

**PHILLYBOND TA-30 ADHESIVE HARDENER**

Last revised: 03/30/00

Printed: 09/19/01

**1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

Product Identifier: EPOXY HARDENER

Chemical family Polyamines and modified polyamines

General information: The following data pertain to the hardener only; properly mixed and cured epoxies are not hazardous.

**MANUFACTURER**

ITW Philadelphia Resins  
130 Commerce Dr.  
Montgomeryville, PA 18936

**EMERGENCY INFORMATION**

Emergency telephone number  
(CHEMTREC) (800) 424-9300  
Other calls: (215) 855-8450

**2. COMPOSITION/INFORMATION ON INGREDIENTS**

| HAZARDOUS CONSTITUENTS                  |       |              | Exposure limits |                        |                              |                        |
|---|-------|--------------|-----------------|------------------------|------------------------------|------------------------|
| Constituent                             | Abbr. | CAS No.      | Weight percent  | ACGIH TLV              | OSHA PEL                     | Other Limits           |
| Phenol                                  |       | 108952       | 0.1-1           | 5 ppm                  | 5ppm                         | 5 ppm (Canada )        |
| Triethylenetetramine                    | TETA  | 112243       | 0.1-1,1-5       | n/e                    | n/e                          | 1 ppm (AIHA-WE ) (EL ) |
| Tetraethylenepentamine                  | TEPA  | 112572       | 1-5             | n/e                    | n/e                          | n/e                    |
| Amorphous fumed silica                  |       | 7631869      | 3-7             | n/e                    | n/e                          | n/e                    |
| Carbon black                            |       | 1333864      | 0.1-1           | 3.5 mg/m <sup>3</sup>  | 3.5 mg/m <sup>3</sup>        | n/e                    |
| Crystalline silica                      |       | 14808607     | 0.1-1           | 0.05 mg/m <sup>3</sup> | 10/(% Q+2) mg/m <sup>3</sup> | 0.1 (Canada ) 3        |
| Partially cross-linked phenolic resin   |       | TRADE SECRET | 1-5             | n/e                    | n/e                          | n/e                    |
| Dimer/TOFA, reaction products with TETA |       | 68082291     | 10-30           | n/e                    | n/e                          | n/e                    |

"TLV" means the Threshold Limit Value exposure (eight-hour, time-weighted average, unless otherwise noted) as 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. HAZARDS IDENTIFICATION****Emergency Overview**

Appearance, physical form, odor: Dark Gray paste with mild ammonia-like odor.

**WARNING! Severe eye, skin and respiratory tract irritant (evidenced by rash, burning sensation, sore throat, nausea, shortness of breath). Harmful if absorbed through skin. May cause skin sensitization. Avoid breathing vapors. Use with adequate ventilation. Do not take internally. Wash thoroughly after handling. Do not expose to heat or flames.**

**Potential health effects:****Primary routes of exposure:**

Skin contact     Skin absorption     Eye contact     Inhalation     Ingestion

**Symptoms of acute overexposure:****Skin:**

Severe irritant.

**Eyes:**

Severe irritant

**Inhalation:**

Irritation of nose and throat; nausea and vomiting in severe cases

**Ingestion:**

May cause irritation of mouth and throat and gastrointestinal tract.

**Effects of chronic overexposure:**

Repeated skin contact can cause sensitization, with itching, rashes, or swelling of the skin. TETA may cause respiratory sensitization and chronic lung toxicity (cough, tightness of chest, shortness of breath). Repeated exposures to high vapor concentrations of TEPA may cause injury to the liver, kidney, and respiratory tract. TEPA has

**Medical conditions which may be aggravated by exposure:**

Eye disease, skin disorders and allergies.

**Carcinogenicity -- OSHA regulated:** No    **ACGIH:** No    **National Toxicology Program:** Yes  
**International Agency for Research on Cancer:** Yes  
**Cancer-suspect constituent(s):** Silica and carbon black

**Other effects:**

Repeated and/or prolonged exposure to low concentrations of vapor may cause: sore throat, eye irritation, nausea, faintness, headache, which are transient. Repeated and /or prolonged exposures may result in: adverse skin effects (such as defatting, rash, irritation or corrosion), adverse eye effects (such as conjunctivitis or corneal damage).

**4. FIRST AID MEASURES****First aid for eyes:**

Immediately flush with clean water for at least 15 minutes while gently holding eyelids open. Get medical help as soon as possible.

**First aid for skin:**

Immediately remove contaminated clothing and shoes and wash well with soap and warm water. See a doctor if irritation develops.

**First aid for inhalation:**

Remove patient to fresh air. Give oxygen or artificial respiration if needed. Obtain medical attention immediately.

**First aid for ingestion:**

Do NOT induce vomiting. Dilute with a cup (250-300 ml) of milk or water. Get immediate medical help. Never give anything by mouth to a person rapidly losing consciousness, already unconscious or convulsing person. If vomiting occurs naturally, lean victim forward to prevent aspiration and repeat the administration of water.

**5. FIRE FIGHTING MEASURES****Extinguishing media:**

Water       Carbon dioxide       Dry chemical       Foam       Alcohol foam

**Flash Point (°F):** >200

**Method:** TCC

**Explosive limits in air -- Lower:** n/d

**Upper:** n/d

**Special firefighting procedures:**

Firefighters should wear self-contained breathing apparatus and sufficient protective gear to prevent all skin and eye contact with this material.

**Unusual fire and explosion hazards:**

None

**Hazardous products of combustion:**

Acrid and toxic fumes with organic amines, ammonia, oxides of carbon and nitrogen.

**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 to remove trace residue.

**Special procedures:**

Prevent spill from entering drainage/sewer systems, waterways, and surface waters.

**7. HANDLING AND STORAGE****Handling precautions:**

Avoid contact with skin, eyes, or clothing. 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 nuisance dust during sanding/grinding of cured product.

**Storage precautions:**

Store in a cool, dry area away from high temperatures and flames.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION****Engineering controls****Ventilation:**

General mechanical ventilation is adequate for occasional use. For prolonged or repeated use, local exhaust is recommended.

**Other engineering controls:**

Have emergency shower and eye wash stations available.

**Personal protective equipment****Eye and face protection:**

Safety glasses with sideshields or chemical goggles.

**Skin Protection:**

Chemical-resistant rubber (for example, neoprene, butyl rubber or nitrile) gloves and other protective gear as needed to prevent skin contact.

**Respiratory protection:**

None needed in normal use with proper ventilation. In poorly ventilated areas or when creating a dust or mist, use NIOSH-approved organic vapor respirator.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

|                                    |       |   |  |
|------------------------------------|-------|---|--|
| <b>Specific gravity:</b>           | 1.29  | <b>Boiling point (°F):</b>                  | >450   |
| <b>Melting point (°F):</b>         | n/d   | <b>Vapor density (air = 1):</b>             | >1   |
| <b>Vapor pressure (mmHg):</b>      | <0.01 | at 68 °F                                    | <b>Evaporation rate (butyl acetate = 1):</b> <<1 |
| <b>VOC (grams/liter):</b>          | 0     | <b>Solubility in water:</b>                 | n/d  |
| <b>Percent volatile by volume:</b> | 0     | <b>pH (5% solution or slurry in water):</b> | Alkaline   |
| <b>Percent solids by weight:</b>   | 100   |   | 0  |

**10. STABILITY AND REACTIVITY**

This product is chemically stable.

Hazardous polymerization will not occur.

**Conditions to avoid:**

Extreme heat or open flame

**Incompatible materials:**

Strong oxidizers, acids, and chlorinated organic compounds

**Hazardous decomposition products:**

Acrid and toxic fumes with organic amines, ammonia, oxides of carbon and nitrogen

**Conditions of hazardous polymerization:**

Heat is released when this product is mixed with epoxy resins; use care when mixing large quantities.

**11. TOXICOLOGICAL INFORMATION****Acute oral effects:**

LD50 (rat): > 2000 mg/kg (estimate)

No data.

**Acute dermal effects**

LD50 (rabbit): > 1000 mg/kg (estimate)

TETA has been found to be toxic by skin absorption (ANSI Z129.1 1988). TETA is a severe irritant to the skin of a rabbit.

**Acute inhalation effects:**

LC50 (rat): No data in 0 hours

Carbon black (1 hr, rat) LC50=27,000 mg/m<sup>3</sup>

**Eye irritation:**

TETA is a severe irritant to the eyes of a rabbit.

**Subchronic effects**

Absorption of phenolic solutions through the skin may be very rapid and cause death. Lesser exposures can cause damage to the kidneys, liver, pancreas and spleen, and edema of the lungs.

**Chronic effects**

It has been generally observed in animal studies that aliphatic amines can cause changes in the lungs and heart. TETA has been found to produce liver and kidney damage and brain congestion in dermally exposed animals. TETA contains two secondary amine groups which can react with nitrosating agents (e.g. nitrites and nitrous acid) to form nitrosamines that may be carcinogenic. Repeated overexposure to phenol can cause effects on the heart and nervous system including changes in heart rate, blood pressure, respiration, as well as tremors and lung disorders. Chronic exposures can cause death from liver and kidney damage.

**Carcinogenicity, teratogenicity, and mutagenicity:**

TETA has tested positive in screening tests for mutagenicity. TETA was found fetotoxic and teratogenic when fed to rats at 0.83% and 1.67% of diet. When applied dermally to the skin of pregnant guinea pigs, there was a 90% abortion rate or death of fetus with developmental anomalies. TEPA has exhibited evidence for weak mutagenic activity in vitro test systems. Carbon black has been shown to have In Vivo mutagenic effects on a rat lung cells. Phenol has been shown to produce fetotoxic effects in laboratory animals. Phenol has been shown to be a mutagenic in germ cells, in vivo.

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

| Constituent                             | Oral LD50<br>(rat) | Dermal LD50<br>(rabbit) | Inhalation LC50<br>(rat, 4 hours) |
|---|--------------------|-------------------------|-----------------------------------|
| Phenol                                  | 317 mg/kg          | 630 mg/kg               | > 3600 mg/m <sup>3</sup>          |
| Triethylenetetramine                    | 2500 mg/kg         | 805 mg/kg               | n/d                               |
| Tetraethylenepentamine                  | 3224 mg/kg         | 660 mg/kg               | n/d                               |
| Amorphous fumed silica                  | > 10 g/kg          | n/d                     | > 0.139 mg/L                      |
| Carbon black                            | n/d                | n/d                     | 6750 mg/m <sup>3</sup>            |
| Crystalline silica                      | n/d                | n/d                     | n/d                               |
| Partially cross-linked phenolic resin   | n/d                | n/d                     | n/d                               |
| Dimer/TOFA, reaction products with TETA | n/d                | n/d                     | n/d                               |

**12. ECOLOGICAL INFORMATION****Ecotoxicity:**

No data.

**Mobility and persistence:**

No data.

**Environmental fate:**

No data.

**13. DISPOSAL CONSIDERATIONS****Waste management recommendations:**

If this material 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.

**14. TRANSPORT INFORMATION****Proper shipping name:** Non-regulated**Technical name:** N/A**Hazard class:** N/A**UN number:** N/A**Packing group:** N/A**IMDG Page no.:** N/A**Emergency Response Guide no.:** N/A**Other:****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:**

| Constituent                             | Extremely Hazardous* | Toxic Chemical** | CERCLA RQ (lbs) | TSCA 12B Export Notification |
|---|----------------------|------------------|-----------------|------------------------------|
| Phenol                                  | Yes                  | Yes              | No              | Required                     |
| Triethylenetetramine                    | No                   | No               | No              | Not required                 |
| Tetraethylenepentamine                  | No                   | No               | No              | Not required                 |
| Amorphous fumed silica                  | No                   | No               | No              | Not required                 |
| Carbon black                            | No                   | No               | No              | Not required                 |
| Crystalline silica                      | No                   | No               | No              | Not required                 |
| Partially cross-linked phenolic resin   | No                   | No               | No              | Not required                 |
| Dimer/TOFA, reaction products with TETA | No                   | No               | No              | Not required                 |

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

**Classification of this material for SARA Section 312 hazardous materials inventory reporting:**

Immediate health hazard    Delayed health hazard

**Regulatory notes:**

HMIRC Claim Registry Number 4180 submitted february 1998.

**Canadian regulations****WHMIS hazard class(es):**    D2B; D2A; D1B

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

***16. OTHER INFORMATION***

| <b>Hazardous Materials Information System (HMIS) ratings:</b> |                     |                   |
|---|---------------------|-------------------|
| <b>Health</b>   | <b>Flammability</b> | <b>Reactivity</b> |
| <b>3*</b>   | <b>1</b>            | <b>1</b>          |

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.

**PHILLYBOND TA-30 ADHESIVE RESIN**

Last revised: 01/28/00

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**1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

Chemical family Epoxy resin

General information: 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.

**MANUFACTURER**

ITW Philadelphia Resins  
130 Commerce Dr.  
Montgomeryville, PA 18936

**EMERGENCY INFORMATION**

Emergency telephone number  
(CHEMTREC) **(800) 424-9300**  
Other calls: **(215) 855-8450**

**2. COMPOSITION/INFORMATION ON INGREDIENTS**

| HAZARDOUS CONSTITUENTS             |            |          |                | Exposure limits   |                                    |                       |
|------------------------------------|------------|----------|----------------|-------------------|------------------------------------|-----------------------|
| Constituent                        | Abbr.      | CAS No.  | Weight percent | ACGIH TLV         | OSHA PEL                           | Other Limits          |
| Crystalline silica                 |            | 14808607 | < 1            | 0.05<br>mg/m<br>3 | 10/(%<br>Q+2)<br>mg/m <sup>3</sup> | 0.1<br>(Canada )<br>3 |
| Bisphenol A diglycidyl ether resin | DGEB<br>PA | 25068386 | 40-70          | n/e               | n/e                                | n/e                   |
| Dibutyl phthalate                  | DBP        | 84742    | 1-10           | 5<br>mg/m<br>3    | 5<br>mg/m <sup>3</sup><br>3        | 5<br>(Canada )        |

"TLV" means the Threshold Limit Value exposure (eight-hour, time-weighted average, unless otherwise noted) as 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. HAZARDS IDENTIFICATION****Emergency Overview**

Appearance, physical form, odor: viscous liquid with little odor.

**CAUTION! Eye and skin irritant. Potential skin sensitizer. Avoid contact with eyes. Avoid prolonged or repeated skin contact. Do not take internally. Wash thoroughly after handling.**

**Potential health effects:****Primary routes of exposure:**

Skin contact     Skin absorption     Eye contact     Inhalation     Ingestion

**Symptoms of acute overexposure:****Skin:**

Moderate irritant (redness, itching). Contact at elevated temperatures can cause thermal burns. May cause skin sensitization (rashes, hives). May be harmful if absorbed through skin.

**Eyes:**

Moderate irritant (tearing, stinging, redness, swelling of eyes). Contact at elevated temperatures can cause thermal burns.

**Inhalation:**

May cause irritation of nose, throat, or airways. Breathing large amounts of vapors may be harmful and may cause nausea, vomiting and diarrhea.

**Ingestion:**

Acute oral toxicity is low. May cause gastric distress (nausea, vomiting, diarrhea).

**Effects of chronic overexposure:**

Prolonged or repeated skin contact may cause sensitization, with itching, swelling, or rashes on later exposure. Studies have shown bisphenol A diglycidyl ether resin to be a sensitizing agent causing allergic contact dermatitis.

**Medical conditions which may be aggravated by exposure:**

Preexisting respiratory (asthma-like conditions), liver, male reproductive system, eye & skin disorders. Development of preexisting skin or lung allergy symptoms may increase.

**Carcinogenicity -- OSHA regulated:** No    **ACGIH:** No    **National Toxicology Program:** Yes  
**International Agency for Research on Cancer:** Yes  
**Cancer-suspect constituent(s):** Silica

**Other effects:**

See section 11.

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**4. FIRST AID MEASURES****First aid for eyes:**

Flush eye with clean water for at least 15 minutes while gently holding eyelids open. Get immediate medical attention.

**First aid for skin:**

Immediately remove contaminated clothing and excess contaminant. Flush skin with water. Wash thoroughly with soap and warm water. Consult a physician if irritation develops.

**First aid for inhalation:**

Remove patient to fresh air. Administer oxygen if breathing is difficult. Get medical attention if symptoms persist.

**First aid for ingestion:**

Do NOT induce vomiting. Give two glasses of water to dilute if patient is conscious. Get medical attention.

### 5. FIRE FIGHTING MEASURES

**Extinguishing media:** Water Carbon dioxide Dry chemical Foam Alcohol foam**Flash Point (°F):** > 350**Method:** estimate**Explosive limits in air -- Lower:** n/d**Upper:** n/d**Special firefighting 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. Cool fire exposed containers with water.

**Unusual fire and explosion hazards:**

Heating above 300 deg F in the presence of air may cause slow oxidative decomposition and above 500 deg F may cause polymerization. Water or foam may cause frothing. Personnel in vicinity and downwind should be evacuated.

**Hazardous products of combustion:**

When heated to decomposition it emits fumes of Cl<sup>-</sup>, 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 to remove trace residue.

**Special procedures:**

Prevent spill from entering drainage/sewer systems, waterways, and surface waters.

### 7. HANDLING AND STORAGE

**Handling precautions:**

Avoid contact with skin, eyes, or clothing. 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 nuisance dust during sanding/grinding of cured product.

**Storage precautions:**

Store in a cool, dry area away from high temperatures and flames. Keep containers closed when not in use.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION****Engineering controls****Ventilation:**

Local exhaust ventilation is preferred although good general mechanical ventilation is usually adequate for most industrial applications. Local exhaust is recommended for confined areas.

**Other engineering controls:**

Have emergency shower and eye wash available.

**Personal protective equipment****Eye and face protection:**

Safety glasses with side shields.

**Skin Protection:**

Chemical-resistant gloves and other gear as required to prevent skin contact.

**Respiratory protection:**

None required at normal handling temperatures and conditions. Use NIOSH approved organic vapor cartridges for uncured resin and dust/particle respirators during grinding/sanding operations of cured resin as exposure levels dictate.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

|                                    |                      |  |            |
|------------------------------------|----------------------|--|------------|
| <b>Specific gravity:</b>           | 1.1-1.3              | <b>Boiling point (°F):</b>                   | >500       |
| <b>Melting point (°F):</b>         | n/d                  | <b>Vapor density (air = 1):</b>              | >1         |
| <b>Vapor pressure (mmHg):</b>      | 0.03 mm Hg at 171 °F | <b>Evaporation rate (butyl acetate = 1):</b> | <<1        |
| <b>VOC (grams/liter):</b>          | 0                    | <b>Solubility in water:</b>                  | Negligible |
| <b>Percent volatile by volume:</b> | 0                    | <b>pH (5% solution or slurry in water):</b>  | neutral    |
| <b>Percent solids by weight:</b>   | 100                  |  | 0          |

**10. STABILITY AND REACTIVITY**

This product is chemically stable.

Hazardous polymerization will not occur.

**Conditions to avoid:**

Open flame and extreme heat

**Incompatible materials:**

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

**Hazardous decomposition products:**

Oxides of carbon; aldehydes, acids and other organic substances may be formed during combustion or elevated temperature (>500 deg F) degradation.

**Conditions of hazardous polymerization:**

Heat is generated when resin is mixed with curing agents; Run-a-way cure reactions may char and decompose the resin, generating unidentified fumes and vapors which may be toxic.

**11. TOXICOLOGICAL INFORMATION****Acute oral effects:**

LD50 (rat): No data available.

**Acute dermal effects**

LD50 (rabbit): No data available.

**Acute inhalation effects:**

LC50 (rat): No data available. in 0 hours

**Eye irritation:**

No data available.

**Subchronic effects**

Dibutyl Phthalate: Dermal Study (90 days, rabbit):  
 LOEL = 4200 mg/kg/day (target organ effects:  
 Kidney); NOEL = 2100 mg/kg/day. Dibutyl  
 Phthalate: Oral Study (9 days, mouse): LOEL:  
 2000 mg/kg/day (target organ effects: testes).

**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 that the resin "is not a systemic carcinogen when applied to the dorsal skin of CF1 mice." DBP has shown to cause liver abnormalities in laboratory animals.

**Carcinogenicity, teratogenicity, 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 In Vivo mutagenicity assays. Both have shown activity by In Vitro microbial mutagenicity screening and have produced chromosomal aberrations in cultured rat liver cells. Dibutyl Phthalate has been shown to cause birth defects in laboratory animal studies. The relevance of these findings to humans is unknown.

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

| Constituent                        | Oral LD50 (rat) | Dermal LD50 (rabbit) | Inhalation LC50 (rat, 4 hours) |
|------------------------------------|-----------------|----------------------|--------------------------------|
| Crystalline silica                 | n/d             | n/d                  | n/d                            |
| Bisphenol A diglycidyl ether resin | 11.4 g/kg       | >20 ml/kg            | no deaths                      |
| Dibutyl phthalate                  | 8000 mg/kg      | >20 mL/kg            | 4250 mg/m <sup>3</sup>         |

**12. ECOLOGICAL INFORMATION****Ecotoxicity:**

Dibutyl Phthalate: 96-h LC-50 (fathead minnow): 0.92 mg/L; 48-h EC-50 (daphnid): 3.4 mg/L;

**Mobility and persistence:**

No data available.

**Environmental fate:**

No data available.

**13. DISPOSAL CONSIDERATIONS****Waste management recommendations:**

If this 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.

**14. TRANSPORT INFORMATION****Proper shipping name:** Non-regulated**Technical name:** N/A**Hazard class:** N/A**UN number:** N/A      **Packing group:** N/A      **IMDG Page no.:** N/A**Emergency Response Guide no.:** N/A**Other:** Ctns > 10 gal are RQ UN 3082**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:**

| <b>Constituent</b>                 | <b>Extremely Hazardous*</b> | <b>Toxic Chemical**</b> | <b>CERCLA RQ (lbs)</b> | <b>TSCA 12B Export Notification</b> |
|------------------------------------|-----------------------------|-------------------------|------------------------|-------------------------------------|
| Crystalline silica                 | No                          | No                      | No                     | Not required                        |
| Bisphenol A diglycidyl ether resin | No                          | No                      | No                     | Not required                        |
| Dibutyl phthalate                  | No                          | Yes                     | No                     | Required                            |

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

**Classification of this material for SARA Section 312 hazardous materials inventory reporting:**

Immediate health hazard    Delayed health hazard

**Canadian regulations****WHMIS hazard class(es):** D2B; D2A

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

**16. OTHER INFORMATION**

| <b>Hazardous Materials Information System (HMIS) ratings:</b> |                     |                   |
|---|---------------------|-------------------|
| <b>Health</b>   | <b>Flammability</b> | <b>Reactivity</b> |
| <b>2*</b>   | <b>1</b>            | <b>1</b>          |

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