



SAFETY DATA SHEET

Eco-EJF Part A

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

1.1 TRADE NAME (AS LABELED):

Tennant Eco-EJF Part A

SYNONYMS:

Epoxy Resin Compound

CAS#:

Mixture

PRODUCT NUMBER:

9012989, 9012992, 9012994

1.2 PRODUCT USE:

Part A of a two-component resin system

CHEMICAL SHIPPING NAME/CLASS:

Not Regulated

U.N. NUMBER:

N/A

1.3 NORTH AMERICA:

MANUFACTURER'S NAME:

Tennant Company

ADDRESS:

701 North Lilac Drive, P.O. Box 1452, Minneapolis, MN 55440-1452

BUSINESS PHONE:

1-763-540-1200

1.4 EUROPE:

MANUFACTURER'S NAME:

Tennant Benelux N.V.

ADDRESS:

Roderveldaan 3, 2600 Antwerpen, Belgium

BUSINESS PHONE:

+32-3-2179411

EMERGENCY PHONE:

800-424-9300 (Chemtrec U.S. – 24 Hrs)

1-703-527-3887 (Chemtrec International – 24 Hrs)

EMAIL:

info@tennantco.com

DATE OF CURRENT REVISION:

June 19, 2018

DATE OF LAST REVISION:

March 5, 2014

2. HAZARD IDENTIFICATION

EMERGENCY OVERVIEW: This product is a gray liquid with a slight sweet odor.

Health Hazards: Exposure may cause mild to moderate irritation to skin. Possible allergic reaction. May cause moderate irritation to eyes upon contact. Inhalation of vapors or mist at high concentrations can cause respiratory irritation. May be harmful if swallowed.

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

Not Regulated

Complies with WHMIS 2015



Signal Word: **Warning!**

2.1 GHS LABELING AND CLASSIFICATION:

CLASSIFICATION OF SUBSTANCE OR MIXTURE IN ACCORDANCE WITH 29 CFR 1200 (OSHA HCS) AND THE EUROPEAN UNION DIRECTIVES:

This product does meet the definition of a hazardous substance or preparation as defined by 29 CFR 1910. 1200 AND the European Union Council Directives 67/548/EEC, 1999/45/EC, 1272/2008/EC and subsequent Directives.

EU HAZARD CLASSIFICATION OF INGREDIENTS:

Index Number:

EC# 203-539-1 Annex VI Index# 603-064-00-3

Remaining components are not listed in Annex VI

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

Component(s) Contributing to Classification(s)

Castor Oil Glycidyl Ether, Propane, 2,2-bis((p-2,3-epoxypropoxy)phenyl)-, polymers, Calcium Silicate, 1-methyl-2-propanol, Titanium Dioxide



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2.2 LABEL ELEMENTS:

GHS Hazard Classification(s):

- Skin Irritation Category 2
- Eye Irritation Category 2
- Skin Sensitizer Category 1
- Aquatic Chronic Category 3

Hazard Statement(s):

- H315: Causes skin irritation
- H319: Causes serious eye irritation
- H317: May cause allergic skin reaction
- H412: Harmful to aquatic life with long lasting effects

Prevention Statements(s):

- P261: Avoid breathing dust/fume/gas/mist/vapours/spray.
- P272: Contaminated work clothing should not be allowed out of the workplace.
- P264: Wash skin thoroughly after handling.
- P273: Avoid release to the environment.
- P280: Wear protective gloves, protective clothing/eye protection/face protection.

Response Statement(s):

- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P337+P313: If eye irritation persists: Get medical advice/attention.
- P302+P352: IF ON SKIN: Wash with plenty of water.
- P333+P313: If skin irritation or rash occurs: Get medical advice/attention.
- P321: Specific treatment (See Section 4 of this SDS).
- P362+P364: Take off contaminated clothing and wash it before reuse.

Storage Statement(s):

None applicable.

Disposal Statement(s):

P501: Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3 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:** May cause respiratory system irritation.
- CONTACT WITH SKIN:** May cause skin irritation and or sensitization.
- EYE CONTACT:** Contact with the eye may cause irritation.
- INGESTION:** May be harmful if swallowed.

CHRONIC: No data available.

TARGET ORGANS: Acute: Skin, Eyes Chronic: No data available

3. COMPOSITION AND INFORMATION ON INGREDIENTS

Hazardous Ingredients:	WT%	CAS#	EINECS #	Hazard Classification
Castor Oil Glycidyl Ether	30-45%	74398-71-3	616-085-8	Skin Irrit. Cat 2, Skin Sens Cat 1
Limestone/Silica, Quartz	25-35%	1317-65-3	212-279-6	Not Classified
Propane, 2,2-bis((p-2,3-epoxypropoxy)phenyl)-, polymers	20-30%	25085-99-8	600-013-7	Eye Irrit. Cat 2, Skin Irrit. Cat 2, Skin Sens Cat 1, Aquatic Chronic Cat 2
Calcium Silicate	2-5%	13983-17-0	237-772-5	Eye Irrit. Cat 2
1-methyl-2-propanol	0.5-2%	107-98-2	203-539-1	Flam Liq Cat 3, STOT SE Cat 3 (Drowsiness / Dizziness)
Titanium Dioxide	0.5-1.5%	13463-67-7	236-675-5	STOT SE 3 (Respiratory system), Skin Irritant Category 2, Eye Irritant Category 2
Balance of other ingredients is less than 1% in concentration (or 0.1% for carcinogens, reproductive toxins, or respiratory sensitizers). Actual concentrations have been withheld as trade secret.				



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4. FIRST-AID MEASURES

4.1 DESCRIPTION OF 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 may develop skin sensitization from exposure.

4.2 SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED:

Exposure may cause mild to moderate irritation to skin. Possible allergic reaction. May cause moderate irritation to eyes upon contact. Inhalation of vapors or mist at high concentrations can cause respiratory irritation. May be harmful if swallowed.

4.3 RECOMMENDATIONS TO PHYSICIANS:

Treat symptoms and eliminate overexposure.

5. FIRE-FIGHTING MEASURES

5.1 FIRE EXTINGUISHING MATERIALS:

FIRE EXTINGUISHING MATERIALS: Use fire extinguishing methods below:

Water Spray: Yes

Carbon Dioxide: Yes

Foam: Yes

Dry Chemical: Yes

Halon: Yes

Other: Any "C" Class

5.2 UNUSUAL FIRE AND EXPLOSION HAZARDS:

Keep containers tightly closed when not in use.

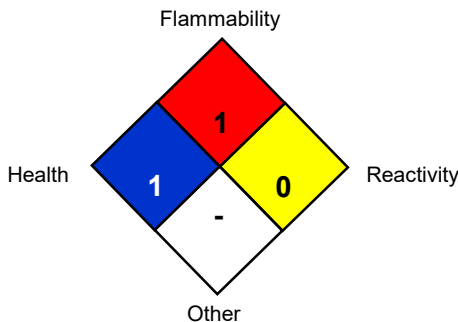
Explosion Sensitivity to Mechanical Impact: No

Explosion Sensitivity to Static Discharge: No

5.3 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)		1	
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

6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES:

See section 8.2 for Exposure Controls.

6.2 ENVIRONMENTAL PRECAUTIONS:

Keep spilled material out of all sewers and open bodies of water.

6.3 SPILL AND LEAK RESPONSE:

Stop the flow of material, if this can be done safely. Dike and contain the spill with inert material (sand, earth, fuller's earth, etc.) and if appropriate, transfer the 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

7.1 PRECAUTIONS FOR SAFE HANDLING:

Use good 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.

7.2 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.

7.3 SPECIFIC USES:

See section 1.2 for details.

8. EXPOSURE CONTROLS - PERSONAL PROTECTION

8.1 EXPOSURE PARAMETERS:

Chemical Name	CAS#	ACGIH TLV	OSHA TWA
Castor Oil Glycidyl Ether	74398-71-3	Not Listed	Not Listed
Limestone/Silica, Quartz	1317-65-3	Not Listed	15 mg/m ³ TWA (total dust); 5 mg/m ³ TWA (respirable fraction)
Propane, 2,2-bis((p-2,3-epoxypropoxy)phenyl)-, polymers	25085-99-8	Not Listed	Not Listed
Calcium Silicate	13983-17-0	10 mg/m ³	15 mg/m ³
1-methyl-2-propanol	107-98-2	50 ppm	100 ppm 360 mg/m ³
Titanium Dioxide	13463-67-7	10 mg/m ³	15 mg/m ³

8.2 EXPOSURE CONTROLS:

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 required 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 required 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.



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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

9.1 INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES:

APPEARANCE (Physical State) and COLOR: This product is a gray liquid

ODOR: Slight sweet odor

ODOR THRESHOLD: Not Applicable

pH: Not Applicable

MELTING/FREEZING POINT: Not Available

BOILING POINT: Not Available

FLASH POINT: >200°F (93°C)

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

VAPOR DENSITY: Heavier than air

RELATIVE DENSITY: Not Available

DENSITY: Not Available

SOLUBILITY IN WATER: Negligible

WEIGHT PER GALLON: Not Available

PARTITION COEFFICENT (n-octanol/water): Not Available

AUTO-IGNITION TEMPERATURE: Not Applicable

DECOMPOSITION TEMPERATURE: Not Available

VISCOSITY: Not Available

9.2 OTHER INFORMATION:

SPECIFIC GRAVITY: 1.38

10. STABILITY and REACTIVITY

10.1 REACTIVITY:

This product is not reactive.

10.2 STABILITY:

Stable under conditions of normal storage and use.

10.3 POSSIBILITY OF HAZARDOUS REACTIONS:

Will not occur.

10.4 CONDITIONS TO AVOID:

Incompatible materials.

10.5 MATERIALS WITH WHICH SUBSTANCE IS INCOMPATIBLE:

Strong acids and oxidizing agents

10.6 HAZARDOUS DECOMPOSITION PRODUCTS:

Thermal decomposition products include carbon dioxide, carbon monoxide, nitrogen and sulfur.

11. TOXICOLOGICAL INFORMATION

11.1 INFORMATION ON TOXICOLOGICAL EFFECTS:

TOXICITY DATA:

No specific data available for this product.

SUSPECTED CANCER AGENT: SUSPECTED CANCER AGENT: One or more ingredients within this product are found on the following lists: FEDERAL OSHA Z LIST, NTP, IARC, or CAL/OSHA and therefore are considered to be, or suspected to be, cancer-causing agents by these agencies.

Titanium Dioxide CAS # 13463-67-7 Group 2B Possibly carcinogenic to humans



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IRRITANCY OF PRODUCT: This product may be irritating to the skin and eyes.

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

REPRODUCTIVE TOXICITY INFORMATION: This product does not contain chemicals which are suspected to be a reproductive hazard.

MUTAGENICITY INFORMATION: This product does not contain chemicals which are reported to be germ cell mutagen hazards.

SPECIFIC TARGET ORGAN TOXICITY – SINGLE EXPOSURE: May cause respiratory system irritation.

SPECIFIC TARGET ORGAN TOXICITY – REPEATED EXPOSURE: Data not sufficient for classification.

12. ECOLOGICAL INFORMATION

12.1 TOXICITY:

No specific data available on this product.

12.2 PERSISTENCE AND DEGRADABILITY:

No specific data available on this product.

12.3 BIOACCUMULATIVE POTENTIAL:

No specific data available on this product.

12.4 MOBILITY IN SOIL:

No specific data available on this product.

12.5 RESULTS OF PBT AND vPvB ASSESSMENT:

No specific data available on this product.

12.6 OTHER ADVERSE EFFECTS:

This product may cause harm to plants, animals or aquatic life.

ALL WORK PRACTICES MUST BE AIMED AT ELIMINATING ENVIRONMENTAL CONTAMINATION.

12.7 WATER ENDANGERMENT CLASS:

Not water endangering in accordance with EU Guideline 91/155-EWG.

12.8 SPECIFIC AVAILABLE COMPONENT INFORMATION:

No additional data available.

13. DISPOSAL CONSIDERATIONS

13.1 WASTE TREATMENT METHODS:

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

13.2 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.

BULK SHIPMENTS WITHIN U.S.:

14.1 PROPER SHIPPING NAME: Not Regulated

14.2 HAZARD CLASS NUMBER and DESCRIPTION: None

14.3 UN IDENTIFICATION NUMBER: None

14.4 PACKING GROUP: None

14.5 DOT LABEL(S) REQUIRED: None

NORTH AMERICAN EMERGENCY RESPONSE GUIDEBOOK NUMBER: None

RQ QUANTITY: None

14.6 MARINE POLLUTANT: None of the components of this product are designated by the Department of Transportation to be Marine Pollutants (49 CFR 172.101, Appendix B).

14.7 SPECIAL PRECAUTIONS FOR USER: None

14.8 INTERNATIONAL TRANSPORTATION:

INTERNATIONAL AIR TRANSPORT ASSOCIATION SHIPPING INFORMATION (IATA): This product is not considered as dangerous goods.



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INTERNATIONAL MARITIME ORGANIZATION SHIPPING INFORMATION (IMO): This product is not considered as dangerous goods.

14.9 TRANSPORT IN BULK ACCORDING TO ANNEX II OF MARPOL 73/78 AND IBC CODE:

EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY ROAD

(ADR): This product is not considered by the United Nations Economic Commission for Europe to be dangerous goods.

15. REGULATORY INFORMATION

15.1 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: This product contains <1% Ethylene Glycol CAS# 107-21-1

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):

⚠ **WARNING!** This product can expose you to chemicals such as Titanium Dioxide which is known to the State of California to cause cancer. For more information, go to WWW.P65Warning.ca.gov.

15.2 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 SDS contains all of the information required by those regulations.

CANADIAN WHMIS CLASSIFICATION and SYMBOLS: Complies with WHMIS 2015.

15.3 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

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

15.5 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.

15.6 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 Giffliste List of Toxic Substances: Listed

U.S. TSCA: Listed



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16. OTHER INFORMATION

PREPARED BY: Chris Eigbrett – (MSDS to GHS Compliance)
DATE OF PRINTING: June 19, 2018

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