



# SAFETY DATA SHEET

**Eco-MVR™ 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>Tennant Eco-MVR™ Part B</b>
<b>SYNONYMS:</b>	Polyamine Resin
<b>CAS#:</b>	Mixture
<b>PRODUCT #:</b>	9006054, 9006057
<b>PRODUCT USE:</b>	Part B of a two-component resin system
<b>CHEMICAL SHIPPING NAME/CLASS:</b>	Amines, liquid, corrosive, n.o.s. (Contains 3- aminoprophldimethylamine , 2,4,6-tris(dimethylaminomethyl)phenol), Class 8, PGII
<b>U.N. NUMBER:</b>	UN2735
<b><u>NORTH AMERICA:</u></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><u>EUROPE:</u></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. – 24 Hrs) 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>	March 14, 2014
<b>DATE OF LAST REVISION:</b>	October 22, 2013

## 2. HAZARD IDENTIFICATION

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

**Health Hazards: Corrosive:** Exposure may cause mild to moderate irritation to skin. May cause severe irritation to eyes upon contact with possible tissue damage. Inhalation of vapors or mist at high concentrations can cause respiratory irritation. May be harmful if swallowed.

**Flammability Hazards:** This product is a combustible liquid with a flash point of 169°F (76°C)

**Reactivity Hazards:** Corrosive

**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**

**EC# 203-680-9 Annex I Index# 612-061-00-6**

**EC# 202-013-9 Annex I Index# 603-069-00-0**

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

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

All Components

### GHS Hazard Classification(s):

Combustible liquid Category 4

Acute Inhalation Toxicity Category 4



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Acute Oral Toxicity Category 4  
Skin Corrosion/Irritation Category 1B  
Eye Irritant Category 2  
Skin Irritant Category 2  
Skin Corrosion/Irritation Category 1B  
Skin Sensitizer Category 1

**Hazard Statement(s):**

H227: Combustible liquid  
H302: Harmful if swallowed  
H314: Causes severe skin burns and eye damage  
H315: Cause skin irritation  
H317: May cause an allergic skin reaction  
H319: Causes serious eye irritation  
H332: Harmful if inhaled

**Precautionary Statement(s):**

P260: Do not breathe dust/fume/vapor/mist/spray  
P264: Wash thoroughly after handling.  
P270: Do not eat, drink or smoke when using this product  
P280: Wear protective gloves/protective clothing/eye protection/face protection

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

[F] Flammable, [Xn] Harmful, [C] Corrosive, [Xi] Irritant

**Risk Phrases:**

R10: Flammable  
R20/22: Harmful by inhalation and if swallowed  
R34: Causes burns  
R36/38: Irritating to eyes and skin  
R43: May cause sensitization by skin contact

**Safety Phrases:**

S24/25: Avoid contact with skin and eyes  
S39: Wear suitable eye/face protection  
S45: In case of accident or if you feel unwell, seek medical advice immediately

**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 and ingestion. The symptoms of overexposure are described below.

**ACUTE:**

**INHALATION:** If mists or sprays of this solution are inhaled, this product may cause pulmonary irritation, irritation of the mucus membranes, and coughing.

**CONTACT WITH SKIN:** Prolonged or repeated skin contact may dry the skin. Symptoms may include redness, drying and cracking of skin.

Additional symptoms of skin contact may include: allergic skin reaction (delayed skin rash which may be followed by blistering, scaling and other skin effects), and numbness. Passage of this material into the body through the skin is possible, and may add to toxic effects from breathing or swallowing.

**EYE CONTACT:** Severe irritation and/or burns can occur following eye exposure. Contact may cause impairment of vision and injure eye tissue.

**INGESTION:** Though ingestion is not anticipated to be a significant route of over-exposure to this product, if ingestion does occur, irritation of the mouth, throat, esophagus, and other tissues of the digestive system may occur upon contact.

**CHRONIC:** Repeated skin contact with this product may result in dermatitis (inflammation and reddening of the skin).

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

### 3. COMPOSITION AND INFORMATION ON INGREDIENTS

Hazardous Ingredients:	WT%	CAS#	EINECS #	Hazard Classification	Risk Phrases
Benzenemethanol	40 - 70%	100-51-6	202-859-9	[Xn] Harmful	R20/22
1,3-Propanediamine, N,N-dimethyl	10 – 30%	109-55-7	203-680-9	[F] Flammable, [Xn] Harmful, [C] Corrosive	R10, R22, R34, R43
Tris-2,4,6-(Dimethylaminomethyl) Phenol	3 – 7%	90-72-2	202-013-9	[Xn] Harmful, [Xi] Irritant	R22, R36/38
Balance of other ingredients is less than 1% in concentration (or 0.1% for carcinogens, reproductive toxins, or respiratory sensitizers).					

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.



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## 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.

**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 with skin, eye or respiratory conditions may aggravate conditions from exposure.

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

## 5. FIRE-FIGHTING MEASURES

**FLASH POINT:** Combustible with flash point 169°F (76°C)

**AUTOIGNITION TEMPERATURE:** Not Available

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

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

Water Spray: No

Carbon Dioxide: Yes

Foam: Yes

Dry Chemical: Yes

Halon: Yes

Other: Any "C" Class

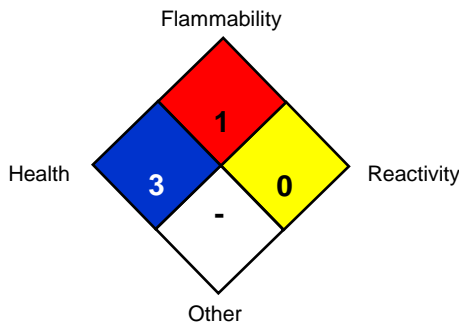
**UNUSUAL FIRE AND EXPLOSION HAZARDS:** Keep containers tightly closed. Closed containers may explode when exposed to extreme heat. Do not apply to hot surfaces

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)			3
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

## 6. ACCIDENTAL RELEASE MEASURES

**SPILL AND LEAK RESPONSE:** Stop the flow of material, if this can be done safely. Floor may be slippery; use care to avoid falling. Dike and contain the spill with inert material (sand, earth, fuller's earth, etc.) and if appropriate, transfer the



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liquid and solid diking material to containers for disposal. Remove contaminated clothing promptly and wash affected skin areas with soap and water. Wash clothing before reuse. Keep spill 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. Store inside in a cool (below 100°F or 37.5°C), dry place. KEEP FROM FREEZING.

### 8. EXPOSURE CONTROLS - PERSONAL PROTECTION

Chemical Name	CAS#	ACGIH TLV	OSHA TWA
Benzenemethanol	100-51-6	Not Listed	Not Listed
1,3-Propanediamine, N,N-dimethyl	109-55-7	Not Listed	Not Listed
Tris-2.4.6-(Dimethylaminomethyl) Phenol	90-72-2	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:** Use as appropriate to prevent skin contact. 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 amine odor.

**ODOR:** Mild

**ODOR THRESHOLD:** Not Available

**pH:** 10 - 12

**MELTING/FREEZING POINT:** Not Available

**BOILING POINT:** Not Available

**FLASH POINT:** Not Available

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

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

**UPPER/LOWER FLAMMABILITY OR EXPLOSION LIMITS:** Not Available

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

**VAPOR DENSITY:** Not Available

**RELATIVE DENSITY:** Not Available

**DENSITY:** 1.0 kg/L

**SPECIFIC GRAVITY:** Not Available



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**SOLUBILITY IN WATER:** Partial  
**WEIGHT PER GALLON:** Not Available  
**PARTITION COEFFICIENT (n-octanol/water):** Not Available  
**AUTO-IGNITION TEMPERATURE:** Not Available  
**DECOMPOSITION TEMPERATURE:** Not Available  
**VISCOSITY:** Not Available  
**VOC g/l / Lb/gal:** 2/0.2

## 10. STABILITY and REACTIVITY

**STABILITY:** Stable under conditions of normal storage and use.  
**HAZARDOUS DECOMPOSITION PRODUCTS:** Thermal decomposition products of this solution can include a variety of compounds (i.e., carbon monoxide, carbon dioxide, aldehydes, nitrogen oxides and other compounds).  
**MATERIALS WITH WHICH SUBSTANCE IS INCOMPATIBLE:** Strong acids and oxidizing agents  
**POSSIBILITY OF HAZARDOUS REACTIONS:** Will not occur.  
**CONDITIONS TO AVOID:** Incompatible materials, excessive heat.

## 11. TOXICOLOGICAL INFORMATION

**TOXICITY DATA:**  
CAS# 90-72-2  
Acute Oral LD50 Rat = 1670 mg/kg  
Acute Dermal LD50 Rabbit = 1400 mg/kg  
**SUSPECTED CANCER AGENT:** Ingredients within this product are not found on the following lists: FEDERAL OSHA Z LIST, NTP, IARC, or CAL/OSHA and therefore are not considered to be, or 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:** This product may contain an ingredient that affects fertility and/or the unborn child.

## 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 may 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:**  
No additional information available

## 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.

<b>PROPER SHIPPING NAME:</b>	Amines, liquid, corrosive, n.o.s. (Contains 3-aminopropanedimethylamine, 2,4,6-tris(dimethylaminomethyl)phenol)
<b>HAZARD CLASS NUMBER and DESCRIPTION:</b>	Corrosive Class 8
<b>UN IDENTIFICATION NUMBER:</b>	UN2735
<b>PACKING GROUP:</b>	PGII



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**DOT LABEL(S) REQUIRED:** Corrosive Class 8

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

**RQ QUANTITY:** None

**MARINE POLLUTANT:** One or more of the components of this product are 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. None

**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):** This product does not contain ingredients that 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 B Division 3 Combustible Liquid, 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 full Details

**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



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## 16. OTHER INFORMATION

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

**DATE OF PRINTING:** March 14, 2014

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 no adhered to as stipulated in the data sheet. Furthermore, Tenant Company assumes no responsibility for injury caused by abnormal use of this material even if reasonable safety procedures are followed.

**END OF SDS SHEET**