMETHYL)PHENOL 80-72-2</td>
<td>DMP</td>
<td>&lt;5</td>
<td>n/e</td>
<td>n/e</td>
<td></td>
</tr>
<tr>
<td>NONYLPHENOL 25154-52-3</td>
<td>n/e</td>
<td>&lt;5</td>
<td>n/e</td>
<td>n/e</td>
<td></td>
</tr>
<tr>
<td>CRYSTALLINE SILICA 14808-60-7</td>
<td>n/e</td>
<td>0.1-1.0</td>
<td>10(≥Q+2) mppcf (respirable)</td>
<td>0.1 mg/m³ (Canada)</td>
<td></td>
</tr>
<tr>
<td>TRADE SECRET (Non-hazardous) MIXTURE</td>
<td>n/e</td>
<td>balance</td>
<td>n/e</td>
<td>n/e</td>
<td></td>
</tr>
</tbody>
</table>

"TLV" means the Threshold Limit Value exposure (eight-hour, time-weighted average, unless otherwise noted) established by the American Conference of Governmental Industrial Hygienists. "STEL" indicates a short-term exposure limit. "PEL" indicates the OSHA Permissible Exposure Limit. "n/e" indicates that no exposure limit has been established. An asterisk (*) indicates a substance whose identify is a trade secret of our supplier and unknown to us.

3. HAZARDOUS IDENTIFICATION

Emergency Overview

Appearance, form, odor: Amber liquid with ammonia-like, fishy odor
WARNING. Eye, skin and respiratory irritant. Potential skin sensitizer.

Potential health effects

Primary Routes of Exposure: Eye and skin contact, ingestion, inhalation

Symptoms of acute overexposure

Skin: Severe irritation or burns, necrosis, blistering and permanent injury. Potential sensitizer.

Eyes: Severe irritant Overexposure may cause lacrimation, conjunctivitis, corneal damage and may cause permanent injury (i.e. blindness)

Inhalation: May be harmful if inhaled. May cause respiratory sensitization with asthma-like symptoms in susceptible individuals.

Ingestion: Causes irritation, a burning sensation of the mouth, throat and gastrointestinal tract and abdominal pain.

Effects of Chronic Exposure: May cause an allergic skin reaction. Repeated or prolonged exposure may cause adverse eye effects (conjunctivitis, corneal damage), or skin effects (rash, irritation, corrosion). Repeated exposures to high concentrations of TEPA may cause injury to the liver, kidney and respiratory tract. TEPA has caused allergic sensitization in humans. Nonylphenol has caused allergic sensitization in humans.

<table>
<thead>
<tr>
<th>Component</th>
<th>Weight%</th>
<th>NTP</th>
<th>ACGIH Carcinogens</th>
<th>IARC</th>
</tr>
</thead>
<tbody>
<tr>
<td>BENZYL ALCOHOL 100-51-6</td>
<td>&lt;5</td>
<td>male rat-no evidence; female rat-no evidence; male mice-no evidence; female mice-no evidence</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CRYSTALLINE SILICA 14808-60-7</td>
<td>0.1-1.0</td>
<td>A2 - Suspected Human Carcinogen</td>
<td>Group 1 Monograph 68, 1997 (inhalation of quartz)</td>
<td></td>
</tr>
</tbody>
</table>

Medical Conditions Recognized as Being Aggravated by Exposure:
Preexisting eye, skin and respiratory disorders may be aggravated by overexposure to this product.

Other:
Repeated and/or prolonged exposure to low concentrations of vapor may cause: sore throat, eye irritation, which are transient. Corneal edema may give rise to a perception of “blue haze” or “fog around lights” which is transient and has no known residual effect

4. FIRST AID MEASURES

Eye Contact: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention if irritation persists.

Skin Contact: Immediately remove contaminated clothing and excess contaminant. Flush with water for at least 15 minutes. Wash thoroughly with soap and water. Consult a physician if irritation develops.

Inhalation: If inhaled, remove from area to fresh air. Get medical attention if respiratory irritation develops or if breathing becomes difficult.

Ingestion: If swallowed, DO NOT induce vomiting. Drink water or milk. Seek medical attention immediately.

Notes to Physician: Victims of a major skin area contact should remain under medical observation for at least 24 hours due to possible delayed effects.

5. FIRE FIGHTING MEASURES

Recommended Extinguishing Media: Carbon dioxide, Dry chemical, foam
6. ACCIDENTAL RELEASE MEASURES

Spill Control: Avoid personal contact. Eliminate ignition sources. Ventilate area.

Containment: Dike, contain and absorb with clay, sand or other suitable material

Cleanup: For large spills, pump to storage/salvage vessels. Soak up residue with an absorbent such as clay, sand or other suitable material and dispose of properly. Flush area with water. Clean-up waste water should be placed in appropriate containers for proper disposal.

Special procedures: Clean-up personnel must be equipped with self-contained breathing apparatus and butyl rubber protective clothing. Prevent spill from entering drainage/sewer systems, waterways and surface water. Notify local health authorities and other appropriate agencies if such contamination occurs.

7. HANDLING AND STORAGE

Handling precautions: Avoid breathing vapors or mists. Avoid contact with the skin and the eyes. Launder contaminated clothing and protective gear before reuse. Discard contaminated leather articles. Wash thoroughly with soap and water after using and particularly before eating, drinking, smoking, applying cosmetics or using toilet facilities. Provide appropriate ventilation/respiratory protection against decomposition products (see Section 10) during welding/flame cutting operations and to protect against dust during sanding/grinding of cured product.

Storage: Store in a cool, dry area. Store away from heat. Keep away from oxidizers.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering controls:

Ventilation:
Use ventilation that is adequate to keep employee exposure to airborne concentrations below exposure limits (or to the lowest feasible levels when limits have not been established). Although good general mechanical ventilation is usually adequate for most industrial applications, local exhaust ventilation is preferred (see ACGIH - Industrial Ventilation). Local exhaust may be required for confined areas (see OSHA CFR 1910.146).

Other engineering controls: Have emergency shower and eye wash available.

Personal protective equipment

Eye and face protection: Wear appropriate protective glasses or splash goggles as described by 29CFR 1910.133, OSHA eye and face protection regulation, or the European standard EN 166

Skin protection: Chemical-resistant gloves (Neoprene, nitrile) and other gear as required to prevent skin contact.

Respiratory protection: With good ventilation, none required. In poorly ventilated areas use NIOSH-approved organic vapor cartridge respirator for uncured resin, dust/particle respirators during grinding/sanding operations for cured resin, or fresh airline respirator as exposure levels dictate (see OSHA CFR 1910.134).
9. PHYSICAL AND CHEMICAL PROPERTIES

**Specific Gravity:** 1.016  
**Boiling Point:** n/d  
**Melting point:** n/d  
**Vapor Pressure:** n/d  
**VOC:** 0  
**Solubility in water:** Not determined  

**pH (5% solution or slurry in water):** Alkaline

10. STABILITY AND REACTIVITY

This material is chemically stable. Hazardous polymerization will not occur.

**Conditions to Avoid:** Keep away from heat, sparks and open flame. Product slowly corrodes copper, aluminum, zinc and galvanized surfaces.

**Incompatibilities:** Strong oxidizers, Acids, Sodium/calcium hypochlorite, Peroxides, Materials reactive with hydroxyl compounds, Reactive metals (e.g. Na, Ca, zinc)

**Hazardous Products of Combustion:** Hydrogen chloride and ammonia when heated, Oxides of carbon, Oxides of nitrogen, Nitric acid, nitriles, amides

**Conditions under which hazardous polymerization may occur:** Heat is generated when resin is mixed with curing agents; Run-away cure reactions may char and decompose the resin, generating unidentified fumes and vapors which may be toxic.

11. TOXICOLOGICAL INFORMATION

**Eye Contact:** Rabbit: Severe irritant. Corrosive.

**Subchronic effects:** Sensitization has occurred in laboratory animals after repeated exposures.

**Carcinogenicity, tertogenicity and mutagenicity:** TEPA has exhibited evidence for weak mutagenic activity in vitro test systems.

**Other chronic effects:** Not determined.

**Toxicological information on hazardous chemical constituents of this product:**

<table>
<thead>
<tr>
<th>Component</th>
<th>Oral LD50 (rat)</th>
<th>Dermal LD50 (rabbit)</th>
<th>Inhalation LC50 4hr (rat)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIMESTONE</td>
<td>n/d</td>
<td>n/d</td>
<td>n/d</td>
</tr>
</tbody>
</table>

1317-65-3
12. ECOLOGICAL INFORMATION

Ecotoxicity: No data available.

Mobility and persistence: No data available.

Environmental fate: No data available.

13. DISPOSAL CONSIDERATIONS

Please see also Section 15, Regulatory Information.

Recommended Method of Disposal: Do not dispose of in a landfill. Incineration is the preferred method of disposal.


14. TRANSPORT INFORMATION

Proper shipping name: Not regulated

Technical name: N/A

Hazard class: N/A

UN/ID Number: N/A

Packing group: N/A

Emergency Response Guide no: N/A

15. REGULATORY INFORMATION

U.S. Federal Regulations

TSCA:
All ingredients of this product are listed or are exempt from listing on the TSCA Inventory.

The following RCRA code(s) applies to this material if it becomes waste:
None

Regulatory status of hazardous chemical constituents of this product:
<table>
<thead>
<tr>
<th>Component</th>
<th>Extremely Hazardous*</th>
<th>Toxic Chemical**</th>
<th>CERCLA RQ (lbs)</th>
<th>12B EXPORT NOTIFICATION:</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIMESTONE</td>
<td>No</td>
<td>No</td>
<td>0.0</td>
<td>Not required</td>
</tr>
<tr>
<td>1317-65-3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>POLYAMIDE OF TALL-OIL FATTY ACID DIMERS AND TETRAETHYLENEPENTAMINE</td>
<td>No</td>
<td>No</td>
<td>0.0</td>
<td>Not required</td>
</tr>
<tr>
<td>89953-36-6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PACM OLIGOMERS</td>
<td>No</td>
<td>No</td>
<td>0.0</td>
<td>Not required</td>
</tr>
<tr>
<td>135108-88-2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BENZYL ALCOHOL</td>
<td>No</td>
<td>No</td>
<td>0.0</td>
<td>Not required</td>
</tr>
<tr>
<td>100-51-6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>POLYAMIDE OF TALL-OIL FATTY ACID DIMERS AND TETRAETHYLENEPENTAMINE</td>
<td>No</td>
<td>No</td>
<td>0.0</td>
<td>Not required</td>
</tr>
<tr>
<td>68953-36-6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BENZYL ALCOHOL</td>
<td>No</td>
<td>No</td>
<td>0.0</td>
<td>Not required</td>
</tr>
<tr>
<td>100-51-6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TETRAETHYLENEPENTAMINE</td>
<td>No</td>
<td>No</td>
<td>0.0</td>
<td>Not required</td>
</tr>
<tr>
<td>112-57-2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4-NONYL-PHENOL</td>
<td>No</td>
<td>No</td>
<td>0.0</td>
<td>Required</td>
</tr>
<tr>
<td>84852-15-3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2,4,6-TRIS(DIMETHYLAMINOMETHYL)PHENOL</td>
<td>No</td>
<td>No</td>
<td>0.0</td>
<td>Not required</td>
</tr>
<tr>
<td>90-72-2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NONYLPHENOL</td>
<td>No</td>
<td>No</td>
<td>0.0</td>
<td>Not required</td>
</tr>
<tr>
<td>25154-52-3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CRYSSTALLINE SILICA</td>
<td>No</td>
<td>No</td>
<td>0.0</td>
<td>Not required</td>
</tr>
<tr>
<td>14808-60-7</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TRADE SECRET (Non-hazardous)</td>
<td>No</td>
<td>No</td>
<td>0.0</td>
<td>Not required</td>
</tr>
<tr>
<td>MIXTURE</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Consult the appropriate regulations for emergency planning and release reporting requirements for substances on the SARA Section 301 Extremely Hazardous Substance List.

**Substances for which the “Toxic Chemical” column is marked “Yes” are on the SARA Section 313 list of Toxic Chemicals, for which release reporting may be required. For specific requirements, consult the appropriate regulations.

For purposes of SARA Section 312 hazardous materials inventory reporting, the following hazard classes apply to this material: Immediate health hazard, Delayed health hazard

California regulations: For purposes of the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Prop 65), this product contains a chemical(s) known to cause cancer and birth defects or other reproductive harm.

Canadian Regulations
WHMIS Hazard Class: D2A VERY TOXIC MATERIALS, D2B TOXIC MATERIALS

Canadian Inventory: All components of this product are on the Canadian Domestic Substances List.

16. OTHER INFORMATION
Hazardous Material Information System (HMIS) rating:
Health 3* Flammability 1 Physical Hazard 0

HMIS is a registered trademark of the National Paint and Coatings Assn.

Revision Date: October/27/2008
Revision Number: 3

The information and recommendations in this document are based on the best information available to us at the time of preparation, but we make no other warranty, express or implied, as to its correctness or completeness, or as to the results of reliance on this document.
Material Safety Data Sheet

ITW Consumer - Devcon/Versachem

HIGH STRENGTH PLASTIC STEEL EPOXY RESIN

This product appears in the following stock number(s):
52345

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Tradename: HIGH STRENGTH PLASTIC STEEL EPOXY RESIN
General use: This information applies to the resin component of the two-part kit. Handle freshly mixed resin and hardener as recommended for the hardener. After curing, the product is not hazardous
Chemical family: Epoxy resin

2. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Component</th>
<th>Abbr.</th>
<th>Weight%</th>
<th>ACGIH; TLV-TWA</th>
<th>OSHA PEL:</th>
<th>Other Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIMESTONE</td>
<td>1317-65-3</td>
<td>n/e</td>
<td>30-60</td>
<td>10 mg/m³</td>
<td>15 mg/m³ TWA (total dust); 5 mg/m³ TWA (respirable)</td>
</tr>
<tr>
<td>BISPHENOL A/EPICHLOROHYDRIN BASED EPOXY RESIN</td>
<td>DGEBPA</td>
<td>25068-38-6</td>
<td>30-60</td>
<td>n/e</td>
<td>n/e</td>
</tr>
<tr>
<td>IRON</td>
<td>7439-89-6</td>
<td>n/e</td>
<td>&lt;10</td>
<td>n/e</td>
<td>n/e</td>
</tr>
<tr>
<td>SILICON DIOXIDE, AMORPHOUS</td>
<td>n/e</td>
<td>112945-52-5</td>
<td>&lt;10</td>
<td>5 mg/m³, TWA</td>
<td>6 mg/m³ TWA</td>
</tr>
<tr>
<td>BENZYL ALCOHOL</td>
<td>BZOH</td>
<td>100-51-6</td>
<td>&lt;5</td>
<td>n/e</td>
<td>10 ppm AIHA</td>
</tr>
<tr>
<td>SILICON</td>
<td>7440-21-3</td>
<td>n/e</td>
<td>&lt;5</td>
<td>15 mg/m³ TWA (total dust); 3 mg/m³ TWA (respirable)</td>
<td></td>
</tr>
<tr>
<td>CRYSTALLINE SILICA</td>
<td>n/e</td>
<td>14808-60-7</td>
<td>0.1-1.0</td>
<td>10(%,Q+2) mppcf (respirable)</td>
<td>0.1 mg/m³ (Canada)</td>
</tr>
<tr>
<td>TRADE SECRET (Non-hazardous) MIXTURE</td>
<td>n/e</td>
<td>balance</td>
<td></td>
<td></td>
<td>n/e</td>
</tr>
</tbody>
</table>

"TLV" means the Threshold Limit Value exposure (eight-hour, time-weighted average, unless otherwise noted) established by the American Conference of Governmental Industrial Hygienists. "STEL" indicates a short-term exposure limit. "PEL" indicates the OSHA Permissible Exposure Limit. "n/e" indicates that no exposure limit has been established. An asterisk (*) indicates a substance whose identity is a trade secret of our supplier and unknown to us.

3. HAZARDOUS IDENTIFICATION

Emergency Overview

Appearance, form, odor: Black Viscous liquid with little odor

WARNING! Eye and skin irritant. Potential skin sensitizer.

Potential health effects

Primary Routes of Exposure: Eye and skin contact, ingestion, inhalation
Symptoms of acute overexposure
Skin: Moderate skin irritant. May cause skin sensitization (itching, redness, rashes, hives, burning, swelling).
Eyes: Moderate eye irritant (stinging, burning sensation, tearing, redness, swelling) Overexposure may cause lacrimation, conjunctivitis, corneal damage and may cause permanent injury (i.e. blindness)
Inhalation: Irritant. Central Nervous System Depression: signs/symptoms can include headache, dizziness, drowsiness, incoordination, slowed reaction time, slurred speech, giddiness and unconsciousness. May cause respiratory sensitization with asthma-like symptoms in susceptible individuals.
Ingestion: Causes irritation, a burning sensation of the mouth, throat and gastrointestinal tract and abdominal pain. May cause gastric distress (nausea, vomiting, diarrhea).

Effects of Chronic Exposure: Prolonged or repeated skin contact may cause sensitization, with itching, swelling or rashes on later exposure.

<table>
<thead>
<tr>
<th>Component</th>
<th>Weight%</th>
<th>NTP</th>
<th>ACGIH Carcinogens</th>
<th>IARC</th>
</tr>
</thead>
<tbody>
<tr>
<td>BENZYL ALCOHOL 100-51-6</td>
<td>&lt;5</td>
<td>male rat-no evidence; female rat-no evidence; male mice-no evidence; female mice-no evidence</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CRystalline SILICA t4808-60-7</td>
<td>0.1-1.0</td>
<td></td>
<td>A2 - Suspected Human Carcinogen</td>
<td>Group 1 Monograph 68, 1997 (inhalation of quartz)</td>
</tr>
</tbody>
</table>

Medical Conditions Recognized as Being Aggravated by Exposure:
Preexisting eye and skin disorders (e.g. eczema). Development of preexisting skin or lung allergy symptoms may increase.

Other:
See Section 11

4. FIRST AID MEASURES
Eye Contact: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention if irritation persists.

Skin Contact: Immediately remove contaminated clothing and excess contaminant. Flush with water for at least 15 minutes. Wash thoroughly with soap and water. Consult a physician if irritation develops.

Inhalation: If inhaled, remove from area to fresh air. Get medical attention if respiratory irritation develops or if breathing becomes difficult.

Ingestion: Do not induce vomiting. Slowly dilute with 1-2 glasses of water or milk and seek medical attention. Never give anything by mouth to an unconscious person

5. FIRE FIGHTING MEASURES
Recommended Extinguishing Media: Carbon dioxide, Dry chemical, foam

Flash point: >200°F (93.3°C) Method: Estimate

<table>
<thead>
<tr>
<th>Lower Explosive</th>
<th>Upper Explosive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limit: n/d</td>
<td>Limit: n/d</td>
</tr>
</tbody>
</table>

Special Fire-Fighting Procedures: Material will not burn unless preheated. Do not enter confined space without full bunker gear. Firefighters should wear self-contained breathing apparatus and protective clothing to prevent all skin and eye contact. Use water spray to cool exposed containers.
Unusual Fire/Explosion Hazards:
Heating above 300°F in the presence of air may cause slow oxidation decomposition and above 500°F may cause polymerization.

Hazardous Products of Combustion:
When heated to decomposition it emits fumes of Cl-, carbon monoxide, other fumes and vapors varying in composition and toxicity.

6. ACCIDENTAL RELEASE MEASURES
Spill Control: Avoid personal contact. Eliminate ignition sources. Ventilate area.

Containment: Dike, contain and absorb with clay, sand or other suitable material

Cleanup: For large spills, pump to storage/salvage vessels. Soak up residue with an absorbent such as clay, sand or other suitable material and dispose of properly. Flush area with water.

Special procedures: Prevent spill from entering drainage/sewer systems, waterways and surface water.

7. HANDLING AND STORAGE
Handling precautions: Avoid contact with the skin and the eyes. Wash thoroughly with soap and water after using and particularly before eating, drinking, smoking, applying cosmetics or using toilet facilities. Launder contaminated clothing and protective gear before reuse. Discard contaminated leather articles. Handle mixed resin and hardener in accordance with the potential hazard of the curing agent used. Provide appropriate ventilation/respiratory protection against decomposition products (see Section 10) during welding/flame cutting operations and to protect against dust during sanding/grinding of cured product.

Storage: Store in a cool, dry area. Store away from heat.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION
Engineering controls:

Ventilation:
General; local exhaust ventilation as necessary to control any air contaminants to within their exposure limits (or to the lowest feasible levels when limits have not been established) during the use of this product.

Other engineering controls: Have emergency shower and eye wash available.

Personal protective equipment

Eye and face protection: Wear appropriate protective glasses or splash goggles as described by 29CFR 1910.133, OSHA eye and face protection regulation, or the European standard EN 166

Skin protection: Chemical-resistant gloves (i.e. butyl) and other gear as required to prevent skin contact.

Respiratory protection: With good ventilation, none required. In poorly ventilated areas use NIOSH-approved organic vapor cartridge respirator for uncured resin, dust/particle respirators during grinding/sanding operations for cured resin, or fresh airline respirator as exposure levels dictate (see OSHA CFR29 1910.134).
9. PHYSICAL AND CHEMICAL PROPERTIES

Specific Gravity: 1.62
Melting point: n/d
Vapor Pressure: Nil @ 171°F
VOC: 0

Boiling Point: >450°F (232.2°C)
Vapor Density (Air=1): >1
Evaporation Rate: <1 (butyl acetate = 1)
Solubility in water: Negligible

pH (5% solution or slurry in water): Neutral

10. STABILITY AND REACTIVITY

This material is chemically stable. Hazardous polymerization will not occur.

Conditions to Avoid: Open flame and extreme heat.

Incompatibilities: Strong Lewis or mineral acids, strong oxidizing agents, strong mineral and organic bases (especially primary and secondary aliphatic amines)

Hazardous Products of Combustion: When heated to decomposition it emits fumes of Cl-, carbon monoxide, other fumes and vapors varying in composition and toxicity

Conditions under which hazardous polymerization may occur: Heat is generated when resin is mixed with curing agents; Run-away cure reactions may char and decompose the resin, generating unidentified fumes and vapors which may be toxic.

11. TOXICOLOGICAL INFORMATION

Eye Contact: No data available.

Subchronic effects: No data available.

Carcinogenicity, tertogenicity and mutagenicity: Both the resin and the diglycidyl ether of bisphenol A (a component of this product) have proved to be inactive when tested by invivo mutagenicity assays. Both have shown activity by invitro mecrobial mutagenicity screening and have produced chromosomal aberrations in cultured rat liver cells. Benzyl alcohol may cause reproductive effects.

Other chronic effects: 2-year bioassays in mice exposed by the dermal route to EPON 828, DGEBA, or other commercial resins yielded limited evidence of weak carcinogenicity. The authors concluded that the renal tumor evidence with EPON 828 "was of no biological significance" and the the resin "is not a systemic carcinogen when applied to the dorsal skin of CF1 mice.". Benzyl alcohol may cause digestive disorders, central nervous system depression and/or lung damage.

Toxicological information on hazardous chemical constituents of this product:

<table>
<thead>
<tr>
<th>Component</th>
<th>Oral LD50 (rat)</th>
<th>Dermal LD50 (rabbit)</th>
<th>Inhalation LC50 4hr (rat)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIMESTONE 1317-65-3</td>
<td>n/d</td>
<td>n/d</td>
<td>n/d</td>
</tr>
<tr>
<td>Component</td>
<td>Oral LD50 (rat)</td>
<td>Dermal LD50 (rabbit)</td>
<td>Inhalation LC50 4hr (rat)</td>
</tr>
<tr>
<td>-----------</td>
<td>----------------</td>
<td>---------------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td>BISPHENOL A/EPICHLOROHYDRIN BASED EPOXY RESIN 25068-38-6</td>
<td>11400 mg/kg</td>
<td>n/d</td>
<td>n/d</td>
</tr>
<tr>
<td>IRON 7439-89-6</td>
<td>984 mg/kg</td>
<td>n/d</td>
<td>n/d</td>
</tr>
<tr>
<td>SILICON DIOXIDE, AMORPHOUS 112945-62-5</td>
<td>n/d</td>
<td>n/d</td>
<td>n/d</td>
</tr>
<tr>
<td>BENZYL ALCOHOL 100-51-6</td>
<td>1230 mg/kg</td>
<td>2000 mg/kg</td>
<td>8.8 mg/L/4h</td>
</tr>
<tr>
<td>SILICON 7440-21-3</td>
<td>3160 mg/kg</td>
<td>n/d</td>
<td>n/d</td>
</tr>
<tr>
<td>CRYSTALLINE SILICA 14808-60-7</td>
<td>n/d</td>
<td>n/d</td>
<td>n/d</td>
</tr>
<tr>
<td>TRADE SECRET (Non-hazardous) MIXTURE</td>
<td>n/d</td>
<td>n/d</td>
<td>n/d</td>
</tr>
</tbody>
</table>

'n/d' = not determined

### 12. ECOLOGICAL INFORMATION

**Ecotoxicity:** No data available.

**Mobility and persistence:** No data available.

**Environmental fate:** No data available.

### 13. DISPOSAL CONSIDERATIONS

Please see also Section 15, Regulatory Information.

**Recommended Method of Disposal:** If resin becomes a waste, it would not be a hazardous waste by RCRA criteria (40CFR 261). Dispose of according to applicable federal, state and local regulations. Incineration is the preferred method of disposal.

**US EPA Waste Number:** NH - Not a RCRA Hazardous Waste Material.

### 14. TRANSPORT INFORMATION

**Proper shipping name:** Not regulated

**Technical name:** N/A

**Hazard class:** N/A

**UN/ID Number:** N/A

**Packing group:** N/A

**Emergency Response Guide no:** N/A

### 15. REGULATORY INFORMATION

**U.S. Federal Regulations**

**TSCA:**
All ingredients of this product are listed or are exempt from listing on the TSCA Inventory.

**The following RCRA code(s) applies to this material if it becomes waste:** None

**Regulatory status of hazardous chemical constituents of this product:**
### Component Information

<table>
<thead>
<tr>
<th>Component</th>
<th>Extremely Hazardous*</th>
<th>Toxic Chemical**</th>
<th>CERCLA RQ (lbs)</th>
<th>12B EXPORT NOTIFICATION:</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIMESTONE 1317-65-3</td>
<td>No</td>
<td>No</td>
<td>0.0</td>
<td>Not required</td>
</tr>
<tr>
<td>BISPHENOL A/EPICHLOROHYDRIN BASED EPOXY RESIN 25068-38-6</td>
<td>No</td>
<td>No</td>
<td>0.0</td>
<td>Not required</td>
</tr>
<tr>
<td>IRON 7439-89-6</td>
<td>No</td>
<td>No</td>
<td>0.0</td>
<td>Not required</td>
</tr>
<tr>
<td>SILICON DIOXIDE, AMORPHOUS 112945-52-5</td>
<td>No</td>
<td>No</td>
<td>0.0</td>
<td>Not required</td>
</tr>
<tr>
<td>BENZYL ALCOHOL 100-51-6</td>
<td>No</td>
<td>No</td>
<td>0.0</td>
<td>Not required</td>
</tr>
<tr>
<td>SILICON 7440-21-3</td>
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<td>No</td>
<td>0.0</td>
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<tr>
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<td>No</td>
<td>0.0</td>
<td>Not required</td>
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<tr>
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<td>No</td>
<td>0.0</td>
<td>Not required</td>
</tr>
</tbody>
</table>

*Consult the appropriate regulations for emergency planning and release reporting requirements for substances on the SARA Section 301 Extremely Hazardous Substance List.

**Substances for which the “Toxic Chemical” column is marked “Yes” are on the SARA Section 313 list of Toxic Chemicals, for which release reporting may be required. For specific requirements, consult the appropriate regulations.

### Other Information

For purposes of SARA Section 312 hazardous materials inventory reporting, the following hazard classes apply to this material: Immediate health hazard, Delayed health hazard

**California regulations:** For purposes of the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Prop 65), this product contains a chemical(s) known to cause cancer and birth defects or other reproductive harm.

**Canadian Regulations**

WHMIS Hazard Class: D2A VERY TOXIC MATERIALS, D2B TOXIC MATERIALS, All components of this product are on the Domestic Substances List

### 16. OTHER INFORMATION

**Hazardous Material Information System (HMIS) rating:**

Health 2*    Flammability 1    Physical Hazard 1

HMIS is a registered trademark of the National Paint and Coatings Assn.

**Revision Date:** October/22/2008

**Revision Number:** 4

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