

# Epoxy Grout



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## AS-479 Epoxy Grout

**For VectorSense Installation**

### Description and Features:

A 100% solids, two component epoxy system with no VOC's, formulated for use as a binder with aggregates as an epoxy mortar or grouting. The product has good mechanical and temperature shock resistance, allowing stress relief in applications where flexibility is of concern, and for use in low temperature applications. The product cures at temperatures down to 10° Celsius or 50° Fahrenheit.

### Uses:

Repairing damaged concrete or masonry  
Grouting for cut concrete surfaces  
Filling of voids in spalled concrete  
Sealing cracks in concrete

### Physical Properties (Unfilled):

Mix ratio (Part A/Part B): 100:36 parts by weight / 100:40 parts by volume  
Mixed viscosity: 500 – 1,500 cps  
Pot life (50 grams at RT): 20 minutes  
Gel time (50 grams at RT): 30 minutes  
Hardness (Shore D): 80 +/- 2  
Tensile strength: 7,500 psi  
Tensile Elongation: 12%  
Compressive strength: >10,000 psi  
Specific gravity: 1.1  
Heat distortion temperature: 70°C/ 190°F  
Flexural strength: 10,000 psi  
Flexural Modulus: 300,000 psi  
Water absorption (1 week @25°C/77°F): 0.4%

### Instructions:

(Please read all Instructions and Health and Safety information prior to use)

Clean the concrete surface of any dirt, dust, laitance or loose material. Once the mixing process has started, do not stop during any of the steps. Leaving large masses of mixed liquid resin will cause dangerous exothermic reactions which generate high levels of heat.

Open container and remove all components, placing silica sand in a separate clean container. Pour the epoxy resin (Part A) and hardener (Part B) into the 2.5 Gallon container, then blend the material thoroughly and evenly using an electric drill with mixing paddle. Immediately after mixing the epoxy resin, start adding the aggregate silica sand as provided and using a mortar mixer with a low speed drill, mix the liquid with the sand until the sand is properly and evenly dispersed. The sand should be thoroughly mixed with the resin, such that the liquid is distributed evenly throughout the mortar.

### Health and Safety:

(Please read all MSDS's prior to using the material)

### Packaging:

Over pack 2.5 Gallon container  
7.5 kg / 16.5 lb - Silica Sand  
1.84 kg / 4 lb - Epoxy Resin (Part A)  
0.66 kg / 1.5 lb - Epoxy Hardener (Part B)

Typical properties, where stated, are to be considered as representative of current production and should not be treated as specifications. The information presented in this document is believed to be reliable and to represent the best available data on these products. No guarantee, warranty, or representation is made, intended, or implied as to the correctness or sufficiency of any information, or as to the suitability of any chemical compounds for any particular use. Cridel Thermoset Resins Inc., further disclaims any liability for consequential or incidental damages of any kind, including lost profits. Any chemical compounds or use thereof are not subject to a claim by a third party for infringement of any patent or other intellectual property right. Each user should conduct sufficient investigation to establish the suitability of any product for its intended use, including its hazards. For all products listed, user should obtain Material Safety Data Sheets that contain proper safety, shipping, handling, and storage procedures.

# SAFETY DATA SHEET (SDS)

## SECTION 1 – IDENTIFICATION

### INITIAL SUPPLIER IDENTIFIER

Cridel Thermoset Resins Inc.  
111 Regina Road, Unit 19  
Woodbridge, Ontario  
Canada L4L 8N5  
Tel (905) 264-9313  
Fax (905) 264-9315

### EMERGENCY TELEPHONE NUMBER

24hr Emergency Transportation Telephone Number  
CANUTEC (613) 996-6666 (COLLECT)

### PRODUCT IDENTIFIER

**Product No: Epoxy Grout #10 Resin**

### OTHER MEANS OF IDENTIFICATION

N/A

### RECOMMENDED USE AND RESTRICTIONS ON USE

N/A

## SECTION 2 – HAZARD IDENTIFICATION

### CLASSIFICATION

SKIN IRRITANT (Category 2)  
SKIN SENSITIZER (Category 1)  
EYE IRRITANT (Category 2A)  
AQUATIC CHRONIC (Category 2)  
SIGNAL WORD: WARNING



<b>HAZARD STATEMENTS</b>	<b>H302</b> <b>H315</b> <b>H317</b> <b>H319</b> <b>H401</b> <b>H411</b>	Harmful if swallowed. May be harmful in contact with skin. May cause an allergic skin reaction. Causes serious eye irritation. Toxic to aquatic life. Toxic to aquatic life with long lasting effects.
<b>PRECAUTIONARY STATEMENTS</b>	<b>P261</b> <b>P264</b> <b>P270</b> <b>P280</b> <b>P272</b> <b>P273</b>	Avoid breathing dust/fume/gas/mist/vapours/spray. Wash thoroughly after handling. Do not eat, drink, or smoke when using this product. Wear protective gloves/protective clothing/ eye protection/ face protection. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment.
<b>RESPONSE IF ON SKIN</b>	<b>P302+P352</b> <b>P362+P364</b> <b>P333+P313</b> <b>P305+P351+P338</b>	IF ON SKIN: Wash with plenty of water. Take off contaminated clothing and wash it before reuse. If skin irritation or rash occurs: get medical advice/attention.
<b>IF IN EYES</b>	<b>P337+P313</b>	IF IN EYES: Rinse cautiously with water for several minutes; Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
<b>DISPOSAL</b>	<b>P501</b>	Dispose of contents/container in accordance to Federal rules, laws and regulations.

## SECTION 3 – COMPOSITION INFORMATION

INGREDIENT	#CAS	%
Diglycidyl-Ether of Bisphenol-A	25068-38-6	60-80
Alkyl C12-C14 Glycidyl Ether	68609-97-2	3-7
Reaction product: Bisphenol F-(epichlorohydrin); epoxy resin	9003-36-5	10-30

## SECTION 4 – FIRST AID MEASURES

<b>Eye contact</b>	Flush eyes with plenty of water for at least 15 minutes while holding eyelids apart. Consult a physician. Do not use eye ointment.
<b>Skin contact</b>	Wash off in flowing water or shower with soap and rinse thoroughly. Remove contaminated clothing and discard. If irritation persists, consult a physician.
<b>Inhalation</b>	Remove to fresh air. If breathing is laboured, administer oxygen. If not breathing administer artificial respiration. Consult a physician.
<b>Ingestion</b>	If swallowed, seek medical attention immediately. Do not induce vomiting unless directed to do so by medical personnel. Do not give anything by mouth to an unconscious person

## SECTION 5 – FIRE-FIGHTING MEASURES

<b>Hazardous combustion products</b>	The by-products expected in incomplete pyrolysis or combustion of epoxy resins are mainly phenolics, carbon monoxide and water. The thermal decomposition products of epoxy resins therefore should be treated as potentially hazardous substances, and appropriate precautions should be taken. May liberate carbon monoxide or carbon dioxide.
<b>Means of extinguishing</b>	Foam, CO <sub>2</sub> , dry chemical, water spray. DO NOT use a direct water stream.
<b>Flash point</b>	>150°C (closed cup)
<b>Conditions of flammability</b>	Combustible
<b>Upper flammable limit</b>	Not available
<b>Lower flammable limit</b>	Not available
<b>Auto ignition temperature</b>	Not available

## SECTION 6 – ACCIDENTAL RELEASE MEASURES

<b>Personal Precautionary Measures</b>	Wear appropriate protective equipment and clothing.
<b>Environmental Precautionary Measures</b>	Prevent entry into sewers and streams, dike if needed. Consult local authorities.
<b>Leak and spill procedures</b>	Avoid contact with material. Evacuate all non-essential personnel. Keep spark producing equipment away. Dike area to prevent spill spreading and soak up with absorbent material such as sand, or polypropylene or polyethylene fibre products and collect in suitable containers. Residual resin may be removed using steam or hot soapy water. Solvents are not recommended for cleanup unless the recommended exposure guidelines and safe handling practices for the specific solvent are followed. Consult appropriate solvent MSDS for handling information and exposure guidelines.

## SECTION 7 – HANDLING AND STORAGE

<b>Handling</b>	Maintain Emergency eye wash stations and showers near working area. Practice good caution and personal cleanliness to avoid skin, eye contact and direct inhalation. Recommended pumping and storage temperature is 15-25°C.
<b>Storage</b>	Keep containers tightly sealed when not in use. Store away from heat, ignition sources; and store away from incompatible materials. Store the material in a cool, dry, and well-ventilated area.

## SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

<b>Eye protection</b>	Safety glasses with side shields. Splash proof goggles.
<b>Skin protection</b>	Use protective clothing impervious to this product. Selection of specific items such as face shield, gloves, boots, apron or full-body suit will depend on operation. Remove contaminated clothing immediately, wash skin with soap and water; and launder clothing before reuse.
<b>Respiratory Protection</b>	No respiratory protection should be needed at room temperature. Avoid breathing vapours of heated material. <b>NOTE:</b> If grinding or sanding cured material, use NIOSH or OSHA approved respiratory protection.
<b>Engineering controls</b>	Good general ventilation is sufficient for most conditions. <b>NOTE:</b> If grinding or sanding cured product use NIOSH/MSHA approved respiratory protection at all times.
<b>Exposure limits</b>	Not available

## SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical state</b>	Liquid
<b>Odour and appearance</b>	Faint epoxy odour
<b>Odour threshold (p.p.m.)</b>	Not available
<b>Specific gravity (gm/cm<sup>3</sup>)</b>	1.12
<b>Vapour pressure (Pa)</b>	13.3
<b>Vapour density (Air = 1)</b>	Not available
<b>Evaporation rate (n butyl acetate = 1)</b>	Not available
<b>Boiling point (°C)</b>	> 200°C

## SECTION 10 – STABILITY AND REACTIVITY

**Chemical Stability** Stable [ x ] Unstable [ ]

**If no, under which conditions** Avoid excessive heat, strong oxidizers, acids and bases.

**Incompatibility to other substances**

**Yes[ x ] No[ ] If so, which ones** Bases, acids, amines and oxidizing materials, plastics other than Teflon or polypropylene, and aluminum at high temperatures. Sodium or Calcium Hypochlorite. Reaction with peroxides may result in violent decomposition of peroxide possibly creating an explosion.

**Conditions of Reactivity**

Excess heating above 60°C over long periods of time degrades the resin. Hazardous polymerization will not occur by itself, but masses of more than 1 lb of product plus an aliphatic amine will cause irreversible polymerization with considerable heat buildup.

**Explosion data - sensitivity to**

- |                             |        |
|-----------------------------|--------|
| 1) <b>Mechanical impact</b> | Stable |
| 2) <b>Static discharge</b>  | Stable |

**Unusual Explosion Hazards**

Extinguish all nearby sources of ignition since vapours decompose to toxic products at high temperatures. When exposed to heat, closed containers may explode. Contact with strong oxidizers may cause fire or explosion

## SECTION 11 – TOXICOLOGICAL INFORMATION

**Route of entry**

**Eye contact** May cause slight transient (temporary) eye irritation. Corneal injury is unlikely.

**Skin contact**

Prolonged or repeated contact may cause skin irritation with local redness.

**Inhalation**

Not available

**Aspiration Toxicity**

Not likely to present a hazard.

**Ingestion**

Not available

<b>Acute Toxicity Estimates (ATE)</b>	Very low toxicity if swallowed. Prolonged skin contact is unlikely to result in absorption of harmful amounts. Vapour from heated material, mist or aerosol may cause respiratory irritation.
<b>Effects of acute exposure to product</b>	Not available.
<b>Effects of chronic exposure to product</b>	Skin sensitization.
<b>Carcinogenicity</b>	Not listed as a carcinogen by NTP, IARC, OSHA and ACGIH
<b>Germ Cell Mutagenicity</b>	Animal mutagenicity studies were negative. In vitro mutagenicity studies were negative in some cases, and positive in others
<b>Reproductive Toxicity</b>	No reproductive effects.
<b>Toxicity Data</b>	<i>Diglycidyl-Ether of Bisphenol-A</i> Oral LD50 (rats): 30,000 mg/kg* Dermal LD50 (rabbits):> 1,200 mg/kg <i>Alkyl C12-C14 Glycidyl Ether</i> Oral LD50 (rats): 19,200 mg/kg*Dermal LD50 (rabbits): >4,500 mg/kg <i>Reaction product: Bisphenol F-(epichlorohydrin); epoxy resin-</i> Oral LD50 (rats): >2,000 mg/kg Estimated*Dermal: prolonged skin contact is unlikely to result in absorption of harmful amounts. The Dermal LD50 has not been determined.
<b>Skin Corrosion/Irritation</b>	Not available
<b>Respiratory or Skin Sensitization</b>	Not available
<b>Other Information</b>	Not available

## SECTION 12 – ECOLOGICAL INFORMATION

Material not readily biodegradable

## SECTION 13 – DISPOSAL CONSIDERATIONS

<b>Disposal Considerations</b>	Any disposal practice must be in accordance with Municipal, Provincial and Federal regulations. Chemical additions, processing, storage, or otherwise altering this material may make the waste management information presented in this SDS incomplete, inaccurate, or otherwise inappropriate. Do not allow into any sewers, on the ground or into any body of water. Dispose of any unused, uncontaminated, as well as contaminated product, by a properly licensed company.
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## SECTION 14 – TRANSPORTATION INFORMATION

<b>TDG (Canada)</b>	
<b>TDG Proper Shipping Name</b>	This product is not regulated by TDG when shipped domestically by land.
<b>DOT</b>	Not regulated for Transport.
<b>SEA transport (IMO-IMDG)</b>	
<b>Proper shipping name</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID N.O.S.(EPOXY RESIN)
<b>U.N. Number</b>	UN 3082
<b>Class</b>	9
<b>Packing Group</b>	III
<b>Marine pollutant</b>	Epoxy resin
<b>Transport in bulk</b>	Consult IMO regulations before transporting ocean bulk according to Annex I or II of Marpol 73/78 and the IBC or IGC Code.

**Air transport (IATA-ICAO)****Proper shipping name**

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID N.O.S.(EPOXY RESIN)

**U.N. Number**

UN 3082

**Class**

9

**Packing Group**

III

**Note**

No additional remark

**SECTION 15 – REGULATORY INFORMATION****TSCA**

All ingredients are on the TSCA Chemical Substance Inventory; or are not required to be listed on the TSCA inventory.

**DSL**

The substance(s) in this product is/are on the Canadian Domestic Substances List.

**WHMIS**

D2B

**SECTION 16 – OTHER INFORMATION**

**Disclaimer:** Cridel Thermoset Resins Inc. (Cridel) expressly disclaims all express or implied warranties of merchantability and fitness for a particular purpose, with respect to the product or information provided herein, and shall under no circumstances be liable for incidental or consequential damages.

Do not use ingredient information and/or ingredient percentages in this SDS as a product specification. For product specification information, refer to our Technical Data Sheet and/or Certificate of Analysis (Compliance).

All information appearing herein is based upon data obtained from the manufacturer and/or recognized technical sources. While the information is believed to be accurate, Cridel makes no representations as to its accuracy or sufficiency. Conditions of use are beyond Cridel's control and therefore users are responsible to verify this data under their own operating conditions to determine whether the product is suitable for their particular purposes and they assume all risks of their use, handling and disposal of the product, or from the publication or use of, or reliance upon, information contained herein. This information relates only to the product designated herein, and does not relate to its use in combination with any other material or in any other process.

\*END OF SDS\*

# SAFETY DATA SHEET (SDS)

## SECTION 1 – IDENTIFICATION

<p><b><u>INITIAL SUPPLIER IDENTIFIER</u></b>                  Cridel Thermoset Resins Inc.                  111 Regina Road, Unit 19                  Woodbridge, Ontario                  Canada L4L 8N5                  Tel (905) 264-9313                  Fax (905) 264-9315</p> <p><b><u>EMERGENCY TELEPHONE NUMBER</u></b>                  24hr Emergency Transportation Telephone Number                  CANUTEC (613) 996-6666 (COLLECT)</p>	<p><b><u>PRODUCT IDENTIFIER</u></b>  <b>Product No: Epoxy Grout #10 Hardener</b></p> <p><b><u>OTHER MEANS OF IDENTIFICATION</u></b>                  N/A</p> <p><b><u>RECOMMENDED USE AND RESTRICTIONS ON USE</u></b>                  N/A</p>
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## SECTION 2 – HAZARD IDENTIFICATION

**CLASSIFICATION**

ACUTE TOXICITY ORAL (Category 4)  
 ACUTE TOXICITY INHALATION (Category 4)  
 SKIN SENSITIZER (Category 1)  
 EYE IRRITANT (Category 1)  
 SPECIFIC TARGET ORGAN TOXICITY [single exposure]- Narcotic effects (Category 3)  
 SIGNAL WORD: DANGER



<b>HAZARD STATEMENTS</b>	H302 H332 H336 H317 H318	Harmful if swallowed Harmful if inhaled May cause drowsiness or dizziness May cause an allergic skin reaction Causes serious eye damage
<b>PRECAUTIONARY STATEMENTS</b>	P260 P264 P280 P271 P272	Do not breathe dust/fumes/gas/mist/vapours/spray Wash hands thoroughly after handling Wear protective gloves/protective clothing/ eye protection/ face protection Use only outdoors or in a well-ventilated area. Contaminated work clothing should not be allowed out of the workplace
<b>RESPONSE IF SWALLOWED IF ON SKIN</b>	P301+P330+P331 P312 P302+P352 P361+P364 P353	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting Call a POISON CENTER or Doctor/Physician if you feel unwell IF ON SKIN: Wash with plenty of water Take off immediately all contaminated clothing and wash it before reuse Rinse skin with water/ shower
<b>IF INHALED</b>	P312 P333+P313 P304+P340 P310	Call a POISON CENTER or Doctor/Physician if you feel unwell If skin irritation or rash occurs: get medical advice/attention as appropriate IF INHALED: Remove person to fresh air and keep comfortable for breathing Immediately call a POISON CENTER or Doctor/Physician
<b>IF IN EYES</b>	P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes; Remove contact lenses, if present and easy to do. Continue rinsing Immediately call a POISON CENTER or Doctor/Physician
<b>STORAGE &amp; DISPOSAL</b>	P405 P501	Store locked up Dispose of contents/container in accordance to Federal rules, laws and regulations.



## SECTION 3 – COMPOSITION INFORMATION

INGREDIENT	#CAS	%
Teta, reaction products with propylene oxide	26950-63-0	60-80
Triethylenetetramine	112-24-3	10-30
Benzyl Alcohol	100-51-6	10-30

## SECTION 4 – FIRST AID MEASURES

<b>Eye contact</b>	Flush eyes with plenty of water for at least 15 minutes while holding eyelids apart. Consult a physician. Do not use eye ointment.
<b>Skin contact</b>	Wash off in flowing water or shower with soap and rinse thoroughly. Remove contaminated clothing and discard. If irritation persists, consult a physician.
<b>Inhalation</b>	Remove to fresh air. If breathing is laboured, administer oxygen. If not breathing, administer artificial respiration. Consult a physician.
<b>Ingestion</b>	If swallowed, seek medical attention immediately. Do not induce vomiting unless directed to do so by medical personnel. Do not give anything by mouth to an unconscious person

## SECTION 5 – FIRE-FIGHTING MEASURES

### Explosion data - sensitivity to

1) Mechanical impact	Stable
2) Static discharge	Stable

**Unusual Fire and Explosion Hazards** During a fire, oxides of nitrogen may be evolved. Burning can produce carbon monoxide and/or carbon dioxide.

**Means of extinguishing** Water spray, carbon dioxide, dry chemical, alcohol resistant foam to extinguish flames. Use water spray to cool fire-exposed containers. Water or foam may cause frothing.

**Flash point** > 99°C [PMCC]

**Conditions of flammability** Non-flammable

**Upper flammable limit** Not available

**Lower flammable limit** Not available

**Auto ignition temperature** Not available

## SECTION 6 – ACCIDENTAL RELEASE MEASURES

**Personal Precautionary Measures** Wear appropriate protective equipment. Avoid contact with liquid and vapours.

### Environmental Precautionary Measures

Prevent entry into sewers and streams, dike if needed. Consult local authorities.

### Leak and spill procedures

Avoid contact with material. Evacuate all non-essential personnel. Keep spark producing equipment away. Dike area to prevent spill spreading and soak up with absorbent material such as sand, or polypropylene or polyethylene fiber products and collect in suitable containers. Residual resin may be removed using steam or hot soapy water. Dispose of absorbent material in accordance with regulations.

## SECTION 7 – HANDLING AND STORAGE

**Handling** Maintain Emergency eye wash stations and showers near working area. Practice good caution and personal cleanliness to avoid skin, eye contact and direct inhalation.

**Storage**

Keep containers tightly sealed when not in use. Store away from heat, ignition sources; and store away from incompatible materials. Store in a cool, dry and well-ventilated area

## SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

**Eye protection**

Splash proof goggles with side shields.

**Skin protection**

Protective clothing such as coveralls or lab coats must be worn. Gloves resistant to chemicals and petroleum distillates required. When handling large quantities, impervious suits, gloves, and rubber boots must be worn. Launder or dry-clean clothes when soiled.

**Respiratory protection**

Airborne concentrations should be kept to lowest levels possible. If vapour, mist or dust is generated and the occupational exposure limit of the product, or any component of the product, is exceeded, use appropriate NIOSH/MSHA approved respirators.

**Engineering controls**

Good general ventilation is sufficient for most conditions. Avoid breathing mists if general ventilation or local exhausts is inadequate; persons exposed to mists should wear appropriate NIOSH/MSHA approved breathing devices.

**Exposure limits**

Not available

## SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

**Physical state**

Liquid

**Odour and appearance**

Ammonia-like odour

**Odour threshold (p.p.m.)**

Not available

**Specific gravity (gm/cm<sup>3</sup>)**

1.02

**Vapour pressure**

< 0.01 kPa at 20°C

**Vapour density (Air = 1)**

> 1

**Evaporation rate (n butyl acetate = 1)**

Not available

**Boiling point (°C)**

220.6°C

**Freezing point (°C)**

Not available

**pH**

11.7

**Coefficient of water/oil distribution**

Not available

**Solubility in water (%)**

> 10

## SECTION 10 – STABILITY AND REACTIVITY

**Chemical Stability. Stable [  ] Unstable [  ]****If no, under which conditions**

Avoid excessive heat, strong oxidizers, acids and bases.

**Incompatibility to other substances.****Yes[  ] No[  ] If so, which ones**

Bases, acids, amines and oxidizing materials, plastics other than Teflon or polypropylene, and aluminum at high temperatures. Sodium or Calcium Hypochlorite. Reaction with peroxides may result in violent decomposition of peroxide possibly creating an explosion.

**Materials to avoid**

CAUTION! N-Nitrosamines, many of which are known to be potent carcinogens, may be formed when the product comes in contact with nitrous acid, nitrites or atmospheres with high nitrous oxide concentrations.

**Conditions of Reactivity**

Avoid heating up the product. Hazardous polymerization will not occur by itself, but masses of more than 1 lb of epoxy resin combined with this product will cause irreversible polymerization with considerable heat buildup.

**Explosion data - sensitivity to****1) Mechanical impact**

Stable

**2) Static discharge**

Stable

**Unusual Explosion Hazards**

Extinguish all nearby sources of ignition since vapours decompose to toxic products at high temperatures. When exposed to heat, closed containers may explode. Contact with strong oxidizers may cause fire or explosion.

## SECTION 11 – TOXICOLOGICAL INFORMATION

### Route of entry

#### Eye contact

Causes irritation, experienced as pain, with excess blinking and tear production, and seen as extreme redness and swelling of the eye and chemical burns of the eye. Severe eye damage may cause blindness.

#### Skin contact

Causes severe irritation with pain, severe excess redness and swelling with chemical burns, blister formation, and possible tissue destruction.

#### Inhalation

Vapour is irritating and may cause excessive tear formation, burning sensation of the nose and throat, coughing, wheezing, shortness of breath, nausea, and vomiting. Extremely high vapor concentrations may cause lung damage. Some individuals may develop asthma.

#### Ingestion

Causes burning of mouth, throat, and stomach with abdominal and chest pain, nausea, vomiting, diarrhea, thirst, weakness, and collapse. Aspiration may occur during swallowing or vomiting, resulting in lung damage.

#### Skin absorption

Prolonged or widespread contact may result in the absorption of potentially harmful amounts of material.

#### Effects of acute exposure to product

Skin contact may cause sensitization and an allergic skin reaction and may aggravate an existing dermatitis. Cross-sensitization may occur by skin contact with this material and other amines.

#### Effects of chronic exposure to product

Repeated skin contact may cause a persistent irritation or dermatitis. Repeated inhalation may cause lung damage. Overexposure to vapour, dust or mist may aggravate existing respiratory conditions, such as asthma, bronchitis, and inflammatory or fibrotic respiratory disease. Repeated oral exposures may cause kidney and liver changes.

#### Mutagenicity

In vitro genetic toxicity studies were negative in some cases and positive in other cases. Animal genetic toxicity studies were negative.

#### Toxicity Data

*Triethylenetetramine*- Oral LD50(rats): 1,716 mg/kg\*Dermal LD50(rabbit): 1,465 mg/kg

*Benzyl Alcohol*- Oral LD50 (rats): 1230 mg/kg\*Dermal LD50 (rats): 2 g/kg

#### Carcinogenicity

Not available

#### Reproductive toxicity

Not available

#### Teratogenicity

Laboratory animals that were fed exaggerated doses of Triethylenetetramine(TETA) showed adverse fetal effects that were believed to be associated with an observed copper deficiency. For the minor component(s): Has caused birth defects in laboratory animals. Has been toxic to the fetus in laboratory animal tests.

**Toxicologically synergistic products** Not available

## SECTION 12 – ECOLOGICAL INFORMATION

Material not readily biodegradable

## SECTION 13 – DISPOSAL CONSIDERATIONS

### Waste disposal

Any disposal practice must be in accordance with Municipal, Provincial and Federal regulations. Chemical additions, processing, storage, or otherwise altering this material may make the waste management information presented in this MSDS incomplete, inaccurate, or otherwise inappropriate. Do not allow into any sewers, on the ground or into any body of water. Dispose of any unused,

uncontaminated, as well as contaminated product, by a properly licensed company.

## SECTION 14 – TRANSPORTATION INFORMATION

<b>Hazard Class</b>	Not regulated
<b>UN Number</b>	Not regulated
<b>Packing Group</b>	Not regulated
<b>Note</b>	No additional remark
<b>Marine Pollutant</b>	No
<b>Not dangerous according to transport regulations</b>	

## SECTION 15 – REGULATORY INFORMATION

<b>TSCA</b>	All ingredients are on the TSCA Chemical Substance Inventory, or are not required to be listed on the TSCA inventory.
<b>DSL</b>	The substance(s) in this product is/are on the Canadian Domestic Substances List.
<b>WHMIS</b>	D1B, D2B, E
<b>NFPA</b>	Health: 3, Flammability: 1, Reactivity: 0
<b>SARA</b>	311 Immediate (acute) health hazard * Delayed (chronic) health hazard 312 Immediate (acute) health hazard * Delayed (chronic) health hazard 313 Not Listed

## SECTION 16 – OTHER INFORMATION

**Disclaimer:** Cridel Thermoset Resins Inc. (Cridel) expressly disclaims all express or implied warranties of merchantability and fitness for a particular purpose, with respect to the product or information provided herein, and shall under no circumstances be liable for incidental or consequential damages.

Do not use ingredient information and/or ingredient percentages in this MSDS as a product specification. For product specification information refer to our Technical Data Sheet and/or Certificate of Analysis (Compliance).

All information appearing herein is based upon data obtained from the manufacturer and/or recognized technical sources. While the information is believed to be accurate, Cridel makes no representations as to its accuracy or sufficiency. Conditions of use are beyond Cridel's control and therefore users are responsible to verify this data under their own operating conditions to determine whether the product is suitable for their particular purposes and they assume all risks of their use, handling and disposal of the product, or from the publication or use of, or reliance upon, information contained herein. This information relates only to the product designated herein, and does not relate to its use in combination with any other material or in any other process.

\*END OF SDS\*