



SAFETY DATA SHEET

Eco-HPS® 100 / Eco-HTS 100 / Eco-SDS Satin Part A

Prepared to U.S. OSHA, Mexico NOM-018-STPS-2015, Canadian WHMIS Standards, Australian WorkSafe, Japanese Industrial Standard JIS Z 7250:2000, and European Directives

1. PRODUCT IDENTIFICATION

1.1 TRADE NAME (AS LABELED):

Eco-HPS® 100 / Eco-HTS 100 / Eco-SDS Satin Part A

SYNONYMS:

None Available

CAS#:

Mixture

PRODUCT #:

9002618 & 9002622

1.2 PRODUCT USE:

Various uses

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)

info@tennantco.com

EMAIL:

DATE OF CURRENT REVISION:

March 11, 2019

DATE OF LAST REVISION:

January 3, 2019

2. HAZARD IDENTIFICATION

EMERGENCY OVERVIEW: This product is a liquid with a characteristic odor.

Health Hazards: Exposure may cause irritation to eyes. May cause respiratory and skin sensitization. May be harmful if inhaled.

Flammability Hazards: This product is a non-flammable liquid with a flash point of >320°F (160°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

See Section 14 for Details

Complies with WHMIS 2015



Signal Word: **Danger**

2.1 EU LABELING AND CLASSIFICATION:

This product does meet the definition of a hazardous substance or preparation as defined by: OSHA HCS 2012 (29 CFR 1910. 1200) AND the European Union Council Directives 67/548/EEC, 1999/45/EC, 1272/2008/EC, 2015/830/EU and subsequent Directives AND Mexico NOM-018-STPS-2015.

EU HAZARD CLASSIFICATION OF INGREDIENTS:

Index Number:

EC# 212-485-8 Annex VI Index# 615-011-00-1

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)

All components listed in Section 3



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2.2 LABEL ELEMENTS:

GHS Hazard Classification(s):

- Acute Toxicity Category 4 (Inhalation)
- Eye Irritant Category 2A
- Skin Sensitization Category 1
- Respiratory Sensitization Category 1

Hazard Statement(s):

- H332: Harmful if inhaled
- H319: Causes serious eye irritation
- H317: May cause an allergic skin reaction
- H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled

Prevention Statements(s):

- P261: Avoid breathing dust/fume/gas/mist/vapours/spray.
- P264: Wash thoroughly after handling.
- P271: Use only outdoors or in a well-ventilated area.
- P272: Contaminated work clothing should not be allowed out of the workplace.
- P280: Wear protective gloves/protective clothing/eye protection/face protection.
- P284: [In case of inadequate ventilation] wear respiratory protection.

Response Statement(s):

- P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- P312: Call a POISON CENTER/doctor if you feel unwell.
- P342+P311: If experiencing respiratory symptoms: Call a POISON CENTER/doctor.
- P302+P352: IF ON SKIN: Wash with plenty of water.
- P321: Specific Treatment (See Section 4 of this SDS).
- P333+P313: If skin irritation or rash occurs: Get medical advice/attention.
- P362+P364: Take off contaminated clothing and wash it before reuse.
- 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.

Storage Statement(s):

- P403+P233: Store in a well-ventilated place. Keep container tightly closed.

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 be harmful if inhaled. Contains materials which have the potential to cause headaches, nausea, dizziness and respiratory tract irritation upon inhalation of vapors heated to high temperatures.

CONTACT WITH SKIN: Contains materials which may cause skin irritation and/or sensitization.

EYE CONTACT: Contains materials which may cause eye irritation.

INGESTION: May be harmful if swallowed.

CHRONIC: None known.

TARGET ORGANS: **Acute:** Skin, Respiratory System and Eyes **Chronic:** No data available.

3. COMPOSITION AND INFORMATION ON INGREDIENTS

| Hazardous Ingredients: | WT% | CAS# | EINECS # | Hazard Classification |
|--|---------|------------|-----------|--|
| Hexamethylene diisocyanate oligomers, Isocyanurate | 80-100% | 28182-81-2 | 500-060-2 | Eye Irritant Category 2, Skin Sensitizer Category 1 |
| Hexamethylene-di-isocyanate | <0.5 | 822-06-0 | 212-485-8 | Acute Toxicity Category 3 (Inhalation), Eye Irritant Category 2, Skin Irritant Category 2, Respiratory Sensitizer Category 1, Skin Sensitizer Category 1, STOT SE Category 3 |
| Balance of other ingredients is less than 1% in concentration (or 0.1% for carcinogens, reproductive toxins, or respiratory sensitizers). Actual concentrations are 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: Individuals with pre-existing skin or respiratory conditions may have conditions aggravated by exposure.

4.2 SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED:

Exposure may cause skin and eye irritation. May cause respiratory and skin sensitization. May be harmful if inhaled.

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:

| | |
|------------------------|-----------------------------|
| <u>Water Spray:</u> No | <u>Carbon Dioxide:</u> Yes |
| <u>Foam:</u> Yes | <u>Dry Chemical:</u> Yes |
| <u>Halon:</u> Yes | <u>Other:</u> Any "C" Class |

5.2 UNUSUAL FIRE AND EXPLOSION HAZARDS:

Water may be ineffective but may be used to cool closed containers to prevent pressure buildup or possible auto ignition when exposed to extreme heat (fog nozzles preferred).

Explosion Sensitivity to Mechanical Impact: No

Explosion Sensitivity to Static Discharge: No

5.3 SPECIAL FIRE-FIGHTING PROCEDURES:

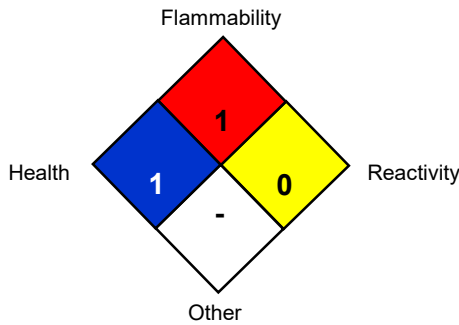
Incipient fire responders should wear eye protection. Structural firefighters must wear Self-Contained Breathing Apparatus and full protective equipment. Isolate materials not yet involved in the fire and protect personnel. Move containers from fire area if this can be done without risk; otherwise, cool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



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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

6. ACCIDENTAL RELEASE MEASURES

6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES:

See section 8.2 for Exposure Controls.

6.2 ENVIRONMENTAL PRECAUTIONS:

None known.

6.3 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 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 |
|--|------------|------------|------------|
| Hexamethylene diisocyanate oligomers, Isocyanurate | 28182-81-2 | Not Listed | Not Listed |
| Hexamethylene-1,6-diisocyanate | 822-06-0 | 0.005 ppm | Not Listed |



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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 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

9.1 INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES:

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

ODOR: None

ODOR THRESHOLD: Not Available

pH: Not Applicable

MELTING/FREEZING POINT: Not Available

BOILING POINT: >302°F (150°C)

FLASH POINT: >320°F (160°C)

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: Heavier than air

RELATIVE DENSITY: Not Available

DENSITY: 1.13 lbs/gal

SOLUBILITY IN WATER: Not Soluble

WEIGHT PER GALLON: Not Available

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

AUTO-IGNITION TEMPERATURE: Not Available

DECOMPOSITION TEMPERATURE: Not Available

VISCOSITY: 600 mPas

VOC g/l / Lb/gal: Not Available

9.2 OTHER INFORMATION:

SPECIFIC GRAVITY: Not available.

10. STABILITY and REACTIVITY

10.1 REACTIVITY:

This product reacts with water and aqueous solutions, alcohols, amines, bases, protic solvents.

10.2 STABILITY:

Stable under conditions of normal storage and use.



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10.3 POSSIBILITY OF HAZARDOUS REACTIONS:

This product reacts with water and aqueous solutions, alcohols, amines, bases, protic solvents with a great release of CO₂, and hence a risk of a pressure build-up in confined areas and forms an insoluble solid precipitate.

10.4 CONDITIONS TO AVOID:

Incompatible materials, excessive heat.

10.5 MATERIALS WITH WHICH SUBSTANCE IS INCOMPATIBLE:

Reactive materials listed above.

10.6 HAZARDOUS DECOMPOSITION PRODUCTS:

On thermal decomposition (pyrolysis) releases: Toxic gases, Carbon dioxide, Nitrogen oxides, Oxides of carbon.

11. TOXICOLOGICAL INFORMATION

11.1 INFORMATION ON TOXICOLOGICAL EFFECTS:

TOXICITY DATA:

| Chemical Name | Oral LD50 | Dermal LD50 | Inhalation LC50 |
|--|---------------------|------------------------|---------------------------------------|
| Polymeric Isocyanate 28182-81-2 | - | - | = 18500 mg/m ³ (Rat) 1 h |
| Hexamethylene-1,6- diisocyanate 822-06-0 | = 710 µL/kg (Rat) | = 593 mg/kg (Rabbit) | = 0.06 mg/L (Rat) 4 h |

SUSPECTED CANCER AGENT: None of 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 eyes.

SENSITIZATION TO THE PRODUCT: This product is considered be a skin and respiratory system sensitizer

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

MUTAGENICITY INFORMATION: This product does not contain a component that is suspected to be a mutagenicity hazard.

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

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

12. ECOLOGICAL INFORMATION

12.1 TOXICITY:

| Chemical Name | Algae/aquatic plants | Fish | Crustacea |
|--|----------------------|--|-----------|
| Hexamethylene-1,6- diisocyanate 822-06-0 | - | 26.1: 96 h Brachydanio rerio mg/L LC50 static | - |

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 ANDvPvB 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.



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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: N/A

14.3 UN IDENTIFICATION NUMBER: N/A

14.4 PACKING GROUP: N/A

14.5 DOT LABEL(S) REQUIRED: N/A

14.6 NORTH AMERICAN EMERGENCY RESPONSE GUIDEBOOK NUMBER: N/A

RQ QUANTITY: NA

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 TRANSPORTION:

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

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 as follows: 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): Ingredients within this product are not on the Proposition 65 Lists.

15.2 CANADIAN REGULATIONS:

CANADIAN DSL/NDSL 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: Classified per WHMIS 2015.



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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 MEXICO REGULATIONS:

HARMONIZED SYSTEM FOR THE IDENTIFICATION AND COMMUNICATION OF HAZARD AND RISKS FROM HAZARDOUS CHEMICALS IN THE WORKPLACE: This product has been classified per NOM-018-STPS-2015.

15.7 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: Chris Eigbrett – (MSDS to GHS Compliance)

DATE OF PRINTING: March 11, 2019

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