

# Safety Data Sheet

Revision Date 08.22.2022

Revision: 2

## 1 Identification of the substance/mixture and the company/undertaking

### 1.1 Product identifier

Trade name: **K-026 Resin**

1.2 Application of the substance / the mixture: Epoxy backing

1.3 Details of the supplier of the Safety Data Sheet

Manufacturer/Supplier:



Copps Industries, Inc.  
10500 N Commerce Street  
Mequon, WI 53092  
Phone: (262) 238-1700

1.4 Emergency telephone number:

ChemTel Inc.  
(800) 255-3924, +1 (813) 248-0585

## 2 Hazards identification

### 2.1 GHS Classification of the substance or mixture

Skin Irritant 2; H315: Causes skin irritation.  
Eye Irritant 2; H319: Causes serious eye irritation.  
Skin Sensitizer 1; H317: May cause and allergic skin reaction.

### 2.2 GHS Label elements

Hazard pictograms/symbols



Signal word: Warning

#### Hazard statements:

H315: Causes skin irritation.  
H319: Causes serious eye irritation.  
H317: May cause and allergic skin reaction.

#### Precautionary statements:

P280: wear protective gloves / eye protection.  
P273: Avoid release to the environment.  
P264: Wash thoroughly after handling.  
P261: Avoid breathing mist/vapours/spray.  
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P333+P313: If skin irritation or rash occurs: Get medical advice/attention.  
P337+P313: If eye irritation persists: Get medical advice/attention.

Additional information: Contains epoxy constituents. May produce an allergic reaction.

#### HMS Rating:

Health: 2  
Flammability: 1  
Physical Hazard: 0

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## 3 Composition/information on ingredients

### 3.2 Mixture

**Description:** Mixture of substances listed below with nonhazardous additions.

Dangerous components:		
CAS: 25068-38-6	Reaction product: bisphenol - A- (epichlorohydrin) epoxy resin (number average molecular weight<700)	25-50%
Trade Secret	Glycidyl ether	<10%
Trade Secret	Epoxy resin	<3%

In conformity with 29CFR 1910.1200(i) the specific chemical identity may be withheld as Trade Secret, while all health/safety properties and effects are included in the SDS.

## 4 First aid measures

### 4.1 Description of first aid measures

**General information:** Immediately remove any clothing soiled by the product. Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident. Take affected persons out into the fresh air.

**After inhalation:** Supply fresh air; consult doctor in case of complaints.

**After skin contact:** Immediately rinse with water. If skin irritation continues, consult a doctor.

**After eye contact:** Remove contact lenses if worn, if possible. Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

**After swallowing:** Rinse out mouth and then drink plenty of water. Do not induce vomiting; call for medical help immediately.

**4.2 Most important symptoms and effects, both acute and delayed:** Allergic reactions, Nausea, Coughing, Gastric or intestinal disorders, Irritant to skin and mucous membranes, Irritant to eyes.

**4.3 Indication of any immediate medical attention and special treatment needed:** Contains reaction product: bisphenol-A-(epichlorohydrin) epoxy resin (number average molecular weight  $\leq$  700). May produce an allergic reaction. If necessary oxygen respiration treatment. Later observation for pneumonia and pulmonary edema. Medical supervision for at least 48 hours.

## 5 Firefighting measures

**Suitable extinguishing agents:** Water haze or fog, Foam, Fire-extinguishing powder, Carbon dioxide.

**For safety reasons unsuitable extinguishing agents:** Water with full jet, Water spray

**5.2 Special hazards arising from the substance or mixture:** Formation of toxic gases is possible during heating or in case of fire.

### 5.3 Advice for the firefighters

**Protective equipment:** Wear self-contained respiratory protective device. Wear fully protective suit.

**Additional information:** Cool endangered receptacles with water fog or haze. Eliminate all ignition sources if safe to do so.

## 6 Accidental release measures

**6.1 Personal precautions, protective equipment and emergency procedures:** Use respiratory protective device against the effects of fumes/dust/aerosol. Wear protective equipment. Keep unprotected persons away. Ensure adequate ventilation. Keep away from ignition sources.

**6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water. Inform respective authorities in case of seepage into water course or sewage system. Prevent from spreading (e.g. by damming-in or oil barriers).

**6.3 Methods and material for containment and cleaning up:** Absorb liquid components with liquid-binding material. Send for recovery or disposal in suitable receptacles. Dispose contaminated material as waste according to item 13. Ensure adequate ventilation.

## 7 Handling and storage

**7.1 Precautions for safe handling:** Use only in well-ventilated areas. Store in cool, dry place in tightly closed receptacles (60-80°F recommended).

**7.2 Conditions for safe storage, including any incompatibilities:** Use only receptacles specifically permitted for this substance/product. Avoid storage near extreme heat, ignition sources or open flame.

**Further Information about storage conditions:** Keep container tightly sealed. Store in an area with adequate ventilation.

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## 8 Exposure controls/personal protection

### 8.1 Control parameters

**Ingredients with limit values that require monitoring at the workplace:** The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

**DNELs:** No further relevant information available.

**PNECs:** No further relevant information available.

**Additional information:** The lists valid during the making were used as basis.

**8.2 Engineering controls** Provide readily accessible eye wash stations and safety showers. Provide ventilation adequate to ensure concentrations are minimized.

### 8.3 Personal protective equipment

**General protective and hygienic measures:** Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work. Do not inhale gases / fumes / aerosols. Avoid contact with the eyes and skin.

**Respiratory protection:** Not required under normal conditions of use. Use suitable respiratory protective device in case of insufficient ventilation. For spills, respiratory protection may be advisable. Use respiratory protection when grinding or cutting material.

**Hand protection:** Protective, impervious gloves. (Neoprene, PVC, Nitrile rubber) The glove material has to be impermeable and resistant to the product / the substance/ the preparation. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

**Eye protection:** Safety glasses with side shields. Contact lenses should not be worn.

**Skin and Body protection:** Protective work clothing. Where potential exposure warrants, rubber or plastic boots and chemically resistant protective suit.

## 9 Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

#### General Information

#### Appearance

Form:	Viscous liquid
Colour:	Tan
Odour:	Sweet
Odour threshold:	No data available
pH:	No data available
Melting point/range:	No data available
Boiling point/range:	>392 °F / >200 °C
Flash point:	>302 °F / >150 °C
Evaporation rate:	No data available
Flammability (solid, gaseous):	Not applicable
Upper/lower flammability or explosive limit:	Not applicable
Vapor pressure:	No data available
Vapor density:	No data available
Relative Density at 20°C:	1.73 g/cm <sup>3</sup>
Solubility in / Miscibility with	
Water:	Not miscible or difficult to mix.
Partition coefficient (n-octanol/water):	No data available
Auto/Self-ignition temperature:	No data available
Decomposition temperature:	No data available
Viscosity	22,000-30,000 cps

## 10 Stability and reactivity

### 10.1 Reactivity

### 10.2 Chemical stability

**Thermal decomposition / conditions to be avoided:** No decomposition if used and stored according to specifications.

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**10.3 Possibility of hazardous reactions:** Reacts with strong alkali, Exothermic polymerization, Reacts with strong acids and oxidizing agents, Reacts with catalysts.

**10.4 Conditions to avoid:** Avoid contact with strong oxidizing agents, excessive heat or flames.

**10.5 Incompatible materials:** Strong acids, bases and oxidizing agents.

**10.6 Hazardous decomposition products:** Carbon monoxide and carbon dioxide.

## 11 Toxicological information

### 11.1 Information on likely routes of exposure:

Inhalation: May cause respiratory irritation

Ingestion: No data

Skin contact: May cause skin irritation

Eye contact: May cause eye irritation

**11.2 Symptoms related to physical, chemical and toxicological characteristics:** No available data

**11.3 Delayed and immediate effects as well as chronic effects from short and long-term exposure:**

(Data for primary hazardous component: Reaction product: bisphenol - A- (epichlorohydrin) epoxy resin)

Acute toxic:

Oral LD50 > 2,000 mg/kg (rat)

Dermal LD50 > 2,000 mg/kg (rat)

Inhalation No data

Skin Corrosive/irritant:

Test material was slightly irritating to skin in key studies. For the skin, mean erythema and edema scores were 0.8 and 0.5 respectively.

Serious eye damage/eye irritation:

Test material was slightly irritating to the eye in key studies. The mean eye score was 0.4

Respiratory sensitization: No data available

Skin sensitization:

In a local lymph node assay, the concentration that would cause a 3-fold increase in proliferation (EC-3) was calculated to be 5.7% which is consistent with moderate dermal sensitization potential.

**11.4 Numerical measures of toxicity:** No data available for mixture.

**Additional toxicological information:** The product shows the following dangers according to the calculation method of the General EU, Classification Guidelines for Preparations as issued in the latest version: Irritant, Danger through skin absorption. Toxic and /or corrosive effects may be delayed up to 24 hours. Inhalation of concentrated vapours as well as oral intake will lead to anesthesia-like conditions and headache, dizziness, etc.

## 12 Ecological information

### 12.1 Toxicity

#### Aquatic toxicity:

(Data taken from SDS of primary hazardous component: Reaction product: bisphenol - A- (epichlorohydrin) epoxy resin)

Fish 96hr-LC50 = 3.6mg/L test mat. *Oncorhynchus mykiss*  
(direct application, nominal) (OECD Guideline 203)

Crustacea LC50 1.41 mg/L 96hr *Oryzias latipes*  
48hr-EC50 = 2.8mg/L test mat *Daphnia magna*  
(direct application, nominal, based on: mobility) (OECD Guideline 202)

Aquatic Plant EC50 1.7mg/L 48hr  
72hr-EC50 > 11 mg/L *Scenedesmus capricornutum*  
water soluble fraction (meas. (arithm. mean))  
based on: growth rate (EPA-660/3-75-009)

**12.2 Persistence and degradability:** No data available.

**12.3 Bioaccumulative potential:** No further relevant information available.

**12.4 Mobility in soil:** No further relevant information available.

#### 12.5 Results of PBT and vPvB assessment:

PBT: Not applicable.

vPvB: Not applicable.

**12.6 Other adverse effects:** No further relevant information available

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## 13 Disposal considerations

### 13.1 Waste treatment methods

**Waste from residue/unused product:** This product should not be allowed to enter drains, water courses or the soil.

Dispose of this material in a safe manner and in accordance with federal, state and local regulations

**Contaminated packaging:** Disposal must be made in accordance with official federal, state and local regulations.

## 14 Transport information

### DOT

UN number: Not Regulated

### IATA

UN number: Not Regulated

### IMDG

UN number: Not Regulated

### TDG

UN number: Not Regulated

## 15 Regulatory Information

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

#### United States (USA)

##### SARA

<b>Section 355 (extremely hazardous substances):</b>
None of the ingredients is listed.
<b>Section 313 (Specific toxic chemical listings):</b>
Component(s) above 'de minimus' level: None
<b>TSCA (Toxic Substances Control Act):</b>
All the ingredients are listed.

##### Proposition 65 (California):

<b>Chemicals known to cause cancer or reproductive toxicity:</b> Ethylene glycol
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#### Canada

<b>Canadian Domestic Substances List (DSL):</b>
All ingredients are listed.
<b>Canadian Ingredient Disclosure list (limit 0.1%)</b>
None of the ingredients is listed.
<b>Canadian Ingredient Disclosure list (limit 1%)</b>
None of the ingredients is listed.

**15.2 Chemical Safety assessment:** A Chemical Safety Assessment has not been carried out.

## 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

### Abbreviation and acronyms:

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

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ACGIH: American Conference of Governmental Industrial Hygienist.  
EINECS: European Inventory of Existing Commercial Chemical Substances  
ELINCS: European List of Notified Chemical Substance  
CAS: Chemical Abstracts Service (division of the American Chemical Society)  
HMIS: Hazardous Materials Identification System (USA)  
WHMIS: Workplace Hazardous Materials Information System (Canada)

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## 1 Identification of the substance/mixture and the company/undertaking

### 1.1 Product identifier

Trade name: **K-026 Hardener**

1.2 Application of the substance / the mixture: **Cold cure epoxy**

1.3 Details of the supplier of the Safety Data Sheet

Manufacturer/Supplier:



Copps Industries, Inc.  
10500 N Commerce Street  
Mequon, WI 53092  
Phone: (262) 238-1700

1.4 Emergency telephone number:

ChemTel Inc.  
(800) 255-3924, +1 (813) 248-0585

## 2 Hazards identification

### 2.1 GHS Classification of the substance or mixture

Acute Toxicity – Oral; Category 3  
Acute Toxicity – Inhalation; Category 3  
Acute Toxicity – Dermal; Category 3  
Skin Corrosion; Category 1B  
Serious Eye Damage; Category 1  
Skin Sensitization; Category 1  
Germ cell mutagenicity - Category 2  
Specific target organ toxicity - repeated exposure - Category 2  
Specific target organ toxicity - single exposure - Category 3

### 2.2 GHS Label elements

Hazard pictograms/symbols



Signal word: **Danger**

#### Hazard statements:

H302: Harmful if swallowed.  
H311: Toxic in contact with skin.  
H314: Causes severe skin burns and eye damage.  
H317: May cause an allergic skin reaction.  
H331: Toxic if inhaled.  
H341: Suspected of causing genetic defects  
H373: May cause damage to organs through prolonged or repeated exposure.

#### Precautionary statements:

P201: Obtain special instructions before use.  
P260: Do not breathe dust/fume/gas/mist/vapours/spray.  
P264: Wash hands thoroughly after handling.  
P270: Do not eat, drink or smoke when using this product.  
P271: Use only outdoors or in a well-ventilated area.  
P280: Wear protective gloves/protective clothing/eye protection/face protection.  
P281: Use personal protective equipment as required  
P301+P312: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.  
P302+P352: IF ON SKIN: Wash with plenty of soap and water.  
P304+340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.

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P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310: Immediately call a POISON CENTRE or doctor/physician.

P333+P313: If skin irritation or rash occurs: Get medical advice/attention.

P363: Wash contaminated clothing before reuse.

P370+P378: In case of fire, use recommended extinguishing media for extinction.

P403+P233: Store in a well-ventilated place. Keep container tightly closed.

**Additional information:** Toxic in contact with skin. Toxic by inhalation. Corrosive, Severe respiratory irritant. Severe skin irritant. Severe eye irritant. May cause sensitization by skin contact.

## HMIS Rating:

Health: 3

Flammability: 1

Physical Hazard: 0

## 3 Composition/information on ingredients

### 3.2 Mixture

**Description:** Mixture of substances listed below with potential nonhazardous additions.

Dangerous components:		
Trade Secret	Aliphatic Amine	20-50%
CAS: 112-24-3	Triethylenetetramine	15-30%
CAS: 108-95-2	Phenol	10-25%
CAS: 111-40-0	Diethylenetriamine	10-20%

## 4 First aid measures

### 4.1 Description of first aid measures

**General information:** Seek medical advice. If breathing has stopped or is labored, give assisted respirations. Supplemental oxygen may be indicated. If the heart has stopped, trained personnel should begin cardiopulmonary resuscitation immediately.

**After inhalation:** Supply fresh air; consult doctor in case of complaints.

**After skin contact:** Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Cover wound with sterile dressing. Immediately remove contaminated clothing, and any extraneous chemical, if possible to do so without delay. NOTE TO PHYSICIANS: Application of corticosteroid cream has been effective in treating skin irritation. Initiate and maintain continuous irrigation until the patient receives medical care. If medical care is not promptly available, continue to irrigate for one hour. Flush immediately with copious amounts of water.

**After eye contact:** Rinse immediately with plenty of water, also under the eyelids, for at least 10 minutes Hold eyelids apart, initiate and maintain gentle and continuous irrigation until the patient receives medical care. If medical care is not promptly available, continue to irrigate for one hour.

**After ingestion:** Never give anything by mouth to an unconscious person. Prevent aspiration of vomit. Turn victim's head to the side. Do not induce vomiting; call for medical help immediately.

**4.2 Most important symptoms and effects, both acute and delayed:** Asthma. Eye disease. Kidney disorders. Liver disorders. Neurological disorders Skin disorders and Allergies.

**4.3 Indication of any immediate medical attention and special treatment needed:** May cause an allergic reaction.

## 5 Firefighting measures

### 5.1 Extinguishing media

**Suitable extinguishing agents:** Foam, Fire-extinguishing powder, Carbon dioxide.

**5.2 Specific hazards arising from the substance or mixture:** Incomplete combustion may form carbon monoxide. May generate ammonia gas. May generate toxic nitrogen oxide gases. Flash back possible over considerable distance. In the event of fire, cool tanks with water spray. Fire or intense heat may cause violent rupture of packages. Burning produces noxious and toxic fumes. May form explosive mixtures in air. Downwind personnel must be evacuated.

### 5.3 Advice for the firefighters

**Protective equipment:** Wear self-contained respiratory protective device. Wear fully protective suit.

**Additional information:** Cool endangered receptacles with water fog or haze. Eliminate all ignition sources if safe to do so.



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## 6 Accidental release measures

**6.1 Personal precautions, protective equipment and emergency procedures:** Use respiratory protective device against the effects of fumes/dust/aerosol. Wear protective equipment. Keep unprotected persons away. Ensure adequate ventilation. Keep away from ignition sources.

**6.2 Environmental precautions:** Do not allow to enter sewers/surface or ground water. Inform respective authorities in case of seepage into water course or sewage system. Prevent from spreading (e.g. by damming-in or oil barriers).

**6.3 Methods and material for containment and cleaning up:** Send for recovery or disposal in suitable receptacles. Dispose contaminated material as waste according to item 13. Ensure adequate ventilation.

## 7 Handling and storage

**7.1 Precautions for safe handling:** Use only in well-ventilated areas. Store in cool, dry place in tightly closed receptacles (60-80°F recommended).

**7.2 Conditions for safe storage, including any incompatibilities:** Use only receptacles specifically permitted for this substance/product. Avoid storage near extreme heat, ignition sources or open flame.

**Further Information about storage conditions:** Keep container tightly sealed. Store in an area with adequate ventilation.

## 8 Exposure controls/personal protection

### 8.1 Control parameters

#### Exposure Limits:

Diethylenetriamine	Time Weighted Average (TWA):ACGIH	1 ppm	-----
Diethylenetriamine	Recommended Exposure Limit (REL): NIOSH	1 ppm	4 mg/m3
Diethylenetriamine	Time Weighted Average (TWA):OSHA Z1A	1 ppm	4 mg/m3
Diethylenetriamine	Time Weighted Average (TWA): Permissible Exposure Limit (PEL): US CA OEL	1 ppm	4 mg/m3
Diethylenetriamine	Time Weighted Average (TWA): TN OEL	1 ppm	4 mg/m3
Phenol	Time Weighted Average (TWA): ACGIH	5 ppm	-
Phenol	Recommended exposure limit (REL): NIOSH	5 ppm	19 mg/m3
Phenol	Ceiling Limit Value and Time Period (if specified): NIOSH	15.6 ppm	60 mg/m3
Phenol	Permissible exposure limit: OSHA Z1	5 ppm	19 mg/m3
Phenol	Time Weighted Average (TWA): OSHA Z1A	5 ppm	19 mg/m3
Phenol	Time Weighted Average (TWA) Permissible Exposure Limit (PEL): US CA OEL	5 ppm	19 mg/m3
Phenol	Time Weighted Average (TWA): TN OEL	5 ppm	19 mg/m3

**8.2 Engineering controls** Provide readily accessible eye wash stations and safety showers. Provide ventilation adequate to ensure concentrations are minimized.

### 8.3 Personal protective equipment

**General protective and hygienic measures:** Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work. Do not inhale gases / fumes / aerosols. Avoid contact with the eyes and skin.

**Respiratory protection:** Not required under normal conditions of use. Use suitable respiratory protective device in case of insufficient ventilation. For spills, respiratory protection may be advisable. Use respiratory protection when grinding or cutting material.

**Hand protection:** Protective, impervious gloves. (Neoprene, Butyl-rubber, Nitrile rubber) The glove material has to be impermeable and resistant to the product / the substance/ the preparation. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

**Eye protection:** Face shield with safety glasses or goggles underneath. Contact lenses should not be worn.

**Skin and Body protection:** Protective work clothing. Where potential exposure warrants, rubber or plastic boots and chemically resistant protective suit.

## 9 Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

#### General Information

#### Appearance

Form:

Liquid

Colour:

Blue

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<b>Odour:</b>	Amine
<b>Odour threshold:</b>	No data available
<b>pH:</b>	Alkaline
<b>Melting point/range:</b>	No data available
<b>Boiling point/range:</b>	>392 °F / >200 °C
<b>Flash point:</b>	>200 °F / >93 °C
<b>Evaporation rate:</b>	No data available
<b>Flammability (solid, gaseous):</b>	Not applicable
<b>Upper/lower flammability or explosive limit:</b>	Not applicable
<b>Vapor pressure:</b>	No data available
<b>Vapor density:</b>	No data available
<b>Relative Density at 20°C:</b>	1.01 g/cm <sup>3</sup>
<b>Solubility in / Miscibility with Water:</b>	Slightly soluble
<b>Partition coefficient (n-octanol/water):</b>	No data available
<b>Auto/Self-ignition temperature:</b>	No data available
<b>Decomposition temperature:</b>	No data available
<b>Viscosity</b>	100 – 200 cps

## 10 Stability and reactivity

### 10.1 Reactivity

### 10.2 Chemical stability

**Thermal decomposition / conditions to be avoided:** No decomposition if used and stored according to specifications.

**10.3 Possibility of hazardous reactions:** Reacts with strong alkali, Exothermic polymerization, Reacts with strong acids and oxidizing agents, Reacts with catalysts.

**10.4 Conditions to avoid:** Avoid contact with strong oxidizing agents, excessive heat or flames.

**10.5 Incompatible materials:** Strong acids, bases and oxidizing agents.

**10.6 Hazardous decomposition products:** Nitric acid, Ammonia, Nitrogen oxides (NO<sub>x</sub>), Nitrogen oxide can react with water vapors to form corrosive nitric acid, Carbon monoxide, Carbon dioxide (CO<sub>2</sub>), Aldehydes, Flammable hydrocarbon fragments.

## 11 Toxicological information

### 11.1 Information on likely routes of exposure:

Skin contact:	Toxic in contact with skin. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Causes skin burns. If absorbed through the skin, may cause central nervous system effects, such as headache, nausea, dizziness, confusion, breathing difficulties.
Eye contact:	Corneal edema may give rise to a perception of "blue haze" or "fog" around lights. Exposed individuals may see rings around bright lights. This effect is temporary and has no known residual effect. Product vapor can cause glaucopsia (corneal edema) when absorbed into the tissue of the eye from the atmosphere. Causes eye burns. May cause blindness.
Ingestion:	Harmful if swallowed. If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the oesophagus and the stomach.
Inhalation:	This product contains a component that is toxic by inhalation when aerosolized or sprayed. Please refer to Section 11 of the SDS for toxicity information. Review the toxicity information against your intended use. If product is not being aerosolized or sprayed, the inhalation toxicity may not be applicable. Toxic by inhalation. Inhalation of aerosol may cause irritation to the upper respiratory tract. In high concentrations may cause asphyxiation. Symptoms may include loss of mobility/consciousness. Victim may not be aware of asphyxiation. Can cause severe eye, skin and respiratory tract burns. Highly toxic by inhalation. May cause central nervous system effects, such as headache, nausea, dizziness, confusion, breathing difficulties. Severe cases of overexposure can result in respiratory failure.

**11.2 Symptoms related to physical, chemical and toxicological characteristics:** Repeated and/or prolonged exposures to low concentrations of vapors or aerosols may cause: sore throat, asthma, eye disease, kidney disorders, liver disorders, skin disorders and allergies.

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**11.3 Delayed and immediate effects as well as chronic effects from short and long-term exposure:** This product contains no listed carcinogens according to IARC, ACGIH, NTP and/or OSHA in concentrations of 0.1 percent or greater. May cause allergic skin reaction. This product may cause adverse reproductive effects. Asthma, Eye disease, Kidney disorders, Liver disorders, Skin disorders and Allergies.

**11.4 Numerical measures of toxicity:** No data is available for full mixture.

Diethylenetriamine	CAS 111-40-0	Oral LD50	1080 mg/kg (rat)
		Dermal LD50	1090 mg/kg (rabbit)
Triethylenetetramine	112-24-3	Oral LD50	1,716 mg/kg (Species : Rat)
		Dermal LD50	1,465 mg/kg (Species : Rabbit)

## 12 Ecological information

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

Toxicity to daphnia –  
Components Phenol

EC50 (48 h) : 4 - 7 mg/l

Species : Daphnia

**12.2 Persistence and degradability:** No data available.

**12.3 Bioaccumulative potential:** No data available on the product itself.

**12.4 Mobility in soil:** No data available.

**12.5 Other adverse effects:** No further relevant information available

## 13 Disposal considerations

**13.1 Waste treatment methods**

**Waste from residue/unused product:** This product should not be allowed to enter drains, water courses or the soil.

Dispose of this material in a safe manner and in accordance with federal, state and local regulations

**Contaminated packaging:** Disposal must be made in accordance with official federal, state and local regulations.

## 14 Transport information

### DOT

**UN number:** UN2922  
**Proper Shipping Name:** Corrosive liquids, toxic, n.o.s., (Triethylenetetramine, Phenol)  
**Hazard Class:** 8  
**Packing Group:** II  
**Labels(s):** 8 (6.1)  
**Marine Pollutant:** No

### IATA

**UN number:** UN2922  
**Proper Shipping Name:** Corrosive liquids, toxic, n.o.s., (Triethylenetetramine, Phenol)  
**Hazard Class:** 8  
**Packing Group:** II  
**Labels(s):** 8 (6.1)  
**Marine Pollutant:** No

### IMDG

**UN number:** UN2922  
**Proper Shipping Name:** Corrosive liquids, toxic, n.o.s., (Triethylenetetramine, Phenol)  
**Hazard Class:** 8  
**Packing Group:** II  
**Labels(s):** 8 (6.1)  
**Marine Pollutant:** No

### TDG

**UN number:** UN2922  
**Proper Shipping Name:** Corrosive liquids, toxic, n.o.s., (Triethylenetetramine, Phenol)  
**Hazard Class:** 8  
**Packing Group:** II  
**Labels(s):** 8 (6.1)  
**Marine Pollutant:** No

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## 15 Regulatory Information

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Toxic Substance Control Act (TSCA) 12(b) Component(s): None.

Country	Regulatory list	Notification
USA	TSCA	Included on Inventory.
EU	EINECS	Included on EINECS inventory or polymer substance, monomers included on EINECS inventory or 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.

#### SARA

<b>Section 355 (extremely hazardous substances):</b> None of the ingredients is listed.
<b>Section 313 (Specific toxic chemical listings):</b> Component(s) above 'de minimus' level: Phenol
<b>TSCA (Toxic Substances Control Act):</b> All the ingredients are listed.

#### Proposition 65 (California):

<b>Chemicals known to cause cancer:</b> None
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**15.2 Chemical Safety assessment:** A Chemical Safety Assessment has not been carried out.

## 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

#### Abbreviation and acronyms:

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labeling of Chemicals

ACGIH: American Conference of Governmental Industrial Hygienist.

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substance

CAS: Chemical Abstracts Service (division of the American Chemical Society)

HMIS: Hazardous Materials Identification System (USA)

WHMIS: Workplace Hazardous Materials Information System (Canada)