



# SAFETY DATA SHEET

**Eco-GPE™ - Part B**

Prepared to U.S. OSHA, CMA, ANSI, Canadian WHMIS Standards, Australian WorkSafe, Japanese Industrial Standard JIS Z 7250:2000, and European Directives

## 1. PRODUCT IDENTIFICATION

<b>TRADE NAME (AS LABELED):</b>	<b>Eco-GPE™ - Part B</b>
<b>SYNONYMS:</b>	Epoxy resin
<b>CAS#:</b>	Mixture
<b>PRODUCT USE:</b>	Experimental Epoxy Resin
<b>CHEMICAL SHIPPING NAME/CLASS:</b>	Corrosive liquid, basic, organic, n.o.s., (Contains Aliphatic Amine, Tris-(Dimethylaminomethyl) Phenol)
<b>U.N. NUMBER:</b>	UN3267
<b>NORTH AMERICA:</b>	
<b>MANUFACTURER'S NAME:</b>	<b>Tennant Company</b>
<b>ADDRESS:</b>	701 North Lilac Drive, P.O. Box 1452, Minneapolis, MN 55440-1452
<b>BUSINESS PHONE:</b>	1-763-540-1200
<b>EUROPE:</b>	
<b>MANUFACTURER'S NAME:</b>	<b>Tennant Benelux N.V.</b>
<b>ADDRESS:</b>	Plantin & Moretuslie 220, B2018 Antwerpen
<b>BUSINESS PHONE:</b>	00800-225-836
<b>EMERGENCY PHONE:</b>	800-424-9300 (ChemTrec U.S. – 24Hrs) 1-703-537-3887 (Chemtrec Europe – 24 Hrs)
<b>EMAIL:</b>	<a href="mailto:info@tennantco.com">info@tennantco.com</a>
<b>DATE OF CURRENT REVISION:</b>	October 29, 2013
<b>DATE OF LAST REVISION:</b>	October 21, 2013

## 2. HAZARD IDENTIFICATION

**EMERGENCY OVERVIEW:** This product is a light yellow liquid with an ammonia odor.

**Health Hazards:** Corrosive: may cause severe irritation, redness, blister formation and/or possible tissue destruction. Extremely irritating to eyes with possible permanent damage. May cause respiratory irritation upon inhalation of heated vapors. Ingestion may cause burning of the 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.

**Flammability Hazards:** This product is a Non-Flammable liquid with a flash point of >200°F (93°C)

**Reactivity Hazards:** None known

**Environmental Hazards:** The Environmental effects of this product have not been investigated. Release of this product may have significant adverse effects in the aquatic environment.

US DOT SYMBOLS



CANADA (WHMIS) SYMBOLS



EUROPEAN and (GHS) Hazard Symbols



Signal Word: **Danger!**

### EU LABELING AND CLASSIFICATION:

This product does meet the definition of a hazardous substance or preparation as defined by the European Union Council Directives 67/548/EEC, 1999/45/EC, 1272/2008/EC and subsequent Directives.

### EU HAZARD CLASSIFICATION OF INGREDIENTS PER DIRECTIVE 1272/2008/EC:

**Index Number:**

**EC# 202-859-9 Annex I Index# 603-057-00-5**

**CAS# 9046-10-0 is not listed in ESIS**

**EC# 201-245-8 Annex I Index# 604-030-00-0**

**EC# 219-941-5 This substance is not classified in the Annex I of Directive 67/548/EEC**

Substances not listed either individually or in group entries must be self classified.

### Component(s) Contributing to Classification(s)

All Components



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### GHS Hazard Classification(s):

Reproductive Toxicity Category 2  
Acute Inhalation Toxicity Category 4  
Acute Oral Toxicity Category 4  
Eye Irritant Category 2  
Skin Irritant Category 2  
Eye Damage Category 1  
Skin Sensitization Category 1

### Hazard Statement(s):

H302: Harmful if swallowed  
H315: Causes skin irritation  
H317: May cause an allergic skin reaction  
H318: Causes serious eye damage  
H332: Harmful if inhaled  
H335: May cause respiratory irritation

### Precautionary Statement(s):

P260: Do not breathe dust/fume/vapor/mist/spray  
P264: Wash thoroughly after handling.  
P281: Use personal protective equipment as required.

### **EU HAZARD CLASSIFICATION OF INGREDIENTS PER DIRECTIVE 1999/45/EC:**

[Xn] Harmful, [Xi] Irritant

### Risk Phrases:

R20/22: Harmful by inhalation and if swallowed  
R36/37/38: Irritating to eyes, respiratory system and skin  
R41: Risk of serious damage to eyes  
R43: May cause sensitization by skin contact  
R52: Harmful to aquatic organisms

### Safety Phrases:

S24/25: Avoid contact with skin and eyes  
S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice  
S39: Wear suitable eye/face protection  
S61: Avoid release to the environment  
S62: if swallowed, do not induce vomiting: seek medical advice immediately and show container label

### **HEALTH HAZARDS OR RISKS FROM EXPOSURE:**

**SYMPTOMS OF OVEREXPOSURE BY ROUTE OF EXPOSURE:** The most significant routes of overexposure for this product are by contact with skin or eyes, inhalation of vapors and ingestion. The symptoms of overexposure are described below.

#### **ACUTE:**

**INHALATION:** Inhalation of vapors from heated material may cause respiratory irritation. Contains materials that have the potential to cause headaches, nausea, and dizziness.

**CONTACT WITH SKIN:** Corrosive: may cause severe irritation, redness, blister formation and/or possible tissue destruction.

**EYE CONTACT:** Extremely irritating to eyes with possible permanent damage. During application of this product, contact lenses should not be worn.

**INGESTION:** Ingestion may cause burning of the 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.

**CHRONIC:** Overexposure may cause reproductive disorder(s) based on tests with laboratory animals.

**TARGET ORGANS:** **Acute:** Skin, Respiratory System and Eyes      **Chronic:** Reproductive System

## 3. COMPOSITION AND INFORMATION ON INGREDIENTS

Hazardous Ingredients:	WT%	CAS#	EINECS #	Hazard Classification	Risk Phrases
Benzyl Alcohol	30 – 40%	100-51-6	202-859-9	[Xn] Harmful	R20/22
Aliphatic Ether Amine	30 – 40%	9046-10-0	Not Listed in ESIS	[Xi] Irritant	R36/38
Bisphenol A	20 – 30%	80-05-7	201-245-8	[Xn] Harmful, [Xi] Irritant	R62, R37, R41, R43, R52
1,3-Cyclohexanedimethanamine	5 – 10%	2579-20-6	219-941-5	[Xi] Irritant	R36/38
Balance of other ingredients is less than 1% in concentration (or 0.1% for carcinogens, reproductive toxins, or respiratory sensitizers).					



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NOTE: ALL WHMIS required information is included in appropriate sections based on the ANSI Z400.1-2010 format. This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR, EU Directives and the Japanese Industrial Standard JIS Z 7250: 2000.

### 4. FIRST-AID MEASURES

**EYE CONTACT:** If product enters the eyes, open eyes while under gentle running water for at least 15 minutes. Seek medical attention immediately.

**SKIN CONTACT:** Wash skin thoroughly with soap and water after handling. Seek medical attention if irritation develops and persists.

**INHALATION:** If breathing becomes difficult, remove victim to fresh air. If necessary, use artificial respiration to support vital functions. Seek medical attention.

**INGESTION:** If product is swallowed, call physician or poison control center for most current information. If professional advice is not available, do not induce vomiting. Never induce vomiting or give diluents (milk or water) to someone who is unconscious, having convulsions, or who cannot swallow. Seek medical advice. Take a copy of the label and/or SDS with the victim to the health professional.

**MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:** Some individuals may develop skin sensitization from prolonged skin contact.

**RECOMMENDATIONS TO PHYSICIANS:** Treat symptoms and eliminate overexposure.

### 5. FIRE-FIGHTING MEASURES

**FLASH POINT:** Non-Flammable with flash point >200°F

**AUTOIGNITION TEMPERATURE:** Not Applicable

**FLAMMABLE LIMITS (in air by volume, %):** Lower NA Upper NA

**FIRE EXTINGUISHING MATERIALS:** Use fire extinguishing methods below:

<u>Water Spray:</u> Yes	<u>Carbon Dioxide:</u> Yes
<u>Foam:</u> Yes	<u>Dry Chemical:</u> Yes
<u>Halon:</u> Yes	<u>Other:</u> Any "C" Class

**NOTE:** Water or foam may cause frothing

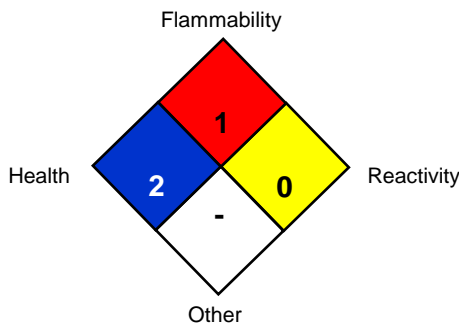
**UNUSUAL FIRE AND EXPLOSION HAZARDS:** Keep containers tightly closed when not in use. Keep away from heat, sparks or open flame. Closed containers may explode when exposed to extreme heat. Do not apply to hot surfaces.

Explosion Sensitivity to Mechanical Impact: No

Explosion Sensitivity to Static Discharge: No

**SPECIAL FIRE-FIGHTING PROCEDURES:** Incipient fire responders should wear eye protection. Structural firefighters must wear Self-Contained Breathing Apparatus and full protective equipment. Isolate materials not yet involved in the fire and protect personnel. Move containers from fire area if this can be done without risk; otherwise, cool with carefully applied water spray. If possible, prevent runoff water from entering storm drains, bodies of water, or other environmentally sensitive areas.

#### NFPA RATING SYSTEM



#### HMIS RATING SYSTEM

HAZARDOUS MATERIAL IDENTIFICATION SYSTEM			
HEALTH HAZARD (BLUE)			2
FLAMMABILITY HAZARD (RED)			1
PHYSICAL HAZARD (YELLOW)			0
PROTECTIVE EQUIPMENT			
EYES	RESPIRATORY	HANDS	BODY
	See Sect 8		See Sect 8
For Routine Industrial Use and Handling Applications			

**Hazard Scale:** 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe \* = Chronic hazard



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## 6. ACCIDENTAL RELEASE MEASURES

**SPILL AND LEAK RESPONSE:** Stop the flow of material, if this can be done safely. Contain discharged material. Absorb spill using an absorbent, non-combustible material such as earth, sand, or vermiculite. Place in a proper container for disposal. Keep spilled material out of all sewers and open bodies of water. Dispose of in accordance with U.S. Federal, State, and local hazardous waste disposal regulations and those of Canada and its Provinces, those of Australia, Japan and EU Member States (see Section 13, Disposal Considerations).

## 7. HANDLING and STORAGE

**WORK PRACTICES AND HYGIENE PRACTICES:** As with all chemicals, avoid getting this product ON YOU or IN YOU. Wash thoroughly after handling this product. Use good hygiene practices.

**STORAGE AND HANDLING PRACTICES:** Store in original container. Keep container closed. Store in a cool, dry location. Avoid exposure to ignition sources and incompatible materials.

## 8. EXPOSURE CONTROLS - PERSONAL PROTECTION

Chemical Name	CAS#	ACGIH TLV	OSHA TWA
Benzyl Alcohol	100-51-6	Not Listed	Not Listed
Aliphatic Ether Amine	9046-10-0	Not Listed	Not Listed
Bisphenol A	80-05-7	Not Listed	5 mg/m <sup>3</sup>
1,3-Cyclohexanedimethanamine	2579-20-6	Not Listed	Not Listed

**VENTILATION AND ENGINEERING CONTROLS:** Use with adequate ventilation to ensure exposure levels are maintained below the limits provided above.

*The following information on appropriate Personal Protective Equipment is provided to assist employers in complying with OSHA regulations found in 29 CFR Subpart I (beginning at 1910.132) or equivalent standard of Canada, or standards of EU member states (including EN 149 for respiratory PPE, and EN 166 for face/eye protection), and those of Japan. Please reference applicable regulations and standards for relevant details.*

**RESPIRATORY PROTECTION:** Maintain airborne contaminant concentrations below guidelines listed above. If necessary, use only respiratory protection authorized in the U.S. Federal OSHA Respiratory Protection Standard (29 CFR 1910.134), equivalent U.S. State standards, Canadian CSA Standard Z94.4-93, the European Standard EN149, or EU member states.

**EYE PROTECTION:** Safety glasses or chemical splash goggles are recommended to avoid contact. If necessary, refer to U.S. OSHA 29 CFR 1910.133, Canadian Standards, and the European Standard EN166, Australian Standards, or relevant Japanese Standards.

**HAND PROTECTION:** Chemical resistant gloves are recommended to prevent contact. If necessary, refer to U.S. OSHA 29 CFR 1910.138, the European Standard DIN EN 374, the appropriate Standards of Canada, Australian Standards, or relevant Japanese Standards.

**BODY PROTECTION:** Not required when using this product. If necessary, refer to appropriate Standards of Canada, or appropriate Standards of the EU, Australian Standards, or relevant Japanese Standards. If a hazard of injury to the feet exists due to falling objects, rolling objects, where objects may pierce the soles of the feet or where employee's feet may be exposed to electrical hazards, use foot protection, as described in U.S. OSHA 29 CFR 1910.136.

## 9. PHYSICAL and CHEMICAL PROPERTIES

**APPEARANCE (Physical State) and COLOR:** This product is a light yellow liquid with an ammonia odor.

**ODOR:** Mild

**ODOR THRESHOLD:** Not Applicable

**pH:** Not Applicable

**MELTING/FREEZING POINT:** Not Available

**BOILING POINT:** Not Available

**FLASH POINT:** >200°F

**EVAPORATION RATE (n-BuAc=1):** Not Available

**FLAMMABILITY (SOILD, GAS):** Not Applicable

**UPPER/LOWER FLAMMABILITY OR EXLOSION LIMITS:** Not Applicable

**VAPOR PRESSURE (mm Hg @ 20°C (68°F):** Not Available



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**VAPOR DENSITY:** Not Available  
**RELATIVE DENSITY:** Not Available  
**DENSITY:** 1.0 kg/L  
**SOLUBILITY IN WATER:** Appreciable  
**WEIGHT PER GALLON:** Not Available  
**PARTITION COEFFICIENT (n-octanol/water):** Not Available  
**AUTO-IGNITION TEMPERATURE:** Not Applicable  
**DECOMPOSITION TEMPERATURE:** Not Available  
**VISCOSITY:** Not Available

## 10. STABILITY and REACTIVITY

**STABILITY:** Stable under conditions of normal storage and use.  
**HAZARDOUS DECOMPOSITION PRODUCTS:** Thermal decomposition products include carbon dioxide, carbon monoxide and nitrogen oxides.  
**MATERIALS WITH WHICH SUBSTANCE IS INCOMPATIBLE:** Strong acids and oxidizing agents  
**POSSIBILITY OF HAZARDOUS REACTIONS:** Will not occur.  
**CONDITIONS TO AVOID:** Incompatible materials

## 11. TOXICOLOGICAL INFORMATION

### TOXICITY DATA:

Benzyl Alcohol CAS# 100-51-6  
Oral rat LD50: 1230 – 3100 mg/kg  
Skin rabbit LD50: 2000 mg/kg  
Aliphatic Ether Amine CAS# 9046-10-0  
Oral rat LD50: 2880 mg/kg  
Skin rabbit LD50: 2980 mg/kg  
Bisphenol A CAS# 80-05-7  
Oral rat LD50: 4100 mg/kg  
Skin rabbit LD50: 3000 mg/kg

**SUSPECTED CANCER AGENT:** None of the ingredients within this product are found on the following lists: FEDERAL OSHA Z LIST, NTP, IARC, or CAL/OSHA and therefore are not considered to be, nor suspected to be, cancer-causing agents by these agencies.

**IRRITANCY OF PRODUCT:** This product may be irritating to skin, eyes or respiratory system.

**SENSITIZATION TO THE PRODUCT:** This product may be a skin sensitizer

**REPRODUCTIVE TOXICITY INFORMATION:** No information concerning the effects of this product and its components on the human reproductive system.

## 12. ECOLOGICAL INFORMATION

ALL WORK PRACTICES MUST BE AIMED AT ELIMINATING ENVIRONMENTAL CONTAMINATION.

**ENVIRONMENTAL STABILITY:** No specific data available on this product.

**CHEMICAL EFFECT ON PLANTS, ANIMALS AND AQUATIC LIFE:** This product is expected to cause significant harm to plants, animals or aquatic life.

**WATER ENDANGERMENT CLASS:** Not water endangering in accordance with EU Guideline 91/155-EWG

### SPECIFIC AVAILABLE COMPONENT INFORMATION:

**Benzyl Alcohol:** Toxicity to fish LC50 - *Lepomis macrochirus* (Bluegill) - 10 mg/l - 96 h

Toxicity to daphnia and other aquatic invertebrates EC50 - *Daphnia magna* (Water flea) - 55 mg/l - 24 h

Bisphenol A: Toxicity to fish flow-through test LC50 - *Cyprinodon variegatus* (sheepshead minnow) - 11 mg/l - 96 h

Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates static test EC50 - *Daphnia magna* (Water flea) - 10.2 mg/l - 48 h



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## 13. DISPOSAL CONSIDERATIONS

**PREPARING WASTES FOR DISPOSAL:** Waste disposal must be in accordance with appropriate U.S. Federal, State, and local regulations, those of Canada, Australia, EU Member States and Japan.

**EU Waste Code:** Not determined

## 14. TRANSPORTATION INFORMATION

US DOT, IATA, IMO, ADR:

**U.S. DEPARTMENT OF TRANSPORTATION (DOT) SHIPPING REGULATIONS:** This product is classified (per 49 CFR 172.101) by the U.S. Department of Transportation, as follows.

**PROPER SHIPPING NAME:** Corrosive liquid, basic, organic, n.o.s. (Contains Aliphatic Amine, Tris-(Dimethylaminomethyl) Phenol)

**HAZARD CLASS NUMBER and DESCRIPTION:** Class 8 Corrosive

**UN IDENTIFICATION NUMBER:** UN 3267

**PACKING GROUP:** PGII

**DOT LABEL(S) REQUIRED:** Corrosive

**NORTH AMERICAN EMERGENCY RESPONSE GUIDEBOOK NUMBER:** 153

**RQ QUANTITY:** None

**MARINE POLLUTANT:** The components of this product are not designated by the Department of Transportation to be Marine Pollutants (49 CFR 172.101, Appendix B).

INTERNATIONAL AIR TRANSPORT ASSOCIATION SHIPPING INFORMATION (IATA): This product is considered as dangerous goods.

INTERNATIONAL MARITIME ORGANIZATION SHIPPING INFORMATION (IMO): This product is considered as dangerous goods.

EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY ROAD (ADR): This product is considered by the United Nations Economic Commission for Europe to be dangerous goods.

## 15. REGULATORY INFORMATION

### UNITED STATES REGULATIONS:

**U.S. SARA REPORTING REQUIREMENTS:** The components of this product are subject to the reporting requirements of Sections 302, 304, and 313 of Title III of the Superfund Amendments and Reauthorization Act.

SARA 313 Reporting: Bisphenol A CAS# 80-05-7 <30%

**U.S. SARA THRESHOLD PLANNING QUANTITY:** There are no specific Threshold Planning Quantities for the components of this product. The default Federal MSDS submission and inventory requirement filing threshold of 10,000 lbs (4,540 kg) therefore applies, per 40 CFR 370.20.

**U.S. CERCLA REPORTABLE QUANTITY (RQ):** None

**U.S. TSCA INVENTORY STATUS:** The components of this product are listed on the TSCA Inventory or are exempted from listing.

**OTHER U.S. FEDERAL REGULATIONS:** None

**CALIFORNIA SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT (PROPOSITION 65):** None of the ingredients within this product are on the Proposition 65 Lists.

### CANADIAN REGULATIONS:

**CANADIAN DSL/NDL INVENTORY STATUS:** The components of this product are on the DSL Inventory, or are exempted from listing.

**OTHER CANADIAN REGULATIONS:** Not applicable.

### **CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA) PRIORITIES SUBSTANCES LISTS:**

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

**CANADIAN WHMIS CLASSIFICATION and SYMBOLS:** This product is a Class D2B, Materials causing other toxic effects and Class E Corrosive material, per WHMIS Controlled Product Regulations

### EUROPEAN ECONOMIC COMMUNITY INFORMATION:

This product does meet the definition of a hazardous substance or preparation as defined by the European Union Council Directives 67/548/EEC, 1999/45/EC, 1272/2008/EC and subsequent Directives.

See Section 2 for Details





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**AUSTRALIAN INFORMATION FOR PRODUCT:** The components of this product are listed on the International Chemical Inventory list.

**JAPANESE INFORMATION FOR PRODUCT:**

**JAPANESE MINISTER OF INTERNATIONAL TRADE AND INDUSTRY (MITI) STATUS:** The components of this product are not listed as Class I Specified Chemical Substances, Class II Specified Chemical Substances, or Designated Chemical Substances by the Japanese MITI.

**JAPANESE ENCS INVENTORY:** The components of this product are on the ENCS Inventory as indicated in the section on International Chemical Inventories, below.

**POISONOUS AND DELETERIOUS SUBSTANCES CONTROL LAW:** No component of this product is a listed Specified Poisonous Substance under the Poisonous and Deleterious Substances Control Law.

**INTERNATIONAL CHEMICAL INVENTORIES:**

Listing of the components on individual country Chemical Inventories is as follows:

Asia-Pac: Listed

Australian Inventory of Chemical Substances (AICS): Listed

Korean Existing Chemicals List (ECL): Listed

Japanese Existing National Inventory of Chemical Substances (ENCS): Listed

Philippines Inventory of Chemicals and Chemical Substances (PICCS): Listed

Swiss Giftlist List of Toxic Substances: Listed

U.S. TSCA: Listed

## 16. OTHER INFORMATION

**PREPARED BY:** Paul Eigbrett – (**GHS MSDS Compliance PLUS**)

**DATE OF PRINTING:** October 29, 2013

The information contained herein is believed to be accurate but is not warranted to be so. Data and calculations are based on information furnished by the manufacturer of the product and manufacturers of the components of the product. Users are advised to confirm in advance of the need that information is current, applicable and suited to the circumstances of use. Tennant Company assumes no responsibility for injury to vendee or third party person proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Furthermore, Tennant Company assumes no responsibility for injury caused by abnormal use of this material even if reasonable safety procedures are followed.

**END OF SDS SHEET**