

## SAFETY DATA SHEET

Complies with OSHA Hazard Communication Standard 29 CFR 1910.1200

### Product Name: GC POTTING EPOXY, PART A (RESIN)

#### SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product Type:	Adhesive	Emergency Contact:	Chemtrec
Product Name:	<b>GC POTTING EPOXY, PART A (RESIN)</b>	Phone:	<b>(800) 424-9300</b>
Part Number(s):	<b>19-823-1R 19-824-1R 19-824-2G</b>		

#### SECTION 2. HAZARDS IDENTIFICATION

##### Hazard Classification



GHS09 Environment

Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.  
Eye Irrit. 2A H319 Causes serious eye irritation.  
Skin Sens. 1 H317 May cause an allergic skin reaction.

##### Label Elements

**GHS label elements** The substance is classified and labeled according to the Globally Harmonized System (GHS).

##### Pictogram(s)



GHS07



GHS09

##### Signal Word Warning

##### Hazard-determining Component(s)

Bisphenol-A-(epichlorohydrin) epoxy resin

##### Hazard statements

Causes skin irritation.  
Causes serious eye irritation.  
May cause an allergic skin reaction.  
Toxic to aquatic life with long lasting effects.

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#### SECTION 2. HAZARDS IDENTIFICATION (CONTINUED)

##### Precautionary statements

Avoid breathing dust/fume/gas/mist/vapors/spray

Wear protective gloves.

Wear eye protection / face protection.

Avoid release to the environment.

Wash thoroughly after handling.

Contaminated work clothing must not be allowed out of the workplace.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Specific treatment (see on this label).

Wash contaminated clothing before reuse.

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

If eye irritation persists: Get medical advice/attention.

If on skin: Wash with plenty of water.

Collect spillage.

Take off contaminated clothing and wash it before reuse.

Dispose of contents/container in accordance with local/regional/national/international regulations.

##### Prevention

Avoid breathing dust/fume/gas/mist/vapors/spray

Wear protective gloves/protective clothing/eye protection/face protection.

Avoid release to the environment.

Wash thoroughly after handling.

Contaminated work clothing must not be allowed out of the workplace.

##### Hazard Rating System

###### NFPA System

###### NFPA Ratings (scale 0 - 4)



NFPA special hazards (water reactivity and oxidizing property): None

###### HMIS System

###### HMIS Ratings (scale 0 - 4)



##### Other hazards

###### Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.



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Revision Date: 09/25/2015  
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#### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

##### Chemical Characterization: Mixtures

##### Composition/Information on Ingredients

CAS: 25068-38-6 NLP: 500-033-5 Index Number: 603-074-00-8	Bisphenol-A-(epichlorohydrin) epoxy resin Aquatic Chronic 2, H411 Skin Irrit. 2, H315; Eye Irrit. 2A, H319; Skin Sens. 1, H317	90-100%
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##### Classification System:

The Classifications were based on the Toxicological and Ecological Data of the substances/mixtures in the Section 11 and 12.

#### SECTION 4. FIRST AID MEASURES

##### Description of First Aid Measures

##### General Information

Ensure medical personnel are aware of exposure and take precautions for their personal protection; see Section 8 for the information of personal protection.

##### After Inhalation

Remove victim from exposure to fresh air. Keep person at rest. Provide oxygen if person is not breathing. Supply fresh air and to be sure call for a doctor.  
In case of unconsciousness place patient stably in side position for transportation.  
Supply fresh air; consult doctor in case of complaints.

##### After Skin Contact

Remove all contaminated clothing and wash before reuse.  
Wash contaminated skin with water and soap and rinse thoroughly.  
As quickly as possible remove contaminated clothing, shoes, and leather goods (e.g. watchbands, belts). Quickly and gently blot or brush away excess chemical. Immediately flush with lukewarm water for 15 minutes. Completely decontaminate clothing, shoes, and leather goods before reuse or discard. If irritation persists, obtain medical advice.

##### After Eye Contact

Immediately bathe eyes for 15 minutes under running water.  
Immediately remove contact lenses if present. Continue rinsing.  
Seek medical treatment in case of complaints.

##### After Swallowing

If victim is unconscious; never give anything by mouth.  
If victim is conscious; rinse out mouth and give victim small amounts of water.  
Seek medical treatment in case of complaints.

##### After Exposure

Seek medical treatment in case of complaints.

##### Indication of any Immediate Medical Attention and Special Treatment Needed

After frequent or high intense exposure, the following medical tests are recommended:

eye tests  
skin tests

Check section 11 Toxicological Information for further relevant information.

##### Information for Doctor

Have chemical containers, labels and/or (M)SDS ready when calling or visiting a medical center.

##### Additional Information

For additional information, please consult the corresponding first aid measures in the most current version of Emergency Response Guidebook which is produced by the US Department of Transportation.



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### SECTION 5. FIRE-FIGHTING MEASURES

#### Extinguishing Media

##### Suitable Extinguishing Agent(s)

Use fire fighting measures and extinguishing agents that suit the environment.

In case of fire, suitable extinguishing agents are:

- Alcohol resistant foam.
- Dry chemical or fire-extinguishing powder.
- Carbon dioxide (CO<sub>2</sub>).
- Water spray or water fog.

##### Unsuitable Extinguishing Agent(s) Water with full jet

#### Firefighting Procedures

- Isolate fire and deny unnecessary entry.
- Immediately withdraw all personnel from the area in case of rising sound from venting safety device.
- Eliminate all ignition sources if safe to do so.
- Do not extinguish fire unless flow can be stopped.
- Fight fire remotely due to the risk of explosion.
- Burning liquids may be moved by flushing with water; protect personnel and minimize property damage.
- Contain fire water runoff if possible to prevent environmental pollution.
- Fight fire from protected location or safe distance.
- Contain fire water runoff if possible to prevent environmental pollution.

#### Special Hazards Arising in Fire

- Will not burn unless preheated.
- In case of fire, following can be released:  
Phenolic compounds  
Carbon dioxide (CO<sub>2</sub>) and Carbon monoxide (CO)

#### Advice for Firefighters

- If employees are expected to fight fires, they must be trained and equipped as stated in the OSHA fire brigades standard (29 CFR 1910.156).
- As with any fire, wear positive-pressure self-contained breathing apparatus and full protective gear that are NIOSH approved.

#### Additional Information Ensure adequate and functional fire fighting facilities equipped in working area at all times.

### SECTION 6. ACCIDENTAL RELEASE MEASURES

#### Personal Precautions

- Avoid contact with skin, eyes, and clothing.
- Do not breathe gas, vapors, dusts or mists if their inhalable particles occur during use.
- Ensure personnel take precautions for their personal protection during clean up; see Section 8 for the specific requirements.

#### Environmental Precautions

- Keep away from sewage system or other water courses; do not penetrate ground/soil.
- Inform respective authorities in case of any seepage to the environment.

#### Cleaning Up Methods

- Ensure adequate ventilation.
- Eliminate all ignition sources.
- Keep unauthorized personnel away.
- For large spills:  
Shut off source of leak if safe to do so.  
Dike and contain.  
Remove with vacuum trucks or pump to storage/salvage vessels.  
Absorb spills with inert materials like sand and or vermiculite.  
Absorb residues with liquid-binding materials.
- For small spills:  
Ventilate and wash area after clean-up is complete.  
Collect spills in suitable and properly labeled containers.  
Do not use solvents unless following safe handling practices and within the recommended exposure guidelines.  
Dispose contaminated chemicals as waste according to Section 13.

#### Additional Information No further relevant information.

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#### SECTION 7. HANDLING AND STORAGE

**Precautions for Safe Handling**

Obtain special instruction before use; do not handle until all safety precautions have been read and understood.

Do not breathe gas, vapors, dusts or mists if their inhalable particles occur during handling.

Wear respiratory protection when handling.

Keep away from incompatible material(s).

Avoid any release into the environment.

Observe all the personal protection requirements in Section 8.

**Information about Protection Against Explosions and Fires**

Will not burn unless preheated.

Keep away from heat, sparks, open flame and other ignition sources during handling.

**Storage**

**Requirements to be Met by Storerooms and Receptacles**

Store in a well-ventilated place; provide ventilation for receptacles.

Keep stored in accordance with local, regional, national, and international regulations.

**Information about Storage in One Common Storage Facility**

Store away from incompatible material(s).

Store away from foodstuffs.

Avoid release to the environment.

**Additional Information** No further relevant information.

#### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Engineering Measures or Controls**

**Exposure Limit Values that Require Monitoring at the Workplace**

The substance/mixture does not contain any relevant quantities of substances with critical values that have to be monitored at the workplace.

**Other Engineering Measures or Controls**

Ventilation rates should be matched to conditions.

If applicable, use process enclosure(s), local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits.

**Personal Protective**

**General Protective and Hygienic Measures**

Avoid any skin contact.

Do not eat, drink or smoke during work.

Avoid any contact with the eye.

Keep food, drink or feed away from working area.

Contaminated work clothing is not allowed out of workplace.

Clean hands and exposed skin thoroughly after work and before breaks.

**Personal Protective Equipment (PPE)**

**Breathing Equipment**

Caution! Improper use of respirators is dangerous.

In case of brief exposure or low pollution, use a respiratory filter device.

In case of intensive or longer exposure, use a positive-pressure respiratory protective device that is independent of circulating air.

**Hand Protection**



Protective gloves

Selection of glove material should take into consideration the penetration times, rates of diffusion, and the degradation.

Suggested glove type(s):

Nitrile Gloves

Butyl Rubber Gloves

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#### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION (CONTINUED)

**Eye Protection**



Tightly sealed goggles

**Body Protection** No relevant information.

**Additional Information**

All protective clothing (suits, gloves, footwear, headgear) should be clean, available every day, and put on before work. The Engineering measures or controls, and PPE recommendations are only guidelines and may not apply to every situation. For additional information, please consult the corresponding requirements under OSHA 29 CFR 1910.94-95, and 29 CFR 1910.132-138.

#### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

**Information on Basic Physical and Chemical Properties**

**Appearance:**

- Form:** Liquid
- Color:** Black
- Odor:** Mild epoxy odor
- Odor Threshold:** Not determined.
- PH-Value:** Not determined.

**Change in Condition:**

- Melting Point:** Not determined.
- Boiling Point:** >260 °C (>500 °F)
- Flash Point:** 252 °C (486 °F)
- Decomposition Temperature:** Not determined.
- Flammability:** Not determined.
- Explosion:** Not determined.
- Explosion Limits:**
  - Lower:** Not determined.
  - Upper:** Not determined.

- Vapor Pressure:** Not determined.
- Density at 25 °C (77 °F):** 1.16 g/cm<sup>3</sup> (9.68 lbs/gal)
- Solubility in or Miscibility with**
  - Water:** Not miscible or difficult to mix.
- Henry's Law Constant:** Not determined
- Viscosity:**
  - Dynamic at 20 °C (68 °F):** 14000 mPas
  - Kinematic:** Not determined.

**Additional Information** No further relevant information.



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#### SECTION 10. STABILITY AND REACTIVITY

- Physical Hazard(s)** Not a regulated reactive or physical hazard under GHS.
- Hazardous Reactivity and Chemical Stability** Stable under normal conditions of use, storage and temperatures.
- Thermal Decomposition and Conditions to be Avoided**  
Keep away from incompatible material(s).  
Thermally decomposes during fire or high heat; keep away from heat, sparks, open flame and other ignition sources.
- Possibility of Other Hazardous Reaction(s)** No further relevant information available.
- Incompatible Material(s)**  
Amines.  
Mercaptans  
Oxidizing agents  
Acids  
Bases (Alkalis)
- Hazardous Decomposition Product(s)**  
Thermally decomposes during fire or very high heat. See Section 5 for fire hazards evolved during thermal decomposition.
- Hazardous Polymerization Product(s)** No relevant information.
- Additional Information** No further relevant information.

#### SECTION 11. TOXICOLOGICAL INFORMATION

##### Acute Toxicity

###### Oral

<b>25068-38-6 Bisphenol-A-(epichlorohydrin) epoxy resin</b>	
Oral LD50	11400 mg/kg (rat) 15600 mg/kg (mouse) Reference: NLM Toxnet (2010).

**Potential Health Effect(s):** Not a classified acute oral hazard.

###### Dermal

<b>25068-38-6 Bisphenol-A-(epichlorohydrin) epoxy resin</b>	
Dermal LD50	20000 mg/kg (rabbit) (Test guideline not available) > 1270 mg/kg (mouse) > 2000 mg/kg (rat) > 1600 mg/kg (rabbit); however, there was no fixed test result available; classification was not possible without further information. Reference: Royce (M)SDS (2011) and ChemID (2010).

**Potential Health Effect(s):** Not a classified acute dermal hazard.

###### Inhalative

<b>25068-38-6 Bisphenol-A-(epichlorohydrin) epoxy resin</b>	
Inhalative LC50/4 h	(Test species: n/a) (Toxicity not expected based on the acute oral data)

**Potential Health Effect(s):** Not a classified acute inhalative hazard.

###### Skin Corrosion or Irritation

<b>25068-38-6 Bisphenol-A-(epichlorohydrin) epoxy resin</b>	
Corrosion/Irritation	irritating (rabbit) Acute skin irritation was mild, through repeated and prolonged exposure may cause severe irritation. The substance was classified as Category 2 by GHS-J. Reference: HSNO CCID (2010) and GHS-J (2006).

###### Potential Health Effect(s):

Causes skin irritation.  
In contact with skin, may cause:  
redness and pain

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#### SECTION 11. TOXICOLOGICAL INFORMATION (CONTINUED)

##### Eye Serious Damage or Irritation

###### 25068-38-6 Bisphenol-A-(epichlorohydrin) epoxy resin

Damage/Irritation irritating (rabbit)  
 The substance caused eye irritation (Category 2A) based on the dermal effect to rabbit skin.

##### Potential Health Effect(s):

Causes serious eye irritation.  
 In contact with eye, may cause:  
 redness and pain

##### Respiratory or Skin Sensitization

###### 25068-38-6 Bisphenol-A-(epichlorohydrin) epoxy resin

Sensitization	Skin	sensitizing (Human) Based on positive results from skin sensitization tests on human volunteers and guinea pigs, GHS-J classified the substance as a dermal sensitizer. Reference: GHS-J (2006).
	Respiratory	(No data available)

##### Potential Health Effect(s):

May cause an allergic skin reaction.  
 No relevant information for respiratory sensitization; classification is not possible.

##### OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

##### Germ Cell Mutagenicity

###### 25068-38-6 Bisphenol-A-(epichlorohydrin) epoxy resin

Mutagenicity positive (Chinese hamster lung fibroblast cells) (In Vitro (Chromosomal Aberration))  
 In Vitro (Chromosomal Aberration; Chinese hamster lung fibroblast cells) - Positive without metabolic activation; negative with metabolic activation.  
 Positive (salmonella typhimurium) (In Vitro (Ames assay)). Due to the absence from In Vivo tests, it was not possible to make a conclusion of mutagenicity of the substance.  
 Reference: NLM CCRIS (2010).

Potential Health Effect(s): No further relevant information; classification is not possible.

##### Carcinogenicity

###### 25068-38-6 Bisphenol-A-(epichlorohydrin) epoxy resin

Carcinogenicity negative (Test species: n/a) (Not listed by ACGIH, IARC, NTP, or OSHA)  
 (Mouse)  
 1 out of 4 cases with female mice showed positive carcinogenic results after a repeated dermal application with 10% concentration of the substance for two years. When considering all of the evidence, the substance was not classified as a carcinogen.  
 Reference: Dow (M)SDS (2010).

Potential Health Effect(s): Not a known Carcinogen.

##### Reproductive Toxicity

###### 25068-38-6 Bisphenol-A-(epichlorohydrin) epoxy resin

Reproductive Toxi: negative (Test species: n/a) (no reproductive or developmental effect observed)  
 There was no reproductive or developmental effect observed at dosing levels that were toxic to parental animals.  
 Reference: GHS-J (2006).

Potential Health Effect(s): Not a known Reproductive hazard.

##### Specific Target Organ Toxicity - Single Exposure

###### 25068-38-6 Bisphenol-A-(epichlorohydrin) epoxy resin

STOT-Single Target: None (Rats and Mice) (No effect after single oral doses)  
 Somnolence (general depressed activity) and dyspnea were observed after a single oral application with 11400 mg/kg to rats, or 15600 mg/kg to mice of the substance. However, the dose levels were both outside of the guidance value ranges.  
 Reference: NLM Toxnet (2010).

Potential Health Effect(s): Not a known hazard to organs upon single exposure.

##### Specific Target Organ Toxicity - Repeated Exposure





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#### SECTION 11. TOXICOLOGICAL INFORMATION (CONTINUED)

##### 25068-38-6 Bisphenol-A-(epichlorohydrin) epoxy resin

**STOT-Repeated** Target: N/A (guinea pig) (insufficient data for classification)  
 With dermal application of the substance for 55 days, increased seromuroid concentrations, decreased lactate-dehydrogenase (LDH), and decreased leucyl-naphthylamidase (LNA) were observed in the test animals. Meanwhile, the substance caused a toxic effect on blood components of female guinea-pigs with greater effects on pregnant animals. However, there was no detail available regarding the dose level or test guideline, classification was thus not possible.  
 Reference: HSNO CCID (2010).

**Potential Health Effect(s):** No further relevant information; classification is not possible.

##### Aspiration Hazard

##### 25068-38-6 Bisphenol-A-(epichlorohydrin) epoxy resin

**Aspiration Hazard** (No data available)

**Potential Health Effect(s):** No relevant information; classification is not possible.

**Additional Information** No further relevant information.

#### SECTION 12. ECOLOGICAL INFORMATION

##### Aquatic Environmental Toxicity

##### 25068-38-6 Bisphenol-A-(epichlorohydrin) epoxy resin

**Algae Toxicity** (No data available)

**Crustacean Toxicity** 1.4 - 1.7 mg/l (Daphnia magna (water flea)) (EC50 (48 hrs))  
**Fish Toxicity** 1.41 mg/l (Oryzias latipes (Rice fish)) (LC50 (96 hrs))  
 3.1 mg/l (Pimephales promelas (fathead minnow)) (LC50 (96 hrs))  
 Based on the non-rapid degradability and the acute LC50 < 10 mg/L, the substance is classified as a Chronic-2 environmental hazard.  
 Reference: Dow (M)SDS (2010) and CHRIP (2010).

**Aquatic Environmental Toxicity Assessment:** Toxic to aquatic life with long lasting effects.

##### Degradability and Stability

##### 25068-38-6 Bisphenol-A-(epichlorohydrin) epoxy resin

**Biodegradation** non-biodegrad. (Test species: n/a) (Biodegradation (OECD TG 302B; 28 days) = 12%)  
 (Activated Sludge) (OECD TG 301C; 4 weeks; Conc. 100 mg/L)  
 Biodegradation (Indirect Analysis from BOD) = 0%  
 Biodegradation (Direct Analysis from HPLC) = 0%  
 The substance is non-biodegradable.  
 Reference: Dow (M)SDS (2010) and CHRIP (2010).

**Persistence** (Test species: n/a) (This substance is persistent)  
 Reference: Canada DSL (2007) and CHRIP (2010).

**Photodegradation** 6.69E-11 cm<sup>3</sup>/molecule-sec (OH radical) (Half-life (T1/2) = 1.92 hrs)  
 However, photolysis in water is negligible.  
 Reference: Dow (M)SDS (2010).

**Stability in water** (No data available)

##### Bioaccumulation and Distribution

##### 25068-38-6 Bisphenol-A-(epichlorohydrin) epoxy resin

**BCF** 0.56-42 (Cyprinus carpio) (The substance is low-bioaccumulative)  
 BCF (28 days; Concentration: 10 µg/L) = 0.56 - 0.67, 3.3 - 4.2  
 BCF (28 days; Concentration: 1 µg/L) = 5.6 - 6.8, 33 - 42  
 Reference: CHRIP (2010).

**Koc** 1800 - 4400 L/kg (soil)  
 Potential for mobility in soil is moderate.  
 Reference: Dow (M)SDS (2010).

**LogPow** 3.7 - 3.9 (Test species: n/a)  
 Reference: Dow (M)SDS (2010).

**Degradability and Bioaccumulation Assessment:** Non-rapidly degradable, and low bioaccumulative.

**Additional Information** No further relevant information.

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#### SECTION 13. DISPOSAL CONSIDERATIONS

**Hazardous Waste List**

**Description:** It may be necessary to contain and dispose of the substance/mixture as a hazardous waste.

**Waste Treatment Recommendation:**

Generation of waste should be avoided or minimized wherever possible.  
 Chemical waste, even small quantities, is neither allowed to be poured down drains, sewage system or waterways; nor disposed with household garbage.  
 Dispose of contents/containers in accordance with local, regional, national, and international regulations.

**Unused and Uncontaminated Packagings**

**Recommendation** Dispose of according to your local waste regulations.

#### SECTION 14. TRANSPORT INFORMATION

**UN-Number**

**DOT, ADR, IMDG, IATA** UN3082

**UN Proper Shipping Name**

**DOT, ADR, IMDG, IATA** Environmentally hazardous substances, liquid, n.o.s. (Bisphenol-A-(epichlorohydrin) epoxy resin)

**Transport hazard class(es)**

**DOT, IMDG, IATA**



**Class Label** 9 Miscellaneous dangerous substances and articles  
9

**ADR**



**Class Label** 9 (M6) Miscellaneous dangerous substances and articles  
9

**Packing group**

**DOT, ADR, IMDG, IATA** III

**Environmental Hazards:**

**Marine Pollutant:** Yes  
Symbol (fish and tree)

**Special Marking (ADR):** Symbol (fish and tree)

**Special Marking (IATA):** Symbol (fish and tree)

**Special Precautions:**

Warning: Miscellaneous dangerous substances and articles

**Danger Code (Kemler):** 90

**EMS Number:** F-A,S-F



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#### SECTION 14. TRANSPORT INFORMATION (CONTINUED)

· **Transport in Bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.

· **Transport/Additional Information:**

· **DOT**

· **Quantity limitations** On passenger aircraft/rail: No limit  
On cargo aircraft only: No limit

· **Remarks:** Special marking with the symbol (fish and tree).

· **ADR**

· **Excepted quantities (EQ)** Code: E1  
Maximum net quantity per inner packaging: 30 ml  
Maximum net quantity per outer packaging: 1000 ml

· **IMDG**

· **Limited quantities (LQ)** 5L

· **Excepted quantities (EQ)** Code: E1  
Maximum net quantity per inner packaging: 30 ml  
Maximum net quantity per outer packaging: 1000 ml

· **UN "Model Regulation":** UN3082, Environmentally hazardous substances, liquid, n.o.s. (Bisphenol-A-(epichlorohydrin) epoxy resin), 9, III

#### SECTION 15. REGULATORY INFORMATION

· **USA Regulation Lists**

· **SARA (Superfund Amendments and Reauthorization Act of 1986)**

· **Section 302 (Extremely Hazardous Substances)**

None of the ingredients is listed.

· **Section 313 (Toxics Release Inventory (TRI) reporting)**

None of the ingredients is listed.

· **Section 311/312 (Hazardous Chemical Inventory Reporting)**

25068-38-6	Bisphenol-A-(epichlorohydrin) epoxy resin	A, C	90-100%
1333-86-4	Carbon black (Wetted form)	A, C	0.1-<1%

· **Hazard Abbreviations for SARA 311/312**

- A - Acute Health Hazard
- C - Chronic Health Hazard
- F - Fire Hazard
- R - Reactive Hazard
- S - Sudden Release of Pressure Hazard

· **TSCA (Toxic Substances Control Act)**

All ingredients are listed.

· **Proposition 65**

· **Chemicals Known to Cause Cancer**

106-89-8 | 1-chloro-2,3-epoxypropane

· **Chemicals Known to Cause Reproductive Toxicity for Females**

None of the ingredients is listed.

· **Chemicals Known to Cause Reproductive Toxicity for Males**

106-89-8 | 1-chloro-2,3-epoxypropane



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### SECTION 15. REGULATORY INFORMATION (CONTINUED)

**Chemicals Known to Cause Developmental Toxicity**

None of the ingredients is listed.

**Carcinogenic Categories**

**EPA (Environmental Protection Agency)**

None of the ingredients is listed.

**IARC (International Agency for Research on Cancer)**

None of the ingredients is listed.

**NTP (National Toxicology Program)**

None of the ingredients is listed.

**TLV (Threshold Limit Value Established by ACGIH)**

1333-86-4 Carbon black (Wetted form)

A4

**NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

**International Regulation Lists**

**Canadian Domestic Substance Listings:**

All ingredients are listed.

**Canadian Ingredient Disclosure list (limit 0.1%)**

None of the ingredients is listed.

**Canadian Ingredient Disclosure list (limit 1%)**

None of the ingredients is listed.

**Chinese Chemical Inventory of Existing Chemical Substances:**

All ingredients are listed.

**Japanese Existing and New Chemical Substance List:**

All ingredients are listed.

**Korean Existing Chemical Inventory:**

All ingredients are listed.

**European Pre-registered substances:**

All ingredients are listed.

**REACH - Substances of Very High Concern (SVHC) List:**

None of the ingredients is listed.

**Restriction of Hazardous Substances Directive (RoHS) list:**

None of the ingredients is listed.



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Revision Date: 09/25/2015  
Supersedes Date: 02/15/2013

## SAFETY DATA SHEET

Complies with OSHA Hazard Communication Standard 29 CFR 1910.1200

### Product Name: GC POTTING EPOXY, PART A (RESIN)

#### SECTION 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.*

##### **Abbreviations and acronyms:**

ACGIH: American Conference of Governmental Industrial Hygienists  
ACToR: US EPA Aggregated Computational Toxicology Resource  
ADR: European Agreement Concerning the International Carriage of Dangerous Goods by Road  
BCF: Bioconcentration Factor  
CAS: Chemical Abstracts Service (division of the American Chemical Society)  
CCRIS: US NLM TOXNET Chemical Carcinogenesis Research Information System  
CHRIP: Japan NITE Information on Biodegradation and Bioconcentration of the Existing Chemical Substances in the Chemical Risk Information Platform  
DOT: US Department of Transportation  
DSL: Canada Domestic Substance List  
ESIS: European Chemical Substances Information System  
HMIS: US National Paint & Coatings Association (NPCA) Hazardous Materials Identification System  
HSDB: US NLM TOXNET Hazardous Substances Databank  
HSNO CCID: New Zealand Hazardous Substances and New Organisms Chemical Classification Information Database  
IARC: International Agency for Research on Cancer developed by United Nations World Health Organisation (WHO)  
IATA-DGR: Dangerous Goods Regulations (DGR) by the International Air Transport Association (IATA)  
ICAO-TI: Technical Instructions (TI) by the International Civil Aviation Organization (ICAO)  
ICSC: International Chemical Safety Cards  
IMDG: International Maritime Dangerous Goods; the principal international rules for International Carriage of Dangerous Goods by SEA under the Recommendations on the Transport of Dangerous Goods by United Nations (RTDG)  
IUCLID: EU REACH International Uniform Chemical Information Database  
Koc: Partition coefficient, soil Organic Carbon to water  
LC50/LD50: Lethal Concentration/Dose, 50 percent  
N/a: Not available or Not applicable  
NFPA: US National Fire Protection Association  
NIOSH: US National Institute of Occupational Safety and Health  
NLM TOXNET: US National Library of Medicine Toxicology Data Network  
NITE: National Institute of Technology and Evaluation, Japan  
OECD: Organisation for Economic Co-operation and Development  
OSHA: US Occupational Safety and Health Administration  
  
P: Marine Pollutant  
RCRA: Resource Conservation and Recovery Act (USA)  
REACH: EU Registry, Evaluation and Authorisation of Chemicals  
RID: the Regulations Concerning the International Carriage of Dangerous Goods by Rail; published by the Central Office for International Carriage by Rail (OTIF)  
RTDG: the Recommendations on the Transport of Dangerous Goods by United Nations (UN)  
RTECS: US Registry of Toxic Effects of Chemical Substances  
SARA: US Superfund Amendments and Reauthorization Act  
SIDS: OECD existing chemicals Screening Information Data Sets  
SVHC: EU ECHA Substance of Very High Concern  
TEEL: Temporary Emergency Exposure Limit developed by US Subcommittee on Consequence Assessment and Protective Actions (SCAPA) of US Department of Energy (DOE)  
TOXLINE: US NLM bibliographic database search system  
TSCA: US Toxic Substance Control Act  
ECHA: European Chemicals Agency's Dissemination portal with information on chemical substances registered under REACH



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**Product Name: GC POTTING EPOXY, PART A (RESIN)**

### **SECTION 17. DISCLAIMER**

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Supersedes Date: 02/15/2013

## SAFETY DATA SHEET

Complies with OSHA Hazard Communication Standard 29 CFR 1910.1200

**Product Name: GC POTTING EPOXY, PART B (HARDENER)**

### SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product Type:	Adhesive	Emergency Contact:	Chemtrec
Product Name:	<b>GC POTTING EPOXY, PART B (HARDNER)</b>	Phone:	<b>(800) 424-9300</b>
Part Number(s):	<b>19-823-2R 19-824-2R 19-824-2G</b>		

### SECTION 2. HAZARDS IDENTIFICATION

#### Hazard Classification



GHS08 Health hazard

Repr. 2 H361 Suspected of damaging fertility or the unborn child.  
STOT RE 1 H372 Causes damage to the respiratory system through prolonged or repeated exposure.



GHS05 Corrosion

Skin Corr. 1B H314 Causes severe skin burns and eye damage.  
Eye Dam. 1 H318 Causes serious eye damage.



GHS09 Environment

Aquatic Acute 1 H400 Very toxic to aquatic life.  
Aquatic Chronic 1 H410 Very toxic to aquatic life with long lasting effects.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.  
Skin Sens. 1 H317 May cause an allergic skin reaction.

## SAFETY DATA SHEET

Complies with OSHA Hazard Communication Standard 29 CFR 1910.1200

### Product Name: GC POTTING EPOXY, PART B (HARDENER)

#### SECTION 2. HAZARDS IDENTIFICATION (CONTINUED)

##### Label Elements

**GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

##### Pictogram(s)



##### Signal Word

 Danger

##### Hazard-determining Component(s)

Benzyl alcohol  
Isophorone diamine  
4-Nonylphenol, branched  
Amine Epoxy Resin Adduct - Proprietary CAS number withheld as permitted by 29CFR1910.1200(i).

##### Hazard statements

Harmful if swallowed.  
Causes severe skin burns and eye damage.  
May cause an allergic skin reaction.  
Suspected of damaging fertility or the unborn child.  
Causes damage to the respiratory system through prolonged or repeated exposure.  
Very toxic to aquatic life.  
Very toxic to aquatic life with long lasting effects.

##### Precautionary statements

Do not breathe dusts or mists.  
Wear protective gloves.  
Wear eye protection / face protection.  
Avoid release to the environment.  
Wash thoroughly after handling.  
Contaminated work clothing must not be allowed out of the workplace.  
Obtain special instructions before use.  
Do not handle until all safety precautions have been read and understood.  
Do not eat, drink or smoke when using this product.  
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.  
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/doctor.  
Specific treatment (see on this label).  
If swallowed: Call a poison center/doctor if you feel unwell.  
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
Wash contaminated clothing before reuse.  
IF exposed or concerned: Get medical advice/attention.  
If skin irritation or rash occurs: Get medical advice/attention.  
If swallowed: Rinse mouth. Do NOT induce vomiting.  
Get medical advice/attention if you feel unwell.  
Collect spillage.  
Store locked up.  
Dispose of contents/container in accordance with local/regional/national/international regulations.

##### Prevention

Do not breathe dust/fume/gas/mist/vapors/spray.  
Wear protective gloves/protective clothing/eye protection/face protection.  
Use personal protective equipment as required.  
Avoid release to the environment.  
Wash thoroughly after handling.  
Contaminated work clothing must not be allowed out of the workplace.  
Obtain special instructions before use.  
Do not handle until all safety precautions have been read and understood.  
Do not eat, drink or smoke when using this product.  
Avoid breathing dust/fume/gas/mist/vapors/spray

**Disposal** Dispose of contents/container in accordance with local/regional/national/international regulations.

##### Hazard Rating System

###### NFPA System

###### NFPA Ratings (scale 0 - 4)



NFPA special hazards (water reactivity and oxidizing property): None

###### HMIS System

###### HMIS Ratings (scale 0 - 4)



##### Other hazards

###### Results of PBT and vPvB assessment

- PBT: Not applicable.
- vPvB: Not applicable.





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## SAFETY DATA SHEET

Complies with OSHA Hazard Communication Standard 29 CFR 1910.1200

**Product Name: GC POTTING EPOXY, PART B (HARDENER)**

### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### Chemical Characterization: Mixtures

##### Composition/Information on Ingredients

CAS: 68410-23-1 EC number: 614-452-7	Polyamide Resin ⚠ Skin Irrit. 2, H315; Eye Irrit. 2A, H319 Aquatic Chronic 3, H412	40-50%
CAS: 100-51-6 EINECS: 202-859-9 Index Number: 603-057-00-5 RTECS: DN 3150000	Benzyl alcohol ⚠ Acute Tox. 4, H302; Acute Tox. 4, H332; Eye Irrit. 2A, H319 Aquatic Acute 2, H401	10-20%
CAS: 2855-13-2 EINECS: 220-666-8 Index Number: 612-067-00-9	Isophorone diamine ⚠ Skin Corr. 1B, H314 ⚠ Acute Tox. 4, H302; Acute Tox. 4, H312; Skin Sens. 1, H317 Aquatic Chronic 3, H412	10-20%
CAS: 84852-15-3 EINECS: 284-625-5 Index Number: 601-053-00-8	Modified Aliphatic Amines 4-Nonylphenol, branched ⚠ Repr. 2, H361 ⚠ Skin Corr. 1B, H314; Eye Dam. 1, H318 ⚠ Aquatic Chronic 1, H410 ⚠ Acute Tox. 4, H302	10-20%
CAS: 112-24-3 EINECS: 203-950-6 Index Number: 612-059-00-5 RTECS: YE6650000	Triethylenetetramine ⚠ Skin Corr. 1B, H314; Eye Dam. 1, H318 ⚠ Acute Tox. 4, H312; Skin Sens. 1, H317 Aquatic Chronic 3, H412	2.5-5%

#### Classification System:

The Classifications were based on the Toxicological and Ecological Data of the substances/mixtures in the Section 11 and 12.

### SECTION 4. FIRST-AID MEASURES

#### Description of First Aid Measures

##### General Information

Symptoms may be delayed several hours after exposure; victims should be medically observed for at least 48 hours after exposure. Ensure medical personnel are aware of exposure and take precautions for their personal protection; see Section 8 for the information of personal protection.

##### After Inhalation

Remove victim from exposure to fresh air. Keep person at rest. Provide oxygen if person is not breathing. Supply fresh air and to be sure call for a doctor. In case of unconsciousness place patient stably in side position for transportation. If breathing is difficult, administer oxygen. Seek immediate medical advice even if no symptoms develop.

##### After Skin Contact

Immediately remove all contaminated clothing and put them in a tightly sealed bag. Immediately wash contaminated skin with water and soap and rinse them thoroughly. Seek immediate medical advice even if no symptoms develop.

##### After Eye Contact

Immediately rinse opened eyes for at least 15 minutes under running water. Immediately remove contact lenses if present. Continue rinsing. Do not put any ointments, oils or medication in eyes without specific instructions.



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### Product Name: GC POTTING EPOXY, PART B (HARDENER)

#### SECTION 4. FIRST-AID MEASURES CONTINUED

*IMMEDIATELY transport victim to a hospital even if no symptoms develop.*

**After Swallowing**

*If victim is unconscious; never give anything by mouth.*

*If victim is conscious; rinse out mouth and give victim small amounts of water.*

*Do NOT induce vomiting.*

*If vomiting occurs spontaneously, keep victim's head below hips to prevent aspiration of liquid into lungs.*

*Seek immediate medical advice.*

**After Exposure** *Get medical advice/attention at once.*

**Information for Doctor** *Have chemical containers, labels and/or (M)SDS ready when calling or visiting a medical center.*

**Indication of any Immediate Medical Attention and Special Treatment Needed**

*After frequent or high intense exposure, the following medical tests are recommended:*

*eye tests*

*skin tests*

*kidney tests*

*Reproductive system function tests*

*Check section 11 Toxicological Information for further relevant information.*

**Additional Information**

*For additional information, please consult the corresponding first aid measures in the most current version of Emergency Response Guidebook which is produced by the US Department of Transportation.*

#### SECTION 5. FIRE-FIGHTING MEASURES

**Extinguishing Media**

**Suitable Extinguishing Agent(s)**

*Use fire fighting measures and extinguishing agents that suit the environment.*

*In case of fire, suitable extinguishing agents are:*

*Alcohol resistant foam.*

*Dry chemical or fire-extinguishing powder.*

*Carbon dioxide (CO<sub>2</sub>).*

*Water spray or water fog.*

**Unsuitable Extinguishing Agent(s)** *Water with full jet*

**Firefighting Procedures**

*Isolate fire and deny unnecessary entry.*

*Eliminate all ignition sources if safe to do so.*

*Do not extinguish fire unless flow can be stopped.*

*Fight fire remotely due to the risk of explosion.*

*Solid stream of water may spread fire; use water spray or water fog.*

*Cool all affected containers with flooding quantities of water.*

*Runoff from fire control or dilution water may be corrosive and/or toxic; protect personnel and minimize property damage.*

*Contain fire water runoff if possible to prevent environmental pollution.*

*Fight fire from protected location or safe distance.*

*Contain fire water runoff if possible to prevent environmental pollution.*

**Special Hazards Arising in Fire**

*Will not burn unless preheated.*

*In case of fire, following can be released:*

*May generate ammonia gas.*

*nitric acid*

*Various hydrocarbons*

*Carbon dioxide (CO<sub>2</sub>) and Carbon monoxide (CO)*

*Nitrogen oxides*



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### Product Name: GC POTTING EPOXY, PART B (HARDENER)

#### SECTION 5. FIRE-FIGHTING MEASURES

**Advice for Firefighters**

*If employees are expected to fight fires, they must be trained and equipped as stated in the OSHA fire brigades standard (29 CFR 1910.156).*

*As with any fire, wear positive-pressure self-contained breathing apparatus and full protective gear that are NIOSH approved.*

**Additional Information** *Ensure adequate and functional fire fighting facilities equipped in working area at all times.*

#### SECTION 6. ACCIDENTAL RELEASE MEASURES

**Personal Precautions**

*Do not touch damaged containers or spills unless wearing appropriate protective equipment.*

*Do not breathe gas, vapors, dusts or mists if their inhalable particles occur during use.*

*Ensure personnel take precautions for their personal protection during clean up; see Section 8 for the specific requirements.*

**Environmental Precautions**

*Keep away from sewage system or other water courses; do not penetrate ground/soil.*

*Inform respective authorities in case of any seepage to the environment.*

**Cleaning Up Methods**

*Ensure adequate ventilation.*

*Eliminate all ignition sources.*

*Keep unauthorized personnel away.*

*For large spills:*

*Shut off source of leak if safe to do so.*

*Dike and contain.*

*Remove with vacuum trucks or pump to storage/salvage vessels.*

*Absorb residues with liquid-binding materials.*

*For small spills:*

*Ventilate and wash area after clean-up is complete.*

*Collect spills in suitable and properly labeled containers.*

*Do not use solvents unless following safe handling practices and within the recommended exposure guidelines.*

*Dispose contaminated chemicals as waste according to Section 13.*

**Additional Information** *No further relevant information.*

#### SECTION 7. HANDLING AND STORAGE

**Handling**

**Precautions for Safe Handling**

*Obtain special instruction before use; do not handle until all safety precautions have been read and understood.*

*Do not breathe gas, vapors, dusts or mists if their inhalable particles occur during handling.*

*Avoid any body contact of containers or contents unless wearing appropriate personal protective equipment.*

*Ensure good ventilation and/or exhaustion at workplace.*

*Keep away from incompatible material(s).*

*Avoid any release into the environment.*

*Observe all the personal protection requirements in Section 8.*

**Information about Protection Against Explosions and Fires**

*Will not burn unless preheated.*

*Keep away from heat, sparks, open flame and other ignition sources during handling.*

**Storage**

**Requirements to be Met by Storerooms and Receptacles**

*Store in a well-ventilated place; provide ventilation for receptacles.*

*Keep stored in accordance with local, regional, national, and international regulations.*

**Information about Storage in One Common Storage Facility**

*Store away from incompatible material(s).*

*Store away from foodstuffs.*

*Avoid release to the environment.*

**Additional Information** *No further relevant information.*

## SAFETY DATA SHEET

Complies with OSHA Hazard Communication Standard 29 CFR 1910.1200

### Product Name: GC POTTING EPOXY, PART B (HARDENER)

#### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Engineering Measures or Controls**

Exposure Limit Values that Require Monitoring at the Workplace	
<b>100-51-6 Benzyl alcohol</b>	
TEEL-1	Short-term value: 260 mg/m <sup>3</sup> , 60.0 ppm
TEEL-2	Short-term value: 660 mg/m <sup>3</sup> , 150.0 ppm
TEEL-3	Short-term value: 660 mg/m <sup>3</sup> , 150.0 ppm
WEEL	Long-term value: 10 ppm
<b>84852-15-3 4-Nonylphenol, branched</b>	
TEEL-1	Short-term value: 20 mg/m <sup>3</sup>
TEEL-2	Short-term value: 125 mg/m <sup>3</sup>
TEEL-3	Short-term value: 500 mg/m <sup>3</sup>
<b>112-24-3 Triethylenetetramine</b>	
WEEL	Long-term value: 6 mg/m <sup>3</sup> , 1 ppm Skin

**Other Engineering Measures or Controls**

Ventilation rates should be matched to conditions.  
 If applicable, use process enclosure(s), local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits.

**Personal Protective**

**General Protective and Hygienic Measures**

Avoid contact with the eyes and skin.  
 Avoid any contact with skin or eye.  
 Do not eat, drink or smoke during work.  
 Keep food, drink or feed away from working area.  
 Contaminated work clothing is not allowed out of workplace.  
 Clean hands and exposed skin thoroughly after work and before breaks.

**Personal Protective Equipment (PPE)**

**Breathing Equipment**

Caution! Improper use of respirators is dangerous.  
 In case of brief exposure or low pollution, use a respiratory filter device.  
 In case of intensive or longer exposure, use a positive-pressure respiratory protective device that is independent of circulating air.

**Hand Protection**



Protective gloves

Selection of glove material should take into consideration the penetration times, rates of diffusion, and the degradation.

Suggested glove type(s):

Nitrile Gloves

Butyl Rubber Gloves

**Eye Protection**



Brief or short term use: Tightly sealed goggles



Intensive or long term use: Tightly sealed goggles and Face Shields

## SAFETY DATA SHEET

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### Product Name: GC POTTING EPOXY, PART B (HARDENER)

#### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION (CONTINUED)

##### Body Protection



Intensive or long term use: Protective Clothing

##### Additional Information

All protective clothing (suits, gloves, footwear, headgear) should be clean, available every day, and put on before work. The Engineering measures or controls, and PPE recommendations are only guidelines and may not apply to every situation. For additional information, please consult the corresponding requirements under OSHA 29 CFR 1910.94-95, and 29 CFR 1910.132-138.

#### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

##### Information on Basic Physical and Chemical Properties

###### Appearance:

Form:	Liquid
Color:	Amber
Odor:	Amine-like
Odor Threshold:	Not determined.

PH-Value: Not determined.

###### Change in Condition:

Melting Point:	Not determined.
Boiling Point:	>140 °C (>284 °F)
Flash Point:	>93 °C (>199 °F)
Decomposition Temperature:	Not determined.
Auto-ignition Temperature:	Not determined.
Flammability:	Not determined.
Explosion:	Not determined.
Explosion Limits:	
Lower:	Not determined.
Upper:	Not determined.

Vapor Pressure: Not determined.  
Density at 25 °C (77 °F): 0.98 g/cm<sup>3</sup> (8.178 lbs/gal)

###### Solubility in or Miscibility with

Water:	Not miscible or difficult to mix.
Viscosity:	
Dynamic at 20 °C (68 °F):	3000 mPas
Kinematic:	Not determined.

Additional Information: No further relevant information.



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### Product Name: GC POTTING EPOXY, PART B (HARDENER)

#### SECTION 10. STABILITY AND REACTIVITY

- Physical Hazard(s)** Not a regulated reactive or physical hazard under GHS.
- Hazardous Reactivity and Chemical Stability** Stable under normal conditions of use, storage and temperatures.
- Thermal Decomposition and Conditions to be Avoided**  
Keep away from incompatible material(s).  
Thermally decomposes during fire or high heat; keep away from heat, sparks, open flame and other ignition sources.
- Possibility of Other Hazardous Reaction(s)**  
May react with strong reducing agents generating flammable hydrogen (H<sub>2</sub>).  
May slowly corrode aluminum and steel.  
May potentially cause an explosion when in contact with concentrated sulfuric acid and strong hydrogen peroxide.
- Incompatible Material(s)**  
Acid chlorides  
Acid anhydrides  
Strong reducing agents  
Sodium hypochlorite, Nitrous acid and other nitrosating agents  
Bases (Alkalis)  
Halogens  
Isocyanates  
Acids  
Strong oxidizing agent  
Zinc and Galvanized Surfaces  
Copper and copper alloys
- Hazardous Decomposition Product(s)**  
Ammonia (NH<sub>3</sub>) and/or Amines.  
Thermally decomposes during fire or very high heat. See Section 5 for fire hazards evolved during thermal decomposition.
- Hazardous Polymerization Product(s)** No relevant information.
- Additional Information** No further relevant information.

#### SECTION 11. TOXICOLOGICAL INFORMATION

##### Acute Toxicity

Oral	
<b>100-51-6 Benzyl alcohol</b>	
Oral LD50	1580 mg/kg (mouse) 1610 mg/kg (rat) (Directive 84/449/EEC) Reference: OECD SIDS (2001).
<b>2855-13-2 Isophorone diamine</b>	
Oral LD50	1030 mg/kg (rat) (males) Reference: OECD SIDS (2004).
<b>84852-15-3 4-Nonylphenol, branched</b>	
Oral LD50	1604 mg/kg (rat) Reference: Royce SDS (2015)

##### Potential Health Effect(s):

If swallowed, may cause:  
diarrhea  
shock or collapse  
cramps  
abnormal pain, headache, nausea, vomiting, drowsiness  
See acute inhalative effect(s) for further information



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### Product Name: GC POTTING EPOXY, PART B (HARDENER)

#### SECTION 11. TOXICOLOGICAL INFORMATION (CONTINUED)

##### Dermal

###### 100-51-6 Benzyl alcohol

Dermal	LD50	2000 mg/kg (rabbit) < 5 mL/kg (guinea pig) Reference: OECD SIDS (2001).
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###### 2855-13-2 Isophorone diamine

Dermal	LD50	1840 mg/kg (rabbit) (Estimated from 2.0 ml/kg) Reference: DuPont (M)SDS (2001).
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###### 84852-15-3 4-Nonylphenol, branched

Dermal	LD50	2031 mg/kg (rabbit) Royce SDS (2015)
--------	------	---

##### Potential Health Effect(s):

Harmful in contact with skin.  
See acute inhalative effect(s) for further information.

##### Inhalative

###### 100-51-6 Benzyl alcohol

Inhalative	LC50/4 h	(rat) (LC50 exceeded the saturated vapor value) LC50 (4 hours) = 8.9 mg/L (Calculated from 2000ppm and 1ppm = 4.42E-3 mg/L) LC50 (4 hours) = 8.8 mg/L (Extrapolated from LC50 (8 hrs) of 1000 ppm according to Haber's law) The LC50 value (4 hours) of 2000ppm was higher than the saturated vapor concentration (30 ppm) under a saturated vapour pressure of 0.03hPa (20 °C), the substance was considered as "mist containing substantially no vapor". Thus, the substance was not classified as an inhalative hazard based on the criteria. Reference: OECD SIDS (2001) and NLM HSDB (2011).
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###### 2855-13-2 Isophorone diamine

Inhalative	LC50/4 h	(rat) (No relevant information available of LC50) Approximate lethal concentration (ALC; 4 hours) = 4.6 mg/l No relevant information available of LC50; classification of acute inhalation hazard was not possible. Reference: OECD SIDS (2004).
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###### 84852-15-3 4-Nonylphenol, branched

Inhalative	LC50/4 h	(mouse) (Non-toxic; LC50 exceeded the saturated vapor value) At 267 mg/m <sup>3</sup> (230 ppm), there was no significant depression. At the saturated vapor concentration of 3636 mg/m <sup>3</sup> (400 ppm) at 70 °C, there was sensory irritation observed which was rapidly gone after removal from exposure. The substance was not classified as an acute inhalative hazard under its regular use. Reference: IUCLID Dataset (2000).
------------	----------	--

##### Potential Health Effect(s):

While not possible to classify the acute inhalative hazard due to missing data, the product may cause the following symptom(s):  
dizziness or lightheadedness  
sore throat  
asthma  
diarrhea  
cough, headache, nausea, shortness of breath, vomiting, and wheezing

## SAFETY DATA SHEET

Complies with OSHA Hazard Communication Standard 29 CFR 1910.1200

### Product Name: GC POTTING EPOXY, PART B (HARDENER)

#### SECTION 11. TOXICOLOGICAL INFORMATION (CONTINUED)

##### Skin Corrosion or Irritation

###### 68410-23-1 Fatty acids, C18 unsatd., dimers, reaction products with polyethylenepolyamines

Corrosion/Irritation (Not applicable) (OECD Test Guideline 431)  
 Not considered to be corrosive to skin in the in vitro skin model EpiDermTM.  
 Source: ECHA REACH Dossier GLP Study 2012

###### 100-51-6 Benzyl alcohol

Corrosion/Irritation (rabbit) (slightly irritating)  
 non-irritating (OECD TG 404)  
 Erythema: 0/4 (Max. 4; 1, 24, 48 hrs and 7 days; 2 out of 3 animals)  
 Erythema: (0-1)/4 (Max. 4; 1, 24, 48 hrs and 7 days; 1 out of 3 animals).  
 slightly irritating (test detail was not available)  
 For safety reason, the substance was classified as slightly irritating to rabbit skin (Category 3).  
 Reference: ECHA (2011) and OECD SIDS (2001).

###### 2855-13-2 Isophorone diamine

Corrosion/Irritation corrosive (rabbit) (FDA Guideline and Draize test)  
 Erythema: 4/4 (Max. 4; mean score of all treated animals); not reversible within 72 hrs.  
 Edema: (>0)/4 (Max. 4; mean score of all treated animals); not reversible within 72 hrs.  
 Overall irritation: (>4)/8 (Max. 8; mean score of all treated animals); not reversible within 72 hrs.  
 The substance was classified to be corrosive (Category 1) to rabbit skin based on the criteria.  
 Reference: ECHA (2011).

###### 84852-15-3 4-Nonylphenol, branched

Corrosion/Irritation corrosive (rabbit) (Directive 84/449/EEC B4; Post-exposure: 8 days)  
 All tested animals showed signs of erythema, edema, and eschar which were not fully reversible within 8 days.  
 Reference: IUCLID Dataset (2000).

##### Potential Health Effect(s):

Causes severe skin burns and eye damage.  
 In contact with skin, may cause:  
 blister formulation  
 redness, pain and severe skin burns

##### Eye Serious Damage or Irritation

###### 100-51-6 Benzyl alcohol

Damage/Irritation Irritating (rabbit) (0.1 ml neat substance; 7 days)  
 Cornea: 1 (Max. 4; mean score of 2 animals); not fully reversible in 7 days  
 Iris: ≤1 (Max. 2; mean score of 2 animals); fully reversible in 7 days  
 Conjunctivae: ≤2 (Max. 3; mean score of 2 animals); fully reversible in 7 days  
 Chemosis: ≤2 (Max. 4; mean score of 2 animals); fully reversible in 7 days  
 The substance was classified as moderately irritating to rabbit eyes (Category 2A).  
 Reference: ECHA (2011).

###### 2855-13-2 Isophorone diamine

Damage/Irritation serious irrit. (rabbit) (OECD TG 405; 0.1 mL neat substance)  
 Overall irritation: 110/110 (Max. 110); not reversible within the test period.  
 The substance produced serious injury almost immediately after application (opalescence); and conjunctiva showed necrosis 24 hours after treatment. Based on the classification criteria, the substance was classified as a serious eye irritant (Category 1) to rabbit eyes.  
 Reference: ECHA (2011).

###### 84852-15-3 4-Nonylphenol, branched

Damage/Irritation serious irrit. (rabbit) (Draize Test)  
 There was corneal opacity in all animals and iritis in two. Meanwhile, all treated animals showed marked conjunctival involvement with transient discharges. Thus, the substance was classified as a serious eye irritant (Category 1).  
 Reference: IUCLID Dataset (2000).

##### Potential Health Effect(s):

Causes serious eye damage.  
 In contact with eye, may cause:  
 decrease or loss of vision  
 redness, pain and severe deep burns





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**Product Name: GC POTTING EPOXY, PART B (HARDENER)**

### SECTION 11. TOXICOLOGICAL INFORMATION (CONTINUED)

#### Respiratory or Skin Sensitization

##### 100-51-6 Benzyl alcohol

Sensitization	Skin	Sensitizing (Human) (Patch-Test) (guinea pig) Not sensitizing (Draize Test and Maximization Test) Sensitizing (Open epicutaneous test and Freund's complete adjuvant test) For safety reason, the substance was classified as a skin sensitizer. Reference: OECD SIDS (2001).
	Respiratory	(No data available)

##### 2855-13-2 Isophorone diamine

Sensitization	Skin	sensitizing (guinea pig) (OECD TG 406; epicutaneous and occlusive) Positive reaction number (negative controlled group: Substance Conc. 0 %) = 0 (at 24+48+72 hrs). Positive reaction number (Conc. 2.5%) = 7 (24 hrs); 5 (48 hrs); and 2 (72 hrs). Positive reaction number (Conc. 5%) = 18 (24 hrs); 15 (48 hrs); and 10 (72 hrs). The substance was classified as a dermal sensitizer (Category 1) to pig skin. Reference: ECHA (2011).
	Respiratory	N/A (Human) (due to limitation of the evidence) There was one single human case described some possible airway effects of the substance; however, no definite conclusion can be drawn on respiratory sensitization due to limitation of the evidence. Reference: OECD SIDS (2004).

##### 84852-15-3 4-Nonylphenol, branched

Sensitization	Skin	not sensitizing (guinea pig) (Buehler test with OECD TG 406) Guinea pig maximization test - negative There was no significant difference between treated and negative controlled groups; the substance was not classified as a dermal sensitizer. Reference: IUCLID Dataset (2000).
	Respiratory	(No data available)

#### Potential Health Effect(s):

May cause an allergic skin reaction.  
No relevant information for respiratory sensitization; classification is not possible.

#### OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

## SAFETY DATA SHEET

Complies with OSHA Hazard Communication Standard 29 CFR 1910.1200

### Product Name: GC POTTING EPOXY, PART B (HARDENER)

#### SECTION 11. TOXICOLOGICAL INFORMATION (CONTINUED)

##### Germ Cell Mutagenicity

###### 100-51-6 Benzyl alcohol

**Mutagenicity** Negative (mouse) (In Vivo (micronucleus assay; OECD TG 474))  
 In Vitro (mammalian chromosome aberration test in Chinese hamster Ovary (CHO) cells) - negative without metabolic activation; weakly positive with metabolic activation.  
 In Vitro (bacterial reverse mutation assay in Salmonella typhimurium (TA98, TA100, TA1535, and TA1537 strains) with OECD TG 471) - negative with and without metabolic activation  
 In Vivo (micronucleus assay; mouse (ddY strains); OECD TG 474; intraperitoneal injection with up to 200 mg/kg bw) - negative; there was no indication of micronucleus induction at any dose tested.  
 When considering all of the evidence, the substance was not a classified mutagen.  
 Reference: ECHA (2011).

###### 2855-13-2 Isophorone diamine

**Mutagenicity** negative (mouse) (In Vivo (micronucleus assay); OECD TG 474)  
 In Vitro (Bacterial reverse mutation assay in S. typhimurium TA 98, TA 100, TA 1535, TA 1537, and TA1538 strains with OECD TG 471) - negative with and without metabolic activation.  
 In Vitro (Mammalian chromosome aberration test in Chinese hamster Ovary (CHO) cells with OECD TG 473) - negative with and without metabolic activation.  
 In Vitro (HGPR assay in CHO K1 cells with OECD TG 476) - negative with and without metabolic activation.  
 In Vivo (Male and female NMRI mice; micronucleus assay; OECD TG 474; single oral dose with up to 500 mg/kg bw) - negative; the substance did not result in any increase in number of micronucleated polychromatic erythrocytes (PCE), or any effects in the PCE/NCE ratios.  
 Reference: ECHA (2011).

###### 84852-15-3 4-Nonylphenol, branched

**Mutagenicity** negative (mouse) (In Vivo (Directive 79/831/EEC, B12))  
 In Vitro (Ames test; salmonella typhimurium) - negative with and without metabolic activation  
 In Vitro (HGPR assay with OECD TG 476; Chinese Hamster) - negative with and without metabolic activation  
 In Vivo (Directive 79/831/EEC, B12; mouse) - no mutagenic effects in mouse erythrocytes were observed during the test sampling time.  
 Reference: IUCLID Dataset (2000).

**Potential Health Effect(s):** No further relevant information; classification is not possible.

##### Carcinogenicity

###### 100-51-6 Benzyl alcohol

**Carcinogenicity** Negative (rat) (No carcinogenic effect after oral doses for 2yrs)  
 NOAEL (carcinogenicity; oral; 103 weeks; OECD TG 453) = 400 mg/kg bw/d (maximum dose test); no evidence of carcinogenic activity was observed.  
 Reference: ECHA (2011).

###### 2855-13-2 Isophorone diamine

**Carcinogenicity** negative (Test species: n/a) (not listed as a Carcinogen by NTP, IARC or OSHA)

###### 84852-15-3 4-Nonylphenol, branched

**Carcinogenicity** negative (Test species: n/a) (not listed as a Carcinogen by NTP, IARC or OSHA)  
 Reference: Hexion (M)SDS (2004).

**Potential Health Effect(s):** No further relevant information; classification is not possible.

##### Reproductive Toxicity

###### 100-51-6 Benzyl alcohol

**Reproductive Toxi.** Negative (mouse) (No developmental or maternal toxicity observed)  
 NOAEL (oral; developmental toxicity) = 550 mg/kg bw/day; no adverse effect observed.  
 NOAEL (oral; maternal toxicity) = 550 mg/kg bw/day; no adverse effect observed.  
 Reference: ECHA (2011).

###### 2855-13-2 Isophorone diamine

**Reproductive Toxi.** negative (rat) (OECD TG 408; Oral with up to 160 mg/kg/d)  
 No effects were observed regarding the reproductive organs in concentrations up to 160 mg/kg bw/day for 90 days.  
 (rat) (OECD TG 414; Oral; Up to 250 mg/kg bw/day)  
 NOAEL (Embryotoxicity; Fetotoxicity; Maternal toxicity; and teratogenicity) ≥ 250 mg/kg bw/day (highest dose tested); no effects were found with up to the highest dose level. Thus, the substance was not classified as a reproductive hazard.  
 Reference: OECD SIDS (2004) and ECHA (2011).

## SAFETY DATA SHEET

Complies with OSHA Hazard Communication Standard 29 CFR 1910.1200

### Product Name: GC POTTING EPOXY, PART B (HARDENER)

#### SECTION 11. TOXICOLOGICAL INFORMATION (CONTINUED)

**84852-15-3 4-Nonylphenol, branched**

Reproductive Toxi. *positive (rat) (NOAEL (oral) = 15 mg/kg/day)  
 There were adverse effects on pups observed at the non-maternally toxic doses; the substance was therefore classified as a suspected reproductive hazard by EU.  
 Reference: EPA HPVIS (2010) and REACH CLP (2012).*

**Potential Health Effect(s):** Suspected of damaging fertility or the unborn child.

**Specific Target Organ Toxicity - Single Exposure**

**100-51-6 Benzyl alcohol**

STOT-Single (No data available)

**2855-13-2 Isophorone diamine**

STOT-Single *Target: N/A (rat) (conclusive but not sufficient for classification)  
 Target organs: N/A  
 Death, restlessness, thirst, rough fur, and tiredness were observed after a single oral administration with 1030 mg/kg bw of the substance. At necropsy, irritation of the intestinal mucosa and an increase in kidney weight were found in several animals. However, ECHA concluded it as conclusive but not sufficient for classification.  
 Reference: ECHA (2011).*

**84852-15-3 4-Nonylphenol, branched**

STOT-Single (No data available)

**Potential Health Effect(s):**

*No further relevant information; classification is not possible.  
 Some target organs may be exclusive due to low concentration of the hazardous component(s).*

**Specific Target Organ Toxicity - Repeated Exposure**

**100-51-6 Benzyl alcohol**

STOT-Repeated *Target: None (Rats and Mice) (No systemic effect after oral or inhalative doses)  
 -Target organs: None  
 NOAEL (mouse; females and males; oral with up to 800 mg/kg bw/d) = 200 mg/kg bw/day  
 NOAEL (rat; females and males; oral with up to 800 mg/kg bw/d) = 400 mg/kg bw/day  
 The dose levels were outside of guidance value ranges.  
 -Target organs: None  
 NOAEC (rat; OECD TG 412; inhalation: aerosol; up to 1072 mg/m<sup>3</sup>; 6 hours/day for 4 weeks) = 1072 mg/m<sup>3</sup>; no adverse effect was found.  
 Reference: ECHA (2011).*

**2855-13-2 Isophorone diamine**

STOT-Repeated *Target: N/A (rat) (conclusive but not sufficient for classification)  
 NOAEL (OECD TG 408; oral; 13 weeks) = 59 mg/kg bw/day (males) and 62 mg/kg bw/day (females); at 160 mg/kg bw/day group, the substance produced histopathological alterations in kidneys. However, the dose level was outside of the guidance values.  
 In another 14 day inhalative study, degeneration/necrosis in olfactory epithelium of the nose, trachea, larynx and lungs were observed after repeated inhalative administration with 0.2 mg/l/day of the substance. However, ECHA concluded it as conclusive but not sufficient for classification.  
 Reference: OECD SIDS (2004) and ECHA (2012).*

**84852-15-3 4-Nonylphenol, branched**

STOT-Repeated *(rat) (Target: Kidney via Oral routes)  
 NOAEL (oral, 90 days) = 50 mg/kg/day; there were renal tubular epithelial degeneration and renal tubular dilatation observed from the test animals.  
 Reference: Huntsman (M)SDS (2009), EPA HPVIS (2010), IUCLID Dataset (2000) and GHS-J (2006).*

**Potential Health Effect(s):** Causes damage to the respiratory system through prolonged or repeated exposure.

**Aspiration Hazard**

**100-51-6 Benzyl alcohol**

Aspiration Hazard (No data available)

**2855-13-2 Isophorone diamine**

Aspiration Hazard (No data available)

**84852-15-3 4-Nonylphenol, branched**

Aspiration Hazard (No data available)

**Potential Health Effect(s):** No relevant information; classification is not possible.



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### Product Name: GC POTTING EPOXY, PART B (HARDENER)

#### SECTION 11. TOXICOLOGICAL INFORMATION (CONTINUED)

**Additional Information** No further relevant information.

#### SECTION 12. ECOLOGICAL INFORMATION

##### Aquatic Environmental Toxicity

###### 100-51-6 Benzyl alcohol

Algae Toxicity	770 mg/l (Pseudokirchneriella subcapitata) (ErC50 (72 hrs); OECD TG 201)
Crustacean Toxicity	230 mg/l (Daphnia magna (water flea)) (EC50 (48 hrs); OECD TG 202) 51 mg/L (NOEC (21 days); OECD TG 211)
Fish Toxicity (static)	460 mg/l (Pimephales promelas (fathead minnow)) (LC50 (96 hrs); EPA OPP 72-1) Based on the acute L(E)C50 (algae, crustacea and fish) > 100 mg/L, and chronic NOEC (crustacea) > 10 mg/L, the substance is not classified as an environmental hazard. Reference: ECHA (2011).

###### 2855-13-2 Isophorone diamine

Algae Toxicity	37 mg/l (Scenedesmus subspicatus) (EC50 (72 hrs; biomass); Directive 87/302/EEC Part C)
Crustacean Toxicity	23 mg/l (Daphnia magna (water flea)) (EC50 (48 hrs); OECD TG 202) 324 mg/L (Chaetogammarus marinus) (EC50 (96 hrs)) 3 mg/L (daphnia magna) (NOEC (21 days); OECD TG 202)
Fish Toxicity	37 mg/l (Leuciscus idus (Ide or Orfe)) (EC50 (72 hrs; biomass); Directive 87/302/EEC Part C) Based on the non-rapid degradability and the acute LC50 < 100 mg/L, the substance is classified as a Chronic-3 environmental hazard. Reference: OECD SIDS (2004).

###### 84852-15-3 4-Nonylphenol, branched

Algae Toxicity	0.27 mg/l (Skeletonema costatum) (EC50 (96 hrs)) (Pseudokirchneriella subcapitata) EC50 (96 hrs) = 0.41 mg/L (Scenedesmus subspicatus) EC50 (72 hrs; Algenwachstums-Hemmtest nach UBA) = 1.3 mg/L
Crustacean Toxicity	0.15 mg/l (Hyalella azteca) (EC50 (96 hrs)) (Daphnia magna (water flea)) EC50 (48 hrs) = 0.035 mg/L Royce SDS (2015) NOEC (21 days) = 0.024 mg/L (Mysidopsis bahia) EC50 (96 hrs) = 0.043 mg/L NOEC (28 days) = 3.9 µg/L
Fish Toxicity	0.14 mg/l (Pimephales promelas (fathead minnow)) Royce SDS (2015)

**Aquatic Environmental Toxicity Assessment:** Very toxic to aquatic life with long lasting effects.

##### Degradability and Stability

###### 100-51-6 Benzyl alcohol

Biodegradation	readily (Test species: n/a) (Biodegradation (OECD TG 301C) ≥ 94%) Biodegradation (Direct from TOC and HPLC; 4 weeks; Chemical conc. 100 ppm) = 98% and 100% Biodegradation (Indirect from BOD; 4 weeks; Chemical conc. 100 ppm) = 94% The substance is readily biodegradable. Reference: CHRIP (2011).
Persistence	(Test species: n/a) (The substance is not persistent) Reference: Canada DSL (2007).
Photodegradation	2.29E-11 cm <sup>3</sup> /molecule-sec (OH radical) (at 25 °C) Reference: ChemID Full Record (2011).
Stability in water	stable (Test species: n/a) Based on structure and organic chemistry rules, no hydrolysis will occur at pH ranges 4 - 11. Reference: OECD SIDS (2001).

###### 2855-13-2 Isophorone diamine

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### Product Name: GC POTTING EPOXY, PART B (HARDENER)

#### SECTION 12. ECOLOGICAL INFORMATION (CONTINUED)

Biodegradation	non-biodegrad. (Test species: n/a) (Biodegradation (OECD TG 301C) < 3%) Biodegradation (Direct Analysis from TOC, HPLC; Conc. 100 mg/L; 4 weeks) = 3%, 3% Biodegradation (Indirect Analysis from BOD; Conc. 100 mg/L; 4 weeks) = 0% The substance is not biodegradable. Reference: CHRIP (2011).
Persistence	(Test species: n/a) (The substance is persistent) Reference: Canada DSL (2007).
Photodegradation	8.47E-11 cm <sup>3</sup> /molecule-sec (OH radical) (Calculated by EPA AOP program) Half-life (5E5 OH/cm <sup>3</sup> ) = 4.5 hours Reference: OECD SIDS (2004).
Stability in water	stable (Test species: n/a) (OECD TG 111) Half-life (Ph=4, 7, and 9; at 25 °C) > 1 year Reference: OECD SIDS (2004).

#### 84852-15-3 4-Nonylphenol, branched

Biodegradation	non-biodegrad. (Test species: n/a) (Read-across from 25154-52-3; OECD TG 301C) Biodegradation (Conc. 100 ppm; 2 weeks; Direct analysis from GC, UV-vis, HPLC) = 8.9, 5.3, 2.5% Biodegradation (Conc. 100 ppm; 2 weeks; Indirect analysis from BOD) = 0% The substance is non-biodegradable. Reference: NITE CHRIP (2010).
Persistence	(Test species: n/a) (The substance is not persistent) Reference: Canada DSL (2007).
Photodegradation	9.99E-11 cm <sup>3</sup> /molecule-sec (OH radical) (Half-life (5.0E5 OH/cm <sup>3</sup> ) = 0.3 day) Reference: IUCLID Dataset (2000).
Stability in water	(No data available)

#### Bioaccumulation and Distribution

##### 100-51-6 Benzyl alcohol

BCF	(Test species: n/a) (The substance is not bioaccumulative) Reference: Canada DSL (2007).
Koc	(No data available)
LogPow	1.1 (Test species: n/a) Reference: ECHA (2011).

##### 2855-13-2 Isophorone diamine

BCF	< 3.4 (Cyprinus carpio) (The substance is not or low bioaccumulative) BCF (Chemical concentration: 1 mg/L; 6 weeks) < 0.3 BCF (Chemical concentration: 0.1 mg/L; 6 weeks) < 3.4 The substance is not or low bioaccumulative in aquatic environment. Reference: CHRIP (2011).
Koc	340.4 L/kg (Test species: n/a) Reference: OECD SIDS (2004).
LogPow	0.99 (Test species: n/a) (OECD TG 107) Reference: OECD SIDS (2004).

##### 84852-15-3 4-Nonylphenol, branched

BCF	90-330 (Cyprinus carpio) (The substance is not bioaccumulative) BCF = 250 - 330 (8 weeks; Concentration: 0.1 ppm) BCF = 90 - 220 (8 weeks; Concentration: 0.01 ppm) (Pimephales promelas (fathead minnow)) BCF (20 days, chemical concentration = 21 µg/L) = 271 Reference: NITE CHRIP (2010) and IUCLID Dataset (2000).
Koc	2580 - 25200 L/kg (Test species: n/a) Calculated from Log Koc = 0.989 LogPow - 0.346 and LogPow of 3.8 - 4.8. Reference: IUCLID Dataset (2000).
LogPow	3.8 - 4.8 (Test species: n/a) Reference: IUCLID Dataset (2000).

**Degradability and Bioaccumulation Assessment:** No further relevant information; assessment is not possible.

**Additional Information** No further relevant information.

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### Product Name: GC POTTING EPOXY, PART B (HARDENER)

#### SECTION 13. DISPOSAL CONSIDERATIONS

**Hazardous Waste List**

**Description:**

The product has not been evaluated for its hazards when disposed as a waste by RCRA. However, it is necessary to contain and dispose of the product as a hazardous waste based on the Hazard Identification in Section 2.

**Waste Treatment Recommendation:**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system. Generation of waste should be avoided or minimized wherever possible. Chemical waste, even small quantities, is neither allowed to be poured down drains, sewage system or waterways; nor disposed with household garbage. Dispose of contents/containers in accordance with local, regional, national, and international regulations.

**Unused and Uncontaminated Packagings**

**Recommendation** Dispose of according to your local waste regulations.

#### SECTION 14. TRANSPORT INFORMATION

**UN-Number**

**DOT, ADR, IMDG, IATA** UN3267

**UN Proper Shipping Name**

**DOT, ADR, IMDG, IATA** Corrosive liquid, basic, organic, n.o.s. (Isophoronediamine, 4-Nonylphenol, branched)

**Transport hazard class(es)**

**DOT**



**Class** 8 Corrosive substances  
**Label** 8

**ADR**



**Class** 8 (C7) Corrosive substances  
**Label** 8

**IMDG**



**Class** 8 Corrosive substances

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### Product Name: GC POTTING EPOXY, PART B (HARDENER)

#### SECTION 14. TRANSPORT INFORMATION (CONTINUED)

<b>Label</b>	8
<b>IATA</b>	
	
<b>Class</b>	8 Corrosive substances
<b>Label</b>	8
<hr/>	
<b>Packing group</b>	
<b>DOT, ADR, IMDG, IATA</b>	III
<b>Environmental Hazards:</b>	
<b>Marine Pollutant:</b>	Yes Symbol (fish and tree)
<hr/>	
<b>Special Precautions:</b>	
<b>Danger Code (Kemler):</b>	Warning: Corrosive substances 80
<b>EMS Number:</b>	F-A, S-B
<b>Segregation Groups</b>	Alkalis
<hr/>	
<b>Transport in Bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	
	Not applicable.
<hr/>	
<b>Transport/Additional Information:</b>	
<b>DOT</b>	
<b>Quantity limitations</b>	On passenger aircraft/rail: 5 L On cargo aircraft only: 60 L
<hr style="border-top: 1px dashed black;"/>	
<b>ADR</b>	
<b>Excepted quantities (EQ)</b>	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
<hr style="border-top: 1px dashed black;"/>	
<b>IMDG</b>	
<b>Limited quantities (LQ)</b>	5L
<b>Excepted quantities (EQ)</b>	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
<hr/>	
<b>UN "Model Regulation":</b>	UN3267, Corrosive liquid, basic, organic, n.o.s. (Isophoronediamine, 4-Nonylphenol, branched), ENVIRONMENTALLY HAZARDOUS, 8, III

#### SECTION 15. REGULATORY INFORMATION

<b>USA Regulation Lists</b>		
<b>SARA (Superfund Amendments and Reauthorization Act of 1986)</b>		
<b>Section 302 (Extremely Hazardous Substances)</b>		
None of the ingredients is listed.		
<b>Section 313 (Toxics Release Inventory (TRI) reporting)</b>		
None of the ingredients is listed.		
<b>Section 311/312 (Hazardous Chemical Inventory Reporting)</b>		
2855-13-2	Isophorone diamine	A, C   10-20%
84852-15-3	4-Nonylphenol, branched	A   10-20%



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**Product Name: GC POTTING EPOXY, PART B (HARDENER)**

### SECTION 15. REGULATORY INFORMATION (CONTINUED)

112-24-3 Triethylenetetramine	A	0-<0.1%
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**Hazard Abbreviations for SARA 311/312**

- A - Acute Health Hazard
- C - Chronic Health Hazard
- F - Fire Hazard
- R - Reactive Hazard
- S - Sudden Release of Pressure Hazard

**TSCA (Toxic Substances Control Act)**

100-51-6 Benzyl alcohol
2855-13-2 Isophorone diamine
84852-15-3 4-Nonylphenol, branched
112-24-3 Triethylenetetramine

**Proposition 65**

**Chemicals Known to Cause Cancer**

None of the ingredients is listed.

**Chemicals Known to Cause Reproductive Toxicity for Females**

None of the ingredients is listed.

**Chemicals Known to Cause Reproductive Toxicity for Males**

None of the ingredients is listed.

**Chemicals Known to Cause Developmental Toxicity**

None of the ingredients is listed.

**Carcinogenic Categories**

**EPA (Environmental Protection Agency)**

None of the ingredients is listed.

**IARC (International Agency for Research on Cancer)**

None of the ingredients is listed.

**NTP (National Toxicology Program)**

None of the ingredients is listed.

**TLV (Threshold Limit Value Established by ACGIH)**

None of the ingredients is listed.

**NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

**International Regulation Lists**

**Canadian Domestic Substance Listings:**

100-51-6 Benzyl alcohol
2855-13-2 Isophorone diamine
84852-15-3 4-Nonylphenol, branched
112-24-3 Triethylenetetramine

**Canadian Ingredient Disclosure list (limit 0.1%)**

None of the ingredients is listed.

**Canadian Ingredient Disclosure list (limit 1%)**

100-51-6 Benzyl alcohol
2855-13-2 Isophorone diamine

**Chinese Chemical Inventory of Existing Chemical Substances:**

100-51-6 Benzyl alcohol
2855-13-2 Isophorone diamine
84852-15-3 4-Nonylphenol, branched





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Revision Date: 09/30/2015  
Supersedes Date: 02/15/2013

## SAFETY DATA SHEET

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### Product Name: GC POTTING EPOXY, PART B (HARDENER)

#### SECTION 15. REGULATORY INFORMATION (CONTINUED)

112-24-3 Triethylenetetramine

##### Japanese Existing and New Chemical Substance List:

100-51-6 Benzyl alcohol

2855-13-2 Isophorone diamine

84852-15-3 4-Nonylphenol, branched

112-24-3 Triethylenetetramine

##### Korean Existing Chemical Inventory:

100-51-6 Benzyl alcohol

2855-13-2 Isophorone diamine

84852-15-3 4-Nonylphenol, branched

112-24-3 Triethylenetetramine

##### European Pre-registered substances:

100-51-6 Benzyl alcohol

2855-13-2 Isophorone diamine

84852-15-3 4-Nonylphenol, branched

112-24-3 Triethylenetetramine

##### REACH - Substances of Very High Concern (SVHC) List:

84852-15-3 4-Nonylphenol, branched

10-20%

##### Restriction of Hazardous Substances Directive (RoHS) list:

None of the ingredients is listed.

#### SECTION 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.

##### Abbreviations and acronyms:

ACGIH: American Conference of Governmental Industrial Hygienists

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

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

CCR: Canadian Categorization Results

ChV: Chronic Value

DOT: US Department of Transportation

ECHA: European Chemicals Agency's Dissemination portal with information on chemical substances registered under REACH

HMIS: US National Paint & Coatings Association (NPCA) Hazardous Materials Identification System

HPVIS: US EPA High Production Volume Information System

IARC: International Agency for Research on Cancer developed by United Nations World Health Organisation (WHO)

ICAO-TI: Technical Instructions (TI) by the International Civil Aviation Organization (ICAO)

IMDG: International Maritime Dangerous Goods; the principal international rules for International Carriage of Dangerous Goods by SEA under the Recommendations on the Transport of Dangerous Goods by United Nations (RTDG)

IUCLID: EU REACH International Uniform Chemical Information Database

LC50/LD50: Lethal Concentration/Dose, 50 percent

N/a: Not available or Not applicable

NFPA: US National Fire Protection Association

NIOSH: US National Institute of Occupational Safety and Health

NLM TOXNET: US National Library of Medicine Toxicology Data Network

OSHA: US Occupational Safety and Health Administration

P: Marine Pollutant

RCRA: Resource Conservation and Recovery Act (USA)

REACH: EU Registry, Evaluation and Authorisation of Chemicals

SARA: US Superfund Amendments and Reauthorization Act

TEEL: Temporary Emergency Exposure Limit developed by US Subcommittee on Consequence Assessment and Protective Actions

(SCAPA) of US Department of Energy (DOE)



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### SECTION 16. OTHER INFORMATION (CONTINUED)

*TSCA: US Toxic Substance Control Act  
ACToR: US EPA Aggregated Computational Toxicology Resource  
BCF: Bioconcentration Factor  
CCRIS: US NLM TOXNET Chemical Carcinogenesis Research Information System  
CHRIP: Japan NITE Information on Biodegradation and Bioconcentration of the Existing Chemical Substances in the Chemical Risk Information Platform  
DSL: Canada Domestic Substance List  
ESIS: European Chemical Substances Information System  
HSDB: US NLM TOXNET Hazardous Substances Databank  
HSNO CCID: New Zealand Hazardous Substances and New Organisms Chemical Classification Information Database  
IATA-DGR: Dangerous Goods Regulations (DGR) by the International Air Transport Association (IATA)  
ICSC: International Chemical Safety Cards  
Koc: Partition coefficient, soil Organic Carbon to water  
NITE: National Institute of Technology and Evaluation, Japan  
OECD: Organisation for Economic Co-operation and Development  
RID: the Regulations Concerning the International Carriage of Dangerous Goods by Rail; published by the Central Office for International Carriage by Rail (OTIF)  
RTDG: the Recommendations on the Transport of Dangerous Goods by United Nations (UN)  
RTECS: US Registry of Toxic Effects of Chemical Substances  
SIDS: OECD existing chemicals Screening Information Data Sets  
SVHC: EU ECHA Substance of Very High Concern  
TOXLINE: US NLM bibliographic database search system*

### SECTION 17. DISCLAIMER

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