# **Material Safety Data Sheet**

**Part No.:** 0146 Page 1

### **CERAMIC REPAIR RESIN**

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

11700 Last revised: 03/28/03

Printed: 7/2/2004

#### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Tradename: CERAMIC REPAIR RESIN
Product Identifier: EPOXY RESINS COMBUSTIBLE

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

**MANUFACTURER** 

ITW Devcon 30 Endicott St. Danvers, MA 01923

#### **EMERGENCY INFORMATION**

Emergency telephone number (CHEMTREC): (800) 424-9300

Other Calls: (978) 777-1100

#### 2. COMPOSITION/INFORMATION ON INGREDIENTS

#### HAZARDOUS CONSTITUENTS

Exposure l	lim	its
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Constituent	Abbr.	CAS No.	Weight percent	ACGIH TLV	OSHA PEL	Other Limits
Xylene		1330207	1-5	100 ppm	100 ppm	100 ppm (Canada)
Bisphenol A diglycidyl ether resin	DGEBPA	25068386	40-70	n/e	n/e	n/e

<sup>&</sup>quot;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. HAZARDS IDENTIFICATION

#### **Emergency Overview**

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

WARNING!	Combustible.	Eye, skin and respiratory irritant.	Potential skin sensitizer.

#### **Potential health effects**

Primary routes of exposure:	Skin contact	Skin absorption	Eye contact	Inhalation	Ingestio

#### Symptoms of acute overexposure:

**Skin:** Moderate irritant. Contact at elevated temperatures can cause thermal burns. May cause skin sensitization (rashes, hives, defatting).

Eyes: Moderate irritant. Contact at elevated temperatures can cause thermal burns. High vapor concentrations may also

be irritating.

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#### Inhalation:

Vapors may irritate nose, throat, and respiratory tract. High vapor concentrations may cause central nervous system (CNS) depression (headache, nausea, giddiness, dizziness).

#### Ingestion:

May cause gastric distress and aspiration (evidenced by coughing). May cause CNS depression.

#### Effects of chronic overexposure:

Prolonged or repeated skin contact may cause sensitization, with itching, swelling, or rashes on later exposure.

Carcinogenicity -- OSHA regulated: No

ACGIH: No

**National Toxicology Program: No** 

International Agency for Research on Cancer:No

Cancer-suspect constituent(s): None

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

Preexisting eye and skin disorders (e.g. eczema). Development of preexisting skin or lung allergy symptoms may increase.

#### Other effects:

See section 11.

#### 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. Rinse mouth out with water, then sip water to remove taste from mouth. Never give anything by mouth to an unconscious person. If vomiting occurs spontaneously, keep head below hips (if sitting) or to the side (if lying down) to prevent aspiration. Get medical attention.

#### Note to physician:

In general, emesis induction is unnecessary in high viscosity, low volatility products, e.g., neat epoxy resins.

#### 5. FIRE FIGHTING MEASURES

Extinguishing media:				
Water	Carbon dioxide	Dry chemical	Foam	Alcohol foam

Flash Point (°F): >250 Method: PMCC

Explosive limits in air (percent) -- 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.

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### Hazardous products of combustion:

When heated to decomposition it emits fumes of CI-, 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. Collect run-off water and transfer to drums or tanks for later disposal. Notify local health authorities and other appropriate agencies if such contamination occurs.

#### 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 dust during sanding/ grinding of cured product.

#### Storage:

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

#### 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 needed in normal use with proper ventilation. In poorly ventilated areas use NIOSH approved organic vapor cartidge respirator for uncured resin, dust/particle respirator during grinding/sanding operations for cured resin, or

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fresh airline respirator as exposure levels dictate (see OSHA 1910.134).

#### 9. PHYSICAL AND CHEMICAL PROPERTIES

Specific gravity: 1.66 Boiling point (°F): >500 Melting point (°F): n/d Vapor density (air = 1): >1 Vapor pressure (mmHg): n/d at 0 °F Evaporation rate (butyl acetate = 1): <<1

VOC (grams/liter): 33 Solubility in water: Negligible
Percent volatile by volume: <3 pH (5% solution or slurry in water): neutral

Percent solids by weight: > 97

#### 10. STABILITY AND REACTIVITY

This material 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 products of decomposition:

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

#### Conditions under which hazardous polymerization may occur:

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): Not available.

Acute dermal effects: LD50 (rabbit): Not available.

Acute inhalation effects: LC50 (rat): Not available. Exposure: hours.

#### Eye irritation:

Not available.

#### Subchronic effects:

No data available.

### Carcinogenicity, teratogenicity, and mutagenicity:

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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. Developmental toxicity studies with xylene have shown embryolethal/toxic and teratogenic effects with maternal toxicity.

#### Other chronic effects:

2-year bioassays in mice exposed by the dermal route to EPON 828, DGEBPA, 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." Laboratory animals exposed to xylene have shown hearing loss, and effects to liver, kidneys, lungs, spleen heart, blood and adrenals.

Toxicological information on hazardous chemical constituents of this product:

Constituent	Oral LD50 (rat)	Dermal LD50 (rabbit)	Inhalation LC50 4hr, (rat)
Xylene	4300 mg/kg	>1700 mg/kg	5000 ppm
Bisphenol A diglycidyl ether resin	11.4 g/kg	>20 ml/kg	no deaths

'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.

#### 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.

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#### 14. TRANSPORT INFORMATION

Proper shipping name: Non-regulated

Technical name: N/A
Hazard class: N/A
UN number: N/A
Packing group: N/A

Emergency Response Guide no.: N/A

IMDG page number: N/A
Other: 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:

Constituent	Extremely Hazardous*	Toxic Chemical**	CERCLA RQ (lbs)	TSCA 12B Export Notification
Xylene	No	Yes	100.0	Not required
Bisphenol A diglycidyl ether resin	No	No	0.0	Not required

<sup>\*</sup>Consult the appropriate regulations for emergency planning and release reporting requirements for substances on the SARA Section 301 Extremely Hazardous Substance list.

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

#### **Canadian regulations**

WHMIS hazard class(es): D2B; B3

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

<sup>\*\*</sup>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.

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# 16. OTHER INFORMATION

Hazardous Materials Identification System (HMIS ratings:	Health 2*	Flammability	Reactivity 1	

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.

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### CERAMIC REPAIR HARDENER

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

11700 Last revised: 06/11/04

Printed: 7/2/2004

#### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Tradename: CERAMIC REPAIR HARDENER

Product Identifier: EPOXY HARDENER

General use: This information pertains to the hardener component of a two component system. When fully cured,

the mixed product is non-hazardous.

Chemical family: Polyamines and modified polyamines

**MANUFACTURER** 

ITW Devcon 30 Endicott St. Danvers. MA 01923 **EMERGENCY INFORMATION** 

Emergency telephone number (CHEMTREC): (800) 424-9300

Other Calls: (978) 777-1100

#### 2. COMPOSITION/INFORMATION ON INGREDIENTS

#### HAZARDOUS CONSTITUENTS

#### **Exposure limits**

Constituent	Abbr.	CAS No.	Weight percent	ACGIH TLV	OSHA PEL	Other Limits
Phenol		108952	10-20	5 ppm	5ppm	5 ppm (Canada)
Triethylenetetramine	TETA	112243	< 20	n/e	n/e	1 ppm (skin) (AIHA-WEEL)
Formaldehyde polymer with phenol and TETA		32610778	50-85	n/e	n/e	n/e
Dimer/TOFA, reaction products with TETA		68082291	1-10	n/e	n/e	n/e

<sup>&</sup>quot;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. HAZARDS IDENTIFICATION

#### **Emergency Overview**

Appearance, form, odor: White paste with mild phenolic-like odor.

WARNING! Eye, skin and respiratory irritant. Harmful if absorbed through skin. Potential skin sensitizer.

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#### **Potential health effects**

Primary routes of exposure:	Skin contact	Skin absorption	Eye contact	Inhalation	Ingestion
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#### Symptoms of acute overexposure:

**Skin:** Severe irritation or burns, necrosis, blistering and permanent injury. Product can be absorbed through the skin and may cause nausea, headache and general discomfort.

**Eyes:** Severe irritation or burns. May cause lacrimation, conjunctivitis, corneal damage and may cause permanent injury (including blindness).

#### Inhalation:

If the hardener is poorly ventilated, strongly heated or atomized, the vapor or mist can cause severe irritation of the respiratory tract, damage contacted tissue and produce scarring. Coughing and chest pain may result, nausea and vomiting in severe cases.

#### Ingestion:

Causes severe damage to mucous membranes if swallowed. Burning of mouth, throat, and stomach with abdominal and chest pain. May cause malaise, headache, discomfort bleeding and vomiting of blood. Aspiration may result in lung damage.

#### Effects of chronic overexposure:

Repeated skin contact or inhalation may cause sensitization, with asthmatic or allergic symptoms on subsequent exposure (itching, rash, defatting, swelling, nausea, faintness, headache). Repeated or prolonged exposure may cause adverse respiratory effects (cough, tightness of chest, shortness of breath), eye effects (conjunctivitis, corneal damage), skin effects (rash, irritation, corrosion), liver effects (jaundice, liver enlargement), or kidney effects (edema, proteinuria). Effects from inhalation of vapors may be delayed. TARGET ORGANS: EYE, SKIN, LIVER OR HEPATIC SYSTEM, KIDNEY, SPLEEN, PANCREAS

Carcinogenicity -- OSHA regulated: No ACGIH: No National Toxicology Program: No

International Agency for Research on Cancer:No

Cancer-suspect constituent(s): None

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

Eye disease, skin disorders and allergies, asthma and respiratory diseases (e.g. Bronchitis, Emphysema). Kidney and liver disorders.

#### Other effects:

Repeated and/or prolonged exposure to low concentrations of vapor may cause: sore throat, eye irritation, nausea, faintness, headache, 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. Phenol is a human poison by ingestion.

#### 4. FIRST AID MEASURES

#### First aid for eyes:

Flush eye with clean water for at least 20 minutes while gently holding eyelids open, lifting upper and lower lids. Get immediate medical attention.

#### First aid for skin:

Immediately remove contaminated clothing and excess contaminant. Flush skin with water for at least 15 minutes. 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. Never give anything by mouth to an unconscious person. If vomiting occurs spontaneously, keep head below hips (if sitting) or to the side (if lying down) to prevent aspiration. Get immediate medical attention.

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#### Note to physician:

Highly injurious to all tissues, similar to that of ammonia or ammonia gas. Chemical pneumonitis, pulmonary edema, laryngeal edema and delayed scarring of the airway or other affected tissues may occur. Treatment is supportive as for thermal burns. Avoid further exposure to this material if sensitization is confirmed.

#### 5. FIRE FIGHTING MEASURES

#### General fire and explosion characteristics:

Class IIIB.

Extinguishing media:				
Water	Carbon dioxide	Dry chemical	Foam	Alcohol foam

Flash Point (°F): >250 Method: PMCC

Explosive limits in air (percent) -- Lower: n/d Upper: n/d

#### Special firefighting procedures:

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 with this material. Cool fire exposed containers with water.

#### Unusual fire and explosion hazards:

Sudden reaction and fire may result if product is mixed with an oxidizing agent. Personnel in vicinity and downwind should be evacuated.

#### 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. Evacuate area. 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. Cover minor spills with sodium bisulfate to neutralize and reduce vapors.

#### Special procedures:

Prevent spill from entering drainage/sewer systems, waterways, and surface waters. Collect run-off water and transfer to drums or tanks for later disposal. Notify local health authorities and other appropriate agencies if such contamination occurs.

#### 7. HANDLING AND STORAGE

### Handling precautions:

Avoid breathing vapors. 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 dust during sanding/grinding of cured product. Do NOT mix with sodium nitrite or other nitrosating agents as cancer-causing nitrosamines could be formed.

#### Storage:

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Store in a cool, dry area away from high temperatures and flames. Do not store in reactive metal containers. Keep away from acids, oxidizers. Keep container tightly closed when not in use.

#### 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 1910.146).

#### Other engineering controls:

Have emergency shower and eye wash available.

### Personal protective equipment

#### Eye and face protection:

Chemical goggles if liquid contact is likely, or safety glasses with side shields.

#### Skin protection:

Chemical-resistant rubber 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 use NIOSH approved organic vapor cartidge respirator for uncured resin, dust/particle respirator during grinding/sanding operations for cured resin, or fresh airline respirator as exposure levels dictate (see OSHA 1910.134).

#### 9. PHYSICAL AND CHEMICAL PROPERTIES

Specific gravity: 1.09 Boiling point (°F): n/d Melting point (°F): n/d Vapor density (air = 1): n/d Vapor pressure (mmHg): <1 at 68 °F Evaporation rate (butyl acetate = 1): <<1

VOC (grams/liter): 0 Solubility in water: Appreciable

Percent volatile by volume: 0 pH (5% solution or slurry in water): alkaline

Percent solids by weight: 100

#### 10. STABILITY AND REACTIVITY

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

#### Conditions to avoid :

Extreme heat or open flame. N-nitrosamines (possibly potent carcinogens) may form when product is in contact with nitrous acid, nitrites or atmospheres with high nitrous oxide concentrations.

#### Incompatible materials:

Oxidizers, acids, Cl-organic cmpds. Reactive metals (e.g. Na, Ca, zinc). Sodium/calcium hypochlorite. Nitrous acid/oxide, nitrites. Peroxides. Mat'ls reactive with hydroxyl cmpds.

#### Hazardous products of decomposition:

Organic amines, ammonia, oxides of carbon and nitrogen, and other acrid and toxic fumes (nitriles, cyanic acid,

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isocyanates, cyanogens, nitrosamines, amides, carbamates).

#### Conditions under which hazardous polymerization may occur:

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): Not available.

Acute dermal effects: LD50 (rabbit): Not available.

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): Not available. Exposure: hours.

#### 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.

#### Carcinogenicity, teratogenicity, and mutagenicity:

TETA has tested positive in screening tests for mutagenicity. Phenol has been shown to produce fetotoxic effects in laboratory animals. Phenol has been shown to be a mutagenic in germ cells, in vivo.

#### Other 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. Sensitization has occurred in laboratory animals after repeated exposures to TETA. 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.

Toxicological information on hazardous chemical constituents of this product:

Constituent	Oral LD50 (rat)	Dermal LD50 (rabbit)	Inhalation LC50 4hr, (rat)
Phenol	317 mg/kg	630 mg/kg	> 3600 mg/m^3
Triethylenetetramine	2500 mg/kg	805 mg/kg	n/d
Formaldehyde polymer with phenol and TETA	n/d	n/d	n/d
Dimer/TOFA, reaction products with TETA	n/d	n/d	n/d

'n/d' = 'not determined'

#### 12 ECOLOGICAL INFORMATION

#### **Ecotoxicity:**

No data.

#### Mobility and persistence:

Phenol: Biodegradability = 99.5% at 7days.

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#### **Environmental fate:**

No data.

### 13. DISPOSAL CONSIDERATIONS

Please see also Section 15, Regulatory Information.

#### 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. Incineration is the preferred method of disposal.

#### 14. TRANSPORT INFORMATION

Proper shipping name: Non-regulated

Technical name :N/AHazard class :N/AUN number:N/APacking group:N/A

Emergency Response Guide no.: N/A

IMDG page number: N/A
Other: 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:

Constituent	Extremely Hazardous*	Toxic Chemical**	CERCLA RQ (lbs)	TSCA 12B Export Notification
Phenol	Yes	Yes	1000.0	Required
Triethylenetetramine	No	No	0.0	Not required
Formaldehyde polymer with phenol and TETA	No	No	0.0	Not required
Dimer/TOFA, reaction products with TETA	No	No	0.0	Not required

<sup>\*</sup>Consult the appropriate regulations for emergency planning and release reporting requirements for substances on the SARA Section 301 Extremely Hazardous Substance list.

<sup>\*\*</sup>Substances for which the "Toxic Chemical" column is marked "Yes" are on the SARA Section 313 list of

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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 --

**Canadian regulations** 

WHMIS hazard class(es): E; D2B; D1B

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

### 16. OTHER INFORMATION

Hazardous Materials Identification System (HMIS) ratings:	Health 3*	Flammability	Reactivity

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.