



# Safety Data Sheet

Issue Date 28-Aug-2018

Revision Date 26-Jan-2018

Revision Number 12

## 1. IDENTIFICATION

### Product identifier

**Product Code** S297-00WHA  
**Product Name** ENVIRO-GLAZE TNEMEC WHITE

### Other means of identification

**Common Name** SERIES 297, PART A  
**Synonyms** None

### Recommended use of the chemical and restrictions on use

**Recommended Use** industrial paint.  
**Uses advised against** Consumer use, For professional use only. Not for residential use.

### Details of the supplier of the safety data sheet

**Manufacturer Address** Tnemec Company, Inc. 6800 Corporate Drive, Kansas City, MO 64120-1372 816-474-3400  
**Distributor** Tnemec Company, Inc. 86 Boul, des Entreprises, Ste. 203, Boisbriand, Quebec Canada J7G 2T3

### Emergency telephone number

**Company Phone Number** Tnemec Regulatory Dept: 816-474-3400  
**24 Hour Emergency Phone Number** 800-535-5053 (Infotrac)

## 2. HAZARDS IDENTIFICATION

### Classification

#### **OSHA Regulatory Status**

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Serious eye damage/eye irritation	Category 2
Germ cell mutagenicity	Category 1B
Carcinogenicity	Category 1A
Reproductive Toxicity	Category 2
Specific target organ toxicity (single exposure)	Category 3
Specific target organ toxicity (repeated exposure)	Category 1

### Label elements

#### EMERGENCY OVERVIEW

#### **Danger**

#### **Hazard statements**

Causes serious eye irritation  
May cause genetic defects  
May cause cancer  
Suspected of damaging fertility or the unborn child  
May cause respiratory irritation. May cause drowsiness or dizziness  
Causes damage to organs through prolonged or repeated exposure

**Appearance** opaque**Physical state** liquid**Odor** Slight aromatic**Precautionary Statements****Prevention**

Obtain special instructions before use  
 Do not handle until all safety precautions have been read and understood  
 Use personal protective equipment as required  
 Wash face, hands and any exposed skin thoroughly after handling  
 Use only outdoors or in a well-ventilated area  
 Do not breathe dust/fume/gas/mist/vapors/spray  
 Do not eat, drink or smoke when using this product

**Response**

IF exposed or concerned: Get medical advice/attention  
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
 If eye irritation persists: Get medical advice/attention  
 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

**Storage**

Store locked up  
 Store in a well-ventilated place. Keep container tightly closed

**Disposal**

Dispose of contents/container to an approved waste disposal plant

**Hazards not otherwise classified (HNOC)****Other information**

Causes mild skin irritation  
 Harmful to aquatic life with long lasting effects  
 Acute Toxicity 21.75647 % of the mixture consists of ingredient(s) of unknown toxicity.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	CAS No	Weight-%
TITANIUM DIOXIDE (TOTAL DUST)	13463-67-7	10 - <30%
Trade secret	-	1 - <10%
AMORPHOUS SILICA	7631-86-9	1 - <10%
AROMATIC PETROLEUM DISTILLATE	64742-95-6	1 - <10%

\*The exact percentage (concentration) of composition has been withheld as a trade secret.

### 4. FIRST AID MEASURES

**Description of first aid measures**

**General advice** If symptoms persist, call a physician.

**Eye contact** Rinse thoroughly with plenty of water for at least 15 minutes.

**Skin contact** Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If skin irritation persists, call a physician.

<b>Inhalation</b>	Remove to fresh air. Oxygen or artificial respiration if needed.
<b>Ingestion</b>	If swallowed, do not induce vomiting. Get medical attention immediately.
<b>Self-protection of the first aider</b>	Use personal protective equipment. Avoid contact with eyes, skin and clothing.

**Most important symptoms and effects, both acute and delayed**

**Most important symptoms and effects** Itching. Burning.

**Notes to physician** Treat symptomatically.

## 5. FIRE-FIGHTING MEASURES

**Suitable extinguishing media**

Carbon dioxide. Dry chemical. Foam.

**Unsuitable extinguishing media** Do not use a solid water stream as it may scatter and spread fire.

**Specific hazards arising from the chemical**

In the event of fire and/or explosion do not breathe fumes Hazardous combustion products may include: A complex mixture of airborne solid and liquid particulates and gases (smoke). Carbon monoxide. Unidentified organic and inorganic compounds.

**Hazardous combustion products** Hazardous combustion products may include: A complex mixture of airborne solid and liquid particulates and gases (smoke). Carbon monoxide. Unidentified organic and inorganic compounds. Carbon dioxide. Hydrocarbons.

**Protective equipment and precautions for firefighters**

Use water spray to cool unopened containers. In the event of fire, wear self-contained breathing apparatus. Keep away from heat/sparks/open flames/hot surfaces. MAY CAUSE HEAT AND PRESSURE BUILD-UP IN CLOSED CONTAINERS.

## 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures**

**Personal precautions** Avoid contact with eyes, skin and clothing. Use personal protective equipment. Remove all sources of ignition. Ensure adequate ventilation.

**Environmental Precautions**

**Environmental precautions** Prevent further leakage or spillage if safe to do so. Do not flush into surface water or sanitary sewer system.

**Methods and material for containment and cleaning up**

**Methods for containment** Remove all sources of ignition. Spills may be collected with inert, absorbent material for proper disposal. Use non-sparking tools, protective gloves, goggles and clothing, adequate ventilation, avoid the breathing of vapors and use respiratory protective devices. Transfer absorbent material to suitable containers for proper disposal.

**Methods for cleaning up** If spilled, contain spilled material and remove with inert absorbent. Dispose of contaminated absorbent, container and unused contents in accordance with local, state and federal regulations.

## 7. HANDLING AND STORAGE

**Precautions for safe handling**

**Handling** Handle in accordance with good industrial hygiene and safety practice. Wear personal

protective equipment. Avoid contact with eyes, skin and clothing. Remove and wash contaminated clothing before re-use. Keep away from open flames, hot surfaces and sources of ignition. Do not breathe vapours or spray mist. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Do not eat, drink or smoke when using this product. Wash thoroughly after handling.

**Conditions for safe storage, including any incompatibilities**

**Storage** Keep tightly closed in a dry and cool place. Keep away from heat, sparks and flame.

**Incompatible products** Incompatible with oxidizing agents. Acids. Bases.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

Control parameters

**Exposure guidelines**

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
TITANIUM DIOXIDE (TOTAL DUST) 13463-67-7	TWA: 10 mg/m <sup>3</sup>	TWA: 10 mg/m <sup>3</sup> TWA: 15 mg/m <sup>3</sup>	5000 mg/m <sup>3</sup>
Trade secret	TWA: 20 ppm	TWA: 25 ppm TWA: 120 mg/m <sup>3</sup> Skin TWA: 50 ppm TWA: 240 mg/m <sup>3</sup>	700 ppm
AMORPHOUS SILICA 7631-86-9	-	TWA: 6 mg/m <sup>3</sup>	3000 mg/m <sup>3</sup>

**Appropriate engineering controls**

**Engineering measures** Sufficient ventilation, in volume and pattern, should be provided through both local and general exhaust to keep the air contaminant concentration below current applicable OSHA Permissible Exposure Limits (PEL) and ACGIH's Threshold Limit Values (TLV). Appropriate ventilation should be employed to remove hazardous decomposition products formed during welding or flame cutting operations of surfaces coated with this product.

**Individual protection measures, such as personal protective equipment**

- Eye/face protection** Use chemical resistant splash type goggles. If splashes are likely to occur, wear face-shield.
- Skin and body protection** Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.
- Respiratory protection** Use only with adequate ventilation. Do not breathe vapors, spray mist, or dust. Ensure fresh air entry during application and drying. If you experience eye watering, headache or dizziness or if air monitoring demonstrates vapor/mist or dust levels are above applicable limits, wear an appropriate, properly fitted respirator (NIOSH/MSHA approved) during and after application. Follow respirator manufacturer's directions for respirator use.

**General hygiene considerations** Handle in accordance with good industrial hygiene and safety practice. Avoid breathing dust created by cutting, sanding, or grinding.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

**Information on basic physical and chemical properties**

<b>Physical state</b>	liquid	<b>Odor</b>	Slight aromatic
<b>Appearance</b>	opaque	<b>Odor threshold</b>	No information available
<b>Color</b>	No information available		

<b>Property</b>	<b>Values</b>	<b>Remarks</b>
pH		No data available

<b>Melting point / freezing point</b>	No data available	No data available
<b>Boiling point / boiling range</b>	100 °C / 212.0 °F	
<b>Flash point</b>	110 °C / 230.0 °F	
<b>Evaporation rate</b>		Pensky Martens - Closed Cup
<b>Flammability (solid, gas)</b>	No data available	No data available
<b>Flammability Limit in Air</b>		No information available
<b>Upper flammability limit</b>	N/A	No data available
<b>Lower flammability limit</b>	1.1	
<b>Vapor pressure</b>		No data available
<b>Vapor density</b>		No data available
<b>Specific gravity</b>	1.35456	g/cm3
<b>Water solubility</b>	Insoluble in cold water	
<b>Solubility in other solvents</b>		No data available
<b>Partition coefficient: n-octanol/water</b>		No data available
<b>Autoignition temperature</b>	No data available	No data available
<b>Decomposition temperature</b>		No data available
<b>Kinematic viscosity</b>		No data available
<b>Dynamic viscosity</b>	600 centipoises	approx

**Other Information**

<b>Density</b>	11.29705 lbs/gal
<b>Volatile organic compounds (VOC) content</b>	1.17397 lbs/gal
<b>Total volatiles weight percent</b>	39.78 %
<b>Total volatiles volume percent</b>	54.9 %
<b>Bulk density</b>	No information available

## 10. STABILITY AND REACTIVITY

**Reactivity**

No data available

**Chemical stability**

Stable under recommended storage conditions.

**Possibility of hazardous reactions**

None under normal processing.

**Conditions to avoid**

Heat, flames and sparks.

**Incompatible materials**

Incompatible with oxidizing agents, Acids, Bases

**Hazardous decomposition products**

Hazardous combustion products may include: A complex mixture of airborne solid and liquid particulates and gases (smoke). Carbon monoxide. Unidentified organic and inorganic compounds. Carbon dioxide. Hydrocarbons.

## 11. TOXICOLOGICAL INFORMATION

**Information on Likely Routes of Exposure**

<b>Inhalation</b>	May cause central nervous system depression with nausea, headache, dizziness, vomiting, and incoordination.
<b>Eye contact</b>	Irritating to eyes.
<b>Skin contact</b>	Irritating to skin. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons.

**Ingestion** Harmful if swallowed.

Chemical name	LD50 Oral	LD50 Dermal	LC50 Inhalation
TITANIUM DIOXIDE (TOTAL DUST) 13463-67-7	> 10000 mg/kg ( Rat )	-	-
Trade secret	= 470 mg/kg ( Rat )	= 99 mg/kg ( Rabbit )	= 450 ppm ( Rat ) 4 h = 486 ppm ( Rat ) 4 h
AMORPHOUS SILICA 7631-86-9	= 7900 mg/kg ( Rat )	> 2000 mg/kg ( Rabbit )	> 2.2 mg/L ( Rat ) 1 h
AROMATIC PETROLEUM DISTILLATE 64742-95-6	= 8400 mg/kg ( Rat )	> 2000 mg/kg ( Rabbit )	= 3400 ppm ( Rat ) 4 h

**Information on toxicological effects**

**Symptoms** Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Skin disorders.

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Chronic Toxicity** NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. Contains ethylene glycol monobutyl ether which may cause blood damage based on animal data. May cause cancer. Substances known to impair fertility. Substances known to be mutagenic to man.

**Sensitization** No information available.

**Mutagenicity** Substances which should be regarded as being mutagenic to man.

**Carcinogenicity** The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	ACGIH	IARC	NTP	OSHA
TITANIUM DIOXIDE (TOTAL DUST) 13463-67-7		Group 2B	-	X
Trade secret	A3	Group 3	-	
AMORPHOUS SILICA 7631-86-9		Group 1 Group 3	Known	
AROMATIC PETROLEUM DISTILLATE 64742-95-6	*	-	-	

**Reproductive effects** Suspected of damaging fertility or the unborn child.

**STOT - single exposure** Skin, blood

**STOT - repeated exposure** Causes damage to organs through prolonged or repeated exposure  
**Target organ effects** blood, Central nervous system, Eyes, hematopoietic system, kidney, liver, Lungs, respiratory system, Skin.

**Aspiration hazard** No information available.

**Acute Toxicity** 21.75647 % of the mixture consists of ingredient(s) of unknown toxicity.

The following values are calculated based on chapter 3.1 of the GHS document .

**12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

Harmful to aquatic life with long lasting effects

29.89400099 % of the mixture consists of components(s) of unknown hazards to the aquatic environment

Chemical name	Toxicity to algae	Toxicity to fish	Toxicity to daphnia
Trade secret		2950: 96 h Lepomis macrochirus mg/L LC50 1490: 96 h Lepomis macrochirus mg/L LC50 static	1698 - 1940: 24 h Daphnia magna mg/L EC50 1000: 48 h Daphnia magna mg/L EC50
AMORPHOUS SILICA 7631-86-9	440: 72 h Pseudokirchneriella subcapitata mg/L EC50	5000: 96 h Brachydanio rerio mg/L LC50 static	7600: 48 h Ceriodaphnia dubia mg/L EC50

AROMATIC PETROLEUM DISTILLATE 64742-95-6		9.22: 96 h Oncorhynchus mykiss mg/L LC50	6.14: 48 h Daphnia magna mg/L EC50
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**Persistence and degradability**

No information available.

**Bioaccumulation**

No information available.

**Mobility in Environmental Media**

Chemical name	log Pow
Trade secret	0.81

**Other Adverse Effects**

No information available

**13. DISPOSAL CONSIDERATIONS**

**Waste treatment methods**

**Disposal Methods**

Keep container tightly closed. If spilled, contain spilled material and remove with inert absorbent. Dispose of contaminated absorbent, container and unused contents in accordance with local, state and federal regulations.

**Contaminated packaging**

Empty containers should be taken to an approved waste handling site for recycling or disposal.

**US EPA Waste Number**

Chemical name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
XYLENE 1330-20-7		Included in waste stream: F039		U239
1,4 DIOXANE 123-91-1	U108	Included in waste stream: F039		U108

**14. TRANSPORT INFORMATION**

**DOT**

**Proper Shipping Name**

paint,water base freezable NOT REGULATED

**Additional information**

Call TNEMEC Traffic Department - 816-474-3400 for additional information or other modes of Transportation.

**15. REGULATORY INFORMATION**

**International Inventories**

TSCA	Complies
DSL/NDSL	Does Not Comply
EINECS/ELINCS	Does Not Comply
ENCS	Does Not Comply
IECSC	Does Not Comply
KECL	Does Not Comply
PICCS	Does Not Comply
AICS	Does Not Comply

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List  
 EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances  
 ENCS - Japan Existing and New Chemical Substances  
 IECS - China Inventory of Existing Chemical Substances  
 KECL - Korean Existing and Evaluated Chemical Substances  
 PICCS - Philippines Inventory of Chemicals and Chemical Substances  
 AICS - Australian Inventory of Chemical Substances

**The following chemical(s) are listed as HAP under the U.S. Clean Air Act, Section 12 (40 CFR 61):**

Chemical name	HAPS Data
Trade secret	

**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40n of the Code of Federal Regulations, Part 372:

Chemical name	SARA 313 - Threshold Values
Trade secret -	1.0

**SARA 311/312 Hazardous**

**Categorization**

Acute Health Hazard	Yes
Chronic Health Hazard	Yes
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

**California Prop. 65**

**WARNING:** This product can expose you to the following chemicals which are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

Chemical name	California Prop. 65
TITANIUM DIOXIDE (TOTAL DUST) - 13463-67-7	Carcinogen
Trade secret -	Developmental
AMORPHOUS SILICA - 7631-86-9	Carcinogen
BUTYL CARBITOL -	*
CARBON BLACK DUST & FUME - 1333-86-4	Carcinogen
1,4 DIOXANE - 123-91-1	Carcinogen
ETHANOL - 64-17-5	Carcinogen Developmental

**California SCAQMD Rule 443**

Contains Photochemically Reactive Solvent

**State Right-to-Know**

Chemical name	New Jersey	Massachusetts	Pennsylvania
TITANIUM DIOXIDE (TOTAL DUST) 13463-67-7	X	X	X
Trade secret	X	X	X
AMORPHOUS SILICA 7631-86-9		X	X

**16. OTHER INFORMATION**

<b>NFPA</b>	Health 2	Flammability 1	Instability 1	Physical hazard *
<b>HMIS (Hazardous Material Information System)</b>	Health 2*	Flammability 1	Reactivity 1	



Prepared By

Tnemec Regulatory Dept: 816-474-3400

Revision Date

26-Jan-2018

Revision Summary

9 4 5 8 11 14 1 6 7 10 13

**Disclaimer**

For specific information regarding occupational safety and health standards, please refer to the Code of Federal Regulations, Title 29, Part 1910.

To the best of our knowledge, the information contained herein is accurate. However, neither the Tnemec Company or any of its subsidiaries assume any liability whatsoever for the accuracy of completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown health hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards which exist.

**End of SDS**



# Safety Data Sheet

Issue Date 11-Jul-2016

Revision Date 11-Jul-2016

Revision Number 14

## 1. IDENTIFICATION

### Product identifier

**Product Code** S297-0297B  
**Product Name** ENVIRO-GLAZE CONVERTER

### Other means of identification

**Common Name** SERIES 297 PART B

### Recommended use of the chemical and restrictions on use

**Recommended Use** industrial paint.  
**Uses advised against** Consumer use, For professional use only. Not for residential use.

### Details of the supplier of the safety data sheet

#### **Manufacturer Address**

Tnemec Company, Inc. 6800 Corporate Drive, Kansas City, MO  
64120-1372 816-474-3400

#### **Distributor**

Tnemec Company, Inc. 86 Boul, des Entreprises, Ste. 203,  
Boisbriand, Quebec Canada J7G 2T3

### Emergency telephone number

**Company Phone Number** Tnemec Regulatory Dept: 816-474-3400  
**24 Hour Emergency Phone Number** 800-535-5053 (Infotrac)

## 2. HAZARDS IDENTIFICATION

### Classification

#### **OSHA Regulatory Status**

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity - Inhalation (Vapors)	Category 4
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A
Respiratory sensitization	Category 1
Skin sensitization	Category 1


### Label elements

## EMERGENCY OVERVIEW

### **Danger**

#### **Hazard statements**

Harmful if inhaled  
Causes skin irritation  
Causes serious eye irritation  
May cause allergy or asthma symptoms or breathing difficulties if inhaled  
May cause an allergic skin reaction



**Appearance** Colorless
**Physical state** liquid
**Odor** Slight Organic

**Precautionary Statements**

**Prevention**

Avoid breathing dust/fume/gas/mist/vapors/spray  
 Use only outdoors or in a well-ventilated area  
 Wash face, hands and any exposed skin thoroughly after handling  
 Wear protective gloves/protective clothing/eye protection/face protection  
 In case of inadequate ventilation wear respiratory protection  
 Contaminated work clothing should not be allowed out of the workplace

**Response**

Get medical advice/attention if you feel unwell  
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
 If eye irritation persists: Get medical advice/attention  
 IF ON SKIN: Wash with plenty of soap and water  
 Take off contaminated clothing and wash before reuse  
 If skin irritation or rash occurs: Get medical advice/attention  
 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing  
 If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician

**Storage**

Store locked up  
 Keep away from children

**Disposal**

Dispose of contents/container to an approved waste disposal plant

**Hazards not otherwise classified (HNOC)**

**Other information**

Acute Toxicity 35.8 % of the mixture consists of ingredient(s) of unknown toxicity.

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Component	CAS-No	Weight-%
HEXAMETHYLENE DIISOCYANATE (HDI) POLYMER	28182-81-2	60 - 100%
POLYISOCYANATE PREPOLYMER	-	30 - 60%
HEXAMETHYLENE DIISOCYANATE (HDI) MONOMER	822-06-0	0.1 - 1%

\*The exact percentage (concentration) of composition has been withheld as a trade secret.

**4. FIRST AID MEASURES**

**Description of first aid measures**

**General advice** If symptoms persist, call a physician.  
**Eye contact** Rinse thoroughly with plenty of water for at least 15 minutes.

<b>Skin contact</b>	Wash affected area with soap and water. Remove contaminated clothing. Dispose of or launder accordingly. Consult a physician if skin irritation persists.
<b>Inhalation</b>	Remove to fresh air. Oxygen or artificial respiration if needed.
<b>Ingestion</b>	If swallowed, do not induce vomiting. Get medical attention immediately.
<b>Self-protection of the first aider</b>	Use personal protective equipment. Avoid contact with eyes, skin and clothing.
<b><u>Most important symptoms and effects, both acute and delayed</u></b>	
<b>Most important symptoms and effects</b>	Asthma-like and/ or skin allergy-like symptoms.
<b>Notes to physician</b>	Treat symptomatically.

## 5. FIRE-FIGHTING MEASURES

### **Suitable extinguishing media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable extinguishing media** Water.

### **Specific hazards arising from the chemical**

Hazardous combustion products may include: A complex mixture of airborne solid and liquid particulates and gases (smoke). Carbon monoxide. Unidentified organic and inorganic compounds. In the event of fire and/or explosion do not breathe fumes

### **Protective equipment and precautions for firefighters**

Use water spray to cool unopened containers. In the event of fire, wear self-contained breathing apparatus. Keep away from heat/sparks/open flames/hot surfaces. MAY CAUSE HEAT AND PRESSURE BUILD-UP IN CLOSED CONTAINERS.

## 6. ACCIDENTAL RELEASE MEASURES

### **Personal precautions, protective equipment and emergency procedures**

**Personal precautions** Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Avoid contact with eyes, skin and clothing. Use personal protective equipment.

### **Environmental Precautions**

**Environmental precautions** Prevent further leakage or spillage if safe to do so. Do not flush into surface water or sanitary sewer system.

### **Methods and material for containment and cleaning up**

**Methods for containment** Spills may be collected with inert, absorbent material for proper disposal. Use protective gloves, goggles and clothing, adequate ventilation, avoid the breathing of vapors and use respiratory protective devices. Transfer absorbent material to suitable container for disposal.

**Methods for cleaning up** If spilled, contain spilled material and remove with inert absorbent. Dispose of contaminated absorbent, container and unused contents in accordance with local, state and federal regulations. Use personal protective equipment.

## 7. HANDLING AND STORAGE

### **Precautions for safe handling**

**Handling** Use only with adequate ventilation. Avoid contact with eyes, skin and clothing. Handle in accordance with good industrial hygiene and safety practice. Remove and wash contaminated clothing before re-use. Do not eat, drink or smoke when using this product. When used in a mixture, read the labels and safety data sheets of all components. Wash thoroughly after handling.

**Conditions for safe storage, including any incompatibilities**

**Storage** Close container after each use. Prevent build-up of vapors by opening all windows and doors to achieve cross ventilation.

**Incompatible products** Water. Amines. Strong bases. copper. Alcohols.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

Control parameters

**Exposure guidelines**

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH
HEXAMETHYLENE DIISOCYANATE (HDI) MONOMER 822-06-0	TWA: 0.005 ppm	-	

Appropriate engineering controls

**Engineering measures** Sufficient ventilation, in volume and pattern, should be provided through both local and general exhaust to keep the air contaminant concentration below current applicable OSHA Permissible Exposure Limits (PEL) and ACGIH's Threshold Limit Values (TLV). Appropriate ventilation should be employed to remove hazardous decomposition products formed during welding or flame cutting operations of surfaces coated with this product.

Individual protection measures, such as personal protective equipment

- Eye/face protection** Safety glasses with side-shields If splashes are likely to occur, wear face-shield.
- Skin and body protection** Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.
- Respiratory protection** INDIVIDUALS WITH LUNG OR BREATHING PROBLEMS OR PRIOR REACTION TO ISOCYANATES MUST NOT BE EXPOSED TO VAPOR OR SPRAY MIST. Do not breathe vapor or spray mist. Wear an appropriate, properly fitted respirator (NIOSH/MSHA approved) during and after application unless air monitoring demonstrates vapor/mist levels are below applicable limits. An airline respirator (TC 19C NIOSH/MSHA) is recommended. A vapor-particulate respirator (TC 23C NIOSH/MSHA) may be appropriate where air monitoring demonstrates vapors are less than ten times the applicable exposure limits and the isocyanate concentration is less than its applicable exposure limit. The use of an air-supplied respirator is mandatory whenever the airborne concentration of isocyanate monomer is unknown.

**General hygiene considerations** Handle in accordance with good industrial hygiene and safety practice. Avoid breathing dust created by cutting, sanding, or grinding.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

Information on basic physical and chemical properties

<b>Physical state</b>	liquid	<b>Odor</b>	Slight Organic
<b>Appearance</b>	Colorless	<b>Odor threshold</b>	No information available
<b>Color</b>	clear		
<b>Property</b>	<u>Values</u>	<u>Remarks</u>	
<b>pH</b>		No data available	
<b>Melting point / freezing point</b>		No data available	

Boiling point / boiling range	72 °C / 162 °F	
Flash point	No information available	
Evaporation rate		No data available
Flammability (solid, gas)		No information available
Flammability Limit in Air		No data available
Upper flammability limit	N/A	
Lower flammability limit	N/A	
Vapor pressure		No data available
Vapor density		No data available
Specific gravity	1.16562	g/cm3
Water solubility	Insoluble in cold water	
Solubility in other solvents		No data available
Partition coefficient: n-octanol/water		No data available
Autoignition temperature		No data available
Decomposition temperature		No data available
Kinematic viscosity		No data available
Dynamic viscosity	1000 mPa s	

**Other Information**

Density	9.69970 lbs/gal
Volatile organic compounds (VOC) content	.000 lbs/gal
Total volatiles weight percent	.0000 %
Total volatiles volume percent	.0000 %

## 10. STABILITY AND REACTIVITY

**Reactivity**

Water reactive, Amines, Alcohols

**Chemical stability**

Stable under recommended storage conditions.

**Possibility of hazardous reactions**

None under normal processing.

**Conditions to avoid**

Heat, flames and sparks.

**Incompatible materials**

Water, Amines, Strong bases, copper, Alcohols

**Hazardous decomposition products**

Hazardous combustion products may include: A complex mixture of airborne solid and liquid particulates and gases (smoke). Carbon monoxide. Unidentified organic and inorganic compounds. Oxides of nitrogen. Carbon dioxide. Hydrogen cyanide. Isocyanates.

## 11. TOXICOLOGICAL INFORMATION

**Information on Likely Routes of Exposure**

<b>Inhalation</b>	Contains isocyanate monomer. If subject to spray application, engineering and administrative controls must be instituted to maintain an exposure level below .005ppm. If these controls are not adequate, the use of an air-supplied respirator is mandatory. May cause sensitization of susceptible persons.
<b>Eye contact</b>	Irritating to eyes.
<b>Skin contact</b>	Irritating to skin. May cause sensitization of susceptible persons.
<b>Ingestion</b>	Harmful if swallowed.

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
HEXAMETHYLENE DIISOCYANATE (HDI) POLYMER 28182-81-2			= 18500 mg/m <sup>3</sup> ( Rat ) 1 h
HEXAMETHYLENE DIISOCYANATE (HDI) MONOMER 822-06-0	= 710 µL/kg ( Rat )	= 593 mg/kg ( Rabbit )	= 0.06 mg/L ( Rat ) 4 h

**Information on toxicological effects**

**Symptoms** Respiratory disorders. Skin disorders.

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Skin corrosion/irritation** May cause irritation.  
**Eye damage/irritation** Irritating to eyes.  
**Chronic Toxicity** Avoid repeated exposure. Contains isocyanates. May produce an allergic reaction.  
**Sensitization** May cause sensitization of susceptible persons.  
**Mutagenicity** No information available.  
**Carcinogenicity** There are no known carcinogenic chemicals in this product.  
**Reproductive effects** No information available.  
**STOT - single exposure** No information available  
**STOT - repeated exposure** No information available  
**Target organ effects** respiratory system, Skin.  
**Aspiration hazard** Based on product level data, this product does not meet the requirement to be classified as an aspiration hazard. However, this product contains an ingredient that may cause aspiration if swallowed.

**Acute Toxicity** 35.8 % of the mixture consists of ingredient(s) of unknown toxicity.

## 12. ECOLOGICAL INFORMATION

**Ecotoxicity**

99.8 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

Component	Toxicity to algae	Toxicity to fish	Toxicity to daphnia
HEXAMETHYLENE DIISOCYANATE (HDI) MONOMER 822-06-0		26.1: 96 h Brachydanio rerio mg/L LC50 static	

**Persistence and degradability**

No information available.

**Bioaccumulation**

No information available.

**Mobility in Environmental Media****Other Adverse Effects**

No information available

## 13. DISPOSAL CONSIDERATIONS

**Waste treatment methods****Disposal Methods**

Keep container tightly closed. If spilled, contain spilled material and remove with inert absorbent. Dispose of contaminated absorbent, container and unused contents in accordance with local, state and federal regulations.

**Contaminated packaging**

Empty containers should be taken to an approved waste handling site for recycling or disposal.

**14. TRANSPORT INFORMATION**

DOT  
**Proper Shipping Name** PAINT & RELATED MATERIAL

IATA

Additional information Call TNE MEC Traffic Department - 816-474-3400 for additional information or other modes of Transportation.

**15. REGULATORY INFORMATION**

International Inventories

TSCA Complies  
 DSL/NDSL Complies  
 EINECS/ELINCS Complies  
 ENCS Does not comply  
 IECSC Complies  
 KECL Complies  
 PICCS Complies  
 AICS Complies

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory  
 DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List  
 EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances  
 ENCS - Japan Existing and New Chemical Substances  
 IECSC - China Inventory of Existing Chemical Substances  
 KECL - Korean Existing and Evaluated Chemical Substances  
 PICCS - Philippines Inventory of Chemicals and Chemical Substances  
 AICS - Australian Inventory of Chemical Substances

The following chemical(s) are listed as HAP under the U.S. Clean Air Act, Section 12 (40 CFR 61):

**Component** HAPS Data  
 HEXAMETHYLENE DIISOCYANATE (HDI) MONOMER

United States of America

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and and Title 40n of the Code of Federal Regulations, Part 372:

Component	SARA 313 - Threshold Values
HEXAMETHYLENE DIISOCYANATE (HDI) MONOMER - 822-06-0	1.0

SARA 311/312 Hazardous

Categorization

Acute Health Hazard Yes  
 Chronic Health Hazard Yes  
 Fire Hazard No  
 Sudden Release of Pressure Hazard No  
 Reactive Hazard No

CERCLA

Component	Hazardous Substances RQs	CERCLA EHS RQs	RQ
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HEXAMETHYLENE DIISOCYANATE (HDI) MONOMER 822-06-0	100 lb		RQ 100 lb final RQ RQ 45.4 kg final RQ
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**United States of America****California Prop. 65**

None of the ingredients are listed with California Proposition 65.

**California SCAQMD Rule 443**

Does Not Contain Photochemically Reactive Solvent

**State Right-to-Know**

Component	New Jersey	Massachusetts	Pennsylvania
HEXAMETHYLENE DIISOCYANATE (HDI) MONOMER 822-06-0	X	X	

**16. OTHER INFORMATION**

**NFPA** Health 2 Flammability 1 Instability 1 Physical hazard \*  
**HMIS (Hazardous** Health 2\* Flammability 1 Reactivity 1  
**Material Information**  
**System)**

**Prepared By** Tnemec Regulatory Dept: 816-474-3400  
**Revision Date** 11-Jul-2016

**Revision Summary**  
 9 4 5 6 7 10 8 11 14 15

**Disclaimer**

For specific information regarding occupational safety and health standards, please refer to the Code of Federal Regulations, Title 29, Part 1910.

To the best of our knowledge, the information contained herein is accurate. However, neither the Tnemec Company or any of its subsidiaries assume any liability whatsoever for the accuracy of completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown health hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards which exist.

**End of SDS**