



# Safety Data Sheet

Issue Date 10-Jul-2015

Revision Date 10-Jul-2015

Revision Number 8

## 1. IDENTIFICATION

### Product identifier

**Product Code** S290-00WHA  
**Product Name** CRU TNEMEC WHITE

### Other means of identification

**Common Name** SERIES 290, PART A

### 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

#### **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 1
Skin sensitization	Category 1
Carcinogenicity	Category 1A
Specific target organ toxicity (single exposure)	Category 3
Specific target organ toxicity (repeated exposure)	Category 1
Flammable Liquids	Category 3


### Label elements

## EMERGENCY OVERVIEW

### **Danger**

#### **Hazard statements**

Causes serious eye damage  
May cause an allergic skin reaction  
May cause cancer  
May cause respiratory irritation. May cause drowsiness or dizziness  
Causes damage to organs through prolonged or repeated exposure  
Flammable liquid and vapor



**Appearance** opaque
**Physical state** liquid
**Odor** Slight

**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
- Contaminated work clothing should not be allowed out of the workplace
- Wear protective gloves
- Use only outdoors or in a well-ventilated area
- Do not breathe dust/fume/gas/mist/vapors/spray
- Wash face, hands and any exposed skin thoroughly after handling
- Do not eat, drink or smoke when using this product
- Keep away from heat/sparks/open flames/hot surfaces. — No smoking
- Keep container tightly closed
- Ground/bond container and receiving equipment
- Use explosion-proof electrical/ventilating/lighting/mixing/equipment
- Use only non-sparking tools
- Take precautionary measures against static discharge
- Keep cool

**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
- Immediately call a POISON CENTER or doctor/physician
- If skin irritation or rash occurs: Get medical advice/attention
- Wash contaminated clothing before reuse
- IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
- IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
- In case of fire: Use CO2, dry chemical, or foam for extinction

**Storage**

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

**Disposal**

- Dispose of contents/container to an approved waste disposal plant

**Hazards not otherwise classified (HNOC)**

**Other information**

Cancer hazard. Contains crystalline silica which can cause cancer. (Risk of cancer depends on duration and level of exposure). Respirable crystalline silica (quartz) can cause silicosis, a fibrosis (scarring) of the lungs

SEE SAFETY DATA SHEET

Acute Toxicity

27.14617789 % of the mixture consists of ingredient(s) of unknown toxicity.

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Component	CAS-No	Weight-%
TITANIUM DIOXIDE (TOTAL DUST)	13463-67-7	10 - 30%

METHYL N-AMYL KETONE	110-43-0	10 - 30%
PROPYLENE GLYCOL MONOMETHYL ETHER ACETATE	108-65-6	10 - 30%
CRYSTALLINE SILICA (QUARTZ)	14808-60-7	10 - 30%
REACTIVE DILUENT	145899-78-1	1 - 10%
HEXYL ACETATE	142-92-7	1 - 10%
POLYETHYLENE WAX-SYNTHETIC WAX	9002-88-4	1 - 10%
AMORPHOUS SILICA	7631-86-9	1 - 10%
AMORPHOUS SILICA	7631-86-9	1 - 10%
ALUMINUM HYDROXIDE	21645-51-2	0.1 - 1%
ZIRCONIUM OXIDE	1314-23-4	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

<b>General advice</b>	If symptoms persist, call a physician.
<b>Eye contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Call a physician immediately.
<b>Skin contact</b>	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Call a physician immediately.
<b>Inhalation</b>	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.
<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

**Notes to physician** Treat symptomatically.

#### 5. FIRE-FIGHTING MEASURES

##### Suitable extinguishing media

Carbon dioxide. Foam. Dry chemical.

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

##### Specific hazards arising from the chemical

Thermal decomposition can lead to release of irritating gases and vapours In the event of fire and/or explosion do not breathe fumes

**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 oxides. Hydrocarbons. Oxides of nitrogen.

##### 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. Solvent vapors are heavier than air and may spread along floors. Flash back possible over considerable distance.

#### 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.

**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** 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** Keep container tightly closed in a dry and well-ventilated place. Keep out of the reach of children.

**Incompatible products** Acids. Bases. Alkaline. Strong oxidizing agents. caustic.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Control parameters**

**Exposure guidelines**

Component	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>
METHYL N-AMYL KETONE 110-43-0	TWA: 50 ppm	TWA: 100 ppm TWA: 465 mg/m <sup>3</sup>	800 ppm
CRYSTALLINE SILICA (QUARTZ) 14808-60-7	TWA: 0.025 mg/m <sup>3</sup>	TWA: 0.1 mg/m <sup>3</sup>	50 mg/m <sup>3</sup>
AMORPHOUS SILICA 7631-86-9	-	TWA: 6 mg/m <sup>3</sup>	3000 mg/m <sup>3</sup>
AMORPHOUS SILICA 7631-86-9	-	TWA: 6 mg/m <sup>3</sup>	3000 mg/m <sup>3</sup>
ALUMINUM HYDROXIDE 21645-51-2	TWA: 1 mg/m <sup>3</sup>	-	
ZIRCONIUM OXIDE 1314-23-4	TWA: 5 mg/m <sup>3</sup>	-	25 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. Respirable crystalline silica (quartz) can cause silicosis, a fibrosis (scarring) of the lungs.

**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
<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>	
<b>pH</b>		No data available	
<b>Melting point / freezing point</b>		No data available	
<b>Boiling point / boiling range</b>	139 °C / 283.0 °F		
<b>Flash point</b>	52 °C / 125.0 °F	Pensky Martens - Closed Cup	
<b>Evaporation rate</b>		No data available	
<b>Flammability (solid, gas)</b>		No information available	
<b>Flammability Limit in Air</b>		No data available	
<b>Upper flammability limit</b>	N/A		
<b>Lower flammability limit</b>	1.0		
<b>Vapor pressure</b>		No data available	
<b>Vapor density</b>		No data available	
<b>Specific gravity</b>	1.40217	g/cm <sup>3</sup>	
<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	
<b>Decomposition temperature</b>		No data available	
<b>Kinematic viscosity</b>		No data available	
<b>Dynamic viscosity</b>	3100 centipoises	approx	
<b>Other Information</b>			
<b>Density</b>	11.69407 lbs/gal		
<b>Volatile organic compounds (VOC) content</b>	3.37023 lbs/gal		
<b>Total volatiles weight percent</b>	28.82 %		
<b>Total volatiles volume percent</b>	46.01 %		

## 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. Reacts with air to form peroxides.

**Incompatible materials**

Acids, Bases, Alkaline, Strong oxidizing agents, caustic

**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 oxides. Hydrocarbons. Oxides of nitrogen.

<b>11. TOXICOLOGICAL INFORMATION</b>
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**Information on Likely Routes of Exposure**

<b>Inhalation</b>	May cause central nervous system depression with nausea, headache, dizziness, vomiting, and incoordination. May cause irritation. Respirable crystalline silica (quartz) can cause silicosis, a fibrosis (scarring) of the lungs.
<b>Eye contact</b>	Causes serious eye damage.
<b>Skin contact</b>	Irritating to skin. May cause sensitization by skin contact.
<b>Ingestion</b>	Harmful if swallowed.

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
TITANIUM DIOXIDE (TOTAL DUST) 13463-67-7	> 10000 mg/kg ( Rat )		
METHYL N-AMYL KETONE 110-43-0	= 1600 mg/kg ( Rat ) = 1670 mg/kg ( Rat )	= 12.6 mL/kg ( Rabbit ) = 12600 µL/kg ( Rabbit )	> 2000 ppm ( Rat ) 4 h
PROPYLENE GLYCOL MONOMETHYL ETHER ACETATE 108-65-6	= 8532 mg/kg ( Rat )	> 5 g/kg ( Rabbit )	
CRYSTALLINE SILICA (QUARTZ) 14808-60-7	= 500 mg/kg ( Rat )		
HEXYL ACETATE 142-92-7	= 41500 µL/kg ( Rat )	> 5 g/kg ( Rabbit )	
POLYETHYLENE WAX-SYNTHETIC WAX 9002-88-4	= 8 g/kg ( Rat )		
AMORPHOUS SILICA 7631-86-9	> 5000 mg/kg ( Rat )	> 2000 mg/kg ( Rabbit )	> 2.2 mg/L ( Rat ) 1 h
AMORPHOUS SILICA 7631-86-9	> 5000 mg/kg ( Rat )	> 2000 mg/kg ( Rabbit )	> 2.2 mg/L ( Rat ) 1 h
ALUMINUM HYDROXIDE 21645-51-2	> 5000 mg/kg ( Rat )		

**Information on toxicological effects**

<b>Symptoms</b>	Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Skin disorders. Irritating to eyes and skin.
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**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Corrosivity** Corrosive to the eyes and may cause severe damage including blindness.  
**Chronic Toxicity** Cancer hazard. Contains crystalline silica which can cause cancer. (Risk of cancer depends on duration and level of exposure). Skin sensitizer.  
**Sensitization** May cause sensitization of susceptible persons.  
**Mutagenicity** No information available.  
**Carcinogenicity** The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	ACGIH	IARC	NTP	OSHA
TITANIUM DIOXIDE (TOTAL DUST) 13463-67-7		Group 2B		X
CRYSTALLINE SILICA (QUARTZ) 14808-60-7	A2	Group 1	Known	X
POLYETHYLENE WAX-SYNTHETIC WAX 9002-88-4		Group 3		
AMORPHOUS SILICA 7631-86-9		Group 3		
AMORPHOUS SILICA 7631-86-9		Group 3		

**Reproductive effects** No information available.  
**STOT - single exposure** Eyes, Skin, Central Nervous System (CNS)  
**STOT - repeated exposure** Causes damage to organs through prolonged or repeated exposure  
**Target organ effects** blood, Central nervous system, Gastrointestinal tract, Eyes, kidney, liver, Lungs, Peripheral Nervous System (PNS), respiratory system, Skin.  
**Aspiration hazard** No information available.

**Acute Toxicity** 27.14617789 % of the mixture consists of ingredient(s) of unknown toxicity.

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

38.96553 % of the mixture consists of components(s) of unknown hazards to the aquatic environment

Component	Toxicity to algae	Toxicity to fish	Toxicity to daphnia
METHYL N-AMYL KETONE 110-43-0		126 - 137: 96 h Pimephales promelas mg/L LC50 flow-through	
PROPYLENE GLYCOL MONOMETHYL ETHER ACETATE 108-65-6		161: 96 h Pimephales promelas mg/L LC50 static	500: 48 h Daphnia magna mg/L EC50
HEXYL ACETATE 142-92-7		3.7 - 4.4: 96 h Pimephales promelas mg/L LC50 flow-through	
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
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

### Persistence and degradability

No information available.

### Bioaccumulation

No information available.

### Mobility in Environmental Media

Component	log Pow
METHYL N-AMYL KETONE 110-43-0	1.98
PROPYLENE GLYCOL MONOMETHYL ETHER ACETATE 108-65-6	0.43

**Other Adverse Effects** No information available

## 13. DISPOSAL CONSIDERATIONS

**Waste treatment methods**

<b>Disposal Methods</b>	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.
<b>Contaminated packaging</b>	Empty containers should be taken to an approved waste handling site for recycling or disposal.

**14. TRANSPORT INFORMATION****DOT**

**Proper Shipping Name** paint in oil Not regulated

**IATA**

**UN/ID no.** 1263  
**Proper Shipping Name** paint  
**Hazard Class** 3  
**Packing Group** III  
**ERG Code** 366

**Additional information**

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

**15. REGULATORY INFORMATION****International Inventories**

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

**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):

**United States of America****SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and and Title 40n of the Code of Federal Regulations, Part 372.

**SARA 311/312 Hazardous Categorization**

**Acute Health Hazard** Yes



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

**CERCLA**

**United States of America**

**California Prop. 65**

WARNING! This product contains a chemical known in the State of California to cause cancer

Component	California Prop. 65
TITANIUM DIOXIDE (TOTAL DUST) - 13463-67-7	Carcinogen
CRYSTALLINE SILICA (QUARTZ) - 14808-60-7	Carcinogen

**California SCAQMD Rule 443**

Contains Photochemically Reactive Solvent

**State Right-to-Know**

Component	New Jersey	Massachusetts	Pennsylvania
TITANIUM DIOXIDE (TOTAL DUST) 13463-67-7	X	X	X
METHYL N-AMYL KETONE 110-43-0	X	X	X
CRYSTALLINE SILICA (QUARTZ) 14808-60-7	X	X	X
AMORPHOUS SILICA 7631-86-9	X	X	X
AMORPHOUS SILICA 7631-86-9	X	X	X
ZIRCONIUM OXIDE 1314-23-4		X	

**16. OTHER INFORMATION**

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

Prepared By Tnemec Regulatory Dept: 816-474-3400  
 Revision Date 10-Jul-2015

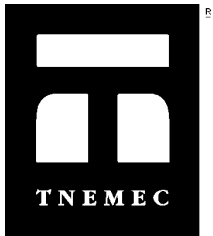
Revision Summary  
 9 1 4 5 7 10 8 11 14 15

**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 MSDS**



# Safety Data Sheet

Issue Date 22-Jun-2015

Revision Date 22-Jun-2015

Revision Number 5

## 1. IDENTIFICATION

### Product identifier

**Product Code** S291-0291B  
**Product Name** S291/S294/S295 CONVERTER

### Other means of identification

**Common Name** SERIES 290/291/294/295, 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

### 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
Respiratory sensitization	Category 1
Skin sensitization	Category 1

### Label elements

#### EMERGENCY OVERVIEW

#### **Danger**

#### **Hazard statements**

Harmful if inhaled  
May cause allergy or asthma symptoms or breathing difficulties if inhaled  
May cause an allergic skin reaction



**Appearance** clear

**Physical state** liquid

**Odor** odorless

**Precautionary Statements****Prevention**

Avoid breathing dust/fume/gas/mist/vapors/spray  
 Use only outdoors or in a well-ventilated area  
 In case of inadequate ventilation wear respiratory protection  
 Contaminated work clothing should not be allowed out of the workplace  
 Wear protective gloves

**Response**

Get medical advice/attention if you feel unwell  
 IF ON SKIN: Wash with plenty of soap and water  
 If skin irritation or rash occurs: Get medical advice/attention  
 Wash contaminated clothing before reuse  
 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**

Keep away from children

**Disposal**

Dispose of contents/container to an approved waste disposal plant

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

SEE SAFETY DATA SHEET

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

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS-No	Weight-%
HEXAMETHYLENE-1,6-DIISOCYANATE HOMOPOLYMER	28182-81-2	60 - 100%
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**

<b>General advice</b>	If symptoms persist, call a physician.
<b>Eye contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms persist, call a physician.
<b>Skin contact</b>	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If symptoms persist, call a physician.
<b>Inhalation</b>	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.
<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**

**Notes to physician** Treat symptomatically.

## 5. FIRE-FIGHTING MEASURES

### **Suitable extinguishing media**

Dry chemical. Carbon dioxide. Foam.

**Unsuitable extinguishing media** Water.

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

Thermal decomposition can lead to release of irritating gases and vapours In the event of fire and/or explosion do not breathe fumes

**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. Nitrogen oxides (NOx). Hydrogen cyanide. Isocyanates.

### **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**

**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**

Keep container tightly closed in a dry and well-ventilated place. Keep out of the reach of children.

#### **Incompatible products**

Amines. Water. Strong bases. Alcohols. copper.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parametersExposure 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

**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>	odorless
<b>Appearance</b>	clear	<b>Odor threshold</b>	No information available
<b>Color</b>	No information available		
<b>Property</b>	<b>Values</b>	<b>Remarks</b>	
<b>pH</b>		No data available	
<b>Melting point / freezing point</b>		No data available	
<b>Boiling point / boiling range</b>		No information available	
<b>Flash point</b>	149 °C / 300 °F	Pensky Martens - Closed Cup	
<b>Evaporation rate</b>		No data available	
<b>Flammability (solid, gas)</b>		No information available	
<b>Flammability Limit in Air</b>		No data available	
<b>Upper flammability limit</b>	N/A		
<b>Lower flammability limit</b>	N/A		
<b>Vapor pressure</b>		No data available	
<b>Vapor density</b>		No data available	
<b>Specific gravity</b>	1.11974	g/cm <sup>3</sup>	
<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	

Decomposition temperature	No data available
Kinematic viscosity	No data available
Dynamic viscosity	No data available

**Other Information**

Density	9.31793 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**

May occur if in contact with moisture, other materials which react with isocyanates, or temperatures above 400 F

**Chemical stability**

Stable under recommended storage conditions.

**Possibility of hazardous reactions**

None under normal processing.

**Conditions to avoid**

Heat, flames and sparks.

**Incompatible materials**

Amines, Water, Strong bases, Alcohols, copper

**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. Nitrogen oxides (NOx). Isocyanates. Hydrogen cyanide.

## 11. TOXICOLOGICAL INFORMATION

**Information on Likely Routes of Exposure**

<b>Inhalation</b>	May cause sensitization of susceptible persons. 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.
<b>Eye contact</b>	Severely irritating to eyes.
<b>Skin contact</b>	May cause sensitization of susceptible persons.
<b>Ingestion</b>	Harmful if swallowed.

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
HEXAMETHYLENE-1,6-DIISOCYANATE HOMOPOLYMER 28182-81-2			= 18500 mg/m <sup>3</sup> ( Rat ) 1 h
HEXAMETHYLENE DIISOCYANATE (HDI) MONOMER 822-06-0	= 738 mg/kg ( Rat )	= 593 mg/kg ( Rabbit )	= 0.06 mg/L ( Rat ) 4 h

**Information on toxicological effects**

**Symptoms** Skin disorders. Respiratory disorders.

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

<b>Chronic Toxicity</b>	Avoid repeated exposure. Contains isocyanates. May produce an allergic reaction.
<b>Sensitization</b>	May cause sensitization of susceptible persons.
<b>Mutagenicity</b>	No information available.
<b>Carcinogenicity</b>	There are no known carcinogenic chemicals in this product.
<b>Reproductive effects</b>	No information available.
<b>STOT - single exposure</b>	No information available
<b>STOT - repeated exposure</b>	No information available
<b>Target organ effects</b>	respiratory system, Skin.
<b>Aspiration hazard</b>	No information available.

**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 in oil

### IATA

**Proper Shipping Name** Not regulated

### 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	Complies
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):**

<b>Component</b>	<b>HAPS Data</b>
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
HEXAMETHYLENE DIISOCYANATE (HDI) MONOMER 822-06-0	100 lb		RQ 100 lb final RQ RQ 45.4 kg final RQ

**United States of America**

**California Prop. 65**

None of the ingredients are listed with California Proposition 65.

**California SCAQMD Rule 443**

Contains Photochemically Reactive Solvent

**State Right-to-Know**

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

**16. OTHER INFORMATION**



<u>NFPA</u>	Health 2	Flammability 0	Instability 1	Physical hazard *
<u>HMIS (Hazardous</u>	Health 2*	Flammability 0	Reactivity 1	
<u>Material Information</u>				
<u>System)</u>				

Prepared By Tnemec Regulatory Dept: 816-474-3400  
Revision Date 22-Jun-2015

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 MSDS**