

# Safety Data Sheet

Issue Date 14-Aug-2018

Revision Date 20-Jul-2018

Revision Number 6

## 1. IDENTIFICATION

### Product identifier

**Product Code** 1080-00WHA  
**Product Name** ENDURA-SHIELD WB TNEMEC WHITE

### Other means of identification

**Common Name** SERIES 1080, 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
Flammable Liquids	Category 3

### 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  
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
- 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
- Keep away from heat/sparks/open flames/hot surfaces. — No smoking
- Keep container tightly closed
- Ground/bond container and receiving equipment
- Use only non-sparking tools
- Take precautionary measures against static discharge
- Keep cool
- Use explosion-proof electrical/ventilating/lighting/mixing /equipment

**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 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**

- May be harmful if swallowed
- Causes mild skin irritation
- Harmful to aquatic life with long lasting effects
- 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
- Contains ethylene glycol monobutyl ether which may cause blood damage based on animal data.
- SEE SAFETY DATA SHEET
- Acute Toxicity 19.94748 % 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	30 - <60%

CRYSTALLINE SILICA (QUARTZ)	14808-60-7	1 - <10%
ETHYLENE GLYCOL MONOBUTYL ETHER	111-76-2	1 - <10%
AMORPHOUS SILICA	7631-86-9	1 - <10%
POLYETHYLENE WAX-SYNTHETIC WAX	9002-88-4	1 - <10%
AROMATIC PETROLEUM DISTILLATE	64742-95-6	1 - <10%
ALUMINUM HYDROXIDE	21645-51-2	0.1 - <1%
1,2,4-TRIMETHYLBENZENE	95-63-6	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 thoroughly with plenty of water for at least 15 minutes. If eye irritation persists, consult a specialist.
<b>Skin contact</b>	Wash off immediately with soap and plenty of water. 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

**Notes to physician** Treat symptomatically.

#### 5. FIRE-FIGHTING MEASURES

##### Suitable extinguishing media

Carbon dioxide. Foam. Dry chemical.

**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 oxides. Nitrogen oxides (NOx). 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. 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** Strong 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>
CRYSTALLINE SILICA (QUARTZ) 14808-60-7	TWA: 0.025 mg/m <sup>3</sup>	TWA: 0.1 mg/m <sup>3</sup> TWA: 50 µg/m <sup>3</sup>	50 mg/m <sup>3</sup>
ETHYLENE GLYCOL MONOBUTYL ETHER 111-76-2	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>
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**

<b>Eye/face protection</b>	Use chemical resistant splash type goggles. If splashes are likely to occur, wear face-shield.
<b>Skin and body protection</b>	Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.
<b>Respiratory protection</b>	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.
<b>General hygiene considerations</b>	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		

<u>Property</u>	<u>Values</u>	<u>Remarks</u>
<b>pH</b>		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>	51 °C / 124.0 °F	Pensky Martens - Closed Cup
<b>Evaporation rate</b>		No data available
<b>Flammability (solid, gas)</b>	No data available	No information available
<b>Flammability Limit in Air</b>		No data available
<b>Upper flammability limit</b>	N/A	
<b>Lower flammability limit</b>	1.1	
<b>Vapor pressure</b>		No data available
<b>Vapor density</b>		No data available
<b>Specific gravity</b>	1.4769	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>	1900 centipoises	approx

### Other Information

<b>Density</b>	12.31733 lbs/gal
<b>Volatile organic compounds (VOC) content</b>	1.15961 lbs/gal
<b>Total volatiles weight percent</b>	34.92 %
<b>Total volatiles volume percent</b>	52.6 %
<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**

Strong 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 oxides. Hydrocarbons. Oxides of nitrogen.

**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>	Causes serious eye irritation.
<b>Skin contact</b>	Irritating to skin. May cause sensitization by skin contact.
<b>Ingestion</b>	Harmful if swallowed.

Chemical name	LD50 Oral	LD50 Dermal	LC50 Inhalation
TITANIUM DIOXIDE (TOTAL DUST) 13463-67-7	> 10000 mg/kg ( Rat )	-	-
ETHYLENE GLYCOL MONOBUTYL ETHER 111-76-2	= 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
POLYETHYLENE WAX-SYNTHETIC WAX 9002-88-4	= 8 g/kg ( Rat ) > 2000 mg/kg ( Rat )	-	-
AROMATIC PETROLEUM DISTILLATE 64742-95-6	= 8400 mg/kg ( Rat )	> 2000 mg/kg ( Rabbit )	= 3400 ppm ( Rat ) 4 h
ALUMINUM HYDROXIDE 21645-51-2	> 5000 mg/kg ( Rat )	-	-
1,2,4-TRIMETHYLBENZENE 95-63-6	= 3280 mg/kg ( Rat )	> 3160 mg/kg ( Rabbit )	= 18 g/m <sup>3</sup> ( Rat ) 4 h

**Information on toxicological effects**

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

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

**Chronic Toxicity** Cancer hazard. Contains crystalline silica which can cause cancer. (Risk of cancer depends on duration and level of exposure). Contains ethylene glycol monobutyl ether which may cause blood damage based on animal data.

**Sensitization** May cause sensitization of susceptible persons.

**Mutagenicity** May cause genetic defects.

**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

CRYSTALLINE SILICA (QUARTZ) 14808-60-7	A2	Group 1	Known	X
ETHYLENE GLYCOL MONOBUTYL ETHER 111-76-2	A3	Group 3	-	
AMORPHOUS SILICA 7631-86-9		Group 1 Group 3	Known	
POLYETHYLENE WAX-SYNTHETIC WAX 9002-88-4		Group 3	-	
AROMATIC PETROLEUM DISTILLATE 64742-95-6	*	-	-	

**Reproductive effects**

Suspected of damaging fertility or the unborn child.

**STOT - single exposure**

Skin, Eyes, Central Nervous System (CNS)

**STOT - repeated exposure**

Causes damage to organs through prolonged or repeated exposure blood, Central nervous system, Eyes, hematopoietic system, kidney, liver, Lungs, respiratory system, Skin.

**Target organ effects****Aspiration hazard**

No information available.

**Acute Toxicity**

19.94748 % of the mixture consists of ingredient(s) of unknown toxicity.

## 12. ECOLOGICAL INFORMATION

**Ecotoxicity**

Harmful to aquatic life with long lasting effects

30.07976467 % 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
ETHYLENE GLYCOL MONOBUTYL ETHER 111-76-2		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
1,2,4-TRIMETHYLBENZENE 95-63-6		7.19 - 8.28: 96 h Pimephales promelas mg/L LC50 flow-through	6.14: 48 h Daphnia magna mg/L EC50

**Persistence and degradability**

No information available.

**Bioaccumulation**

No information available.

**Mobility in Environmental Media**

Chemical name	log Pow
ETHYLENE GLYCOL MONOBUTYL ETHER 111-76-2	0.81
1,2,4-TRIMETHYLBENZENE 95-63-6	3.63

**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.

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
TOLUENE 108-88-3	U220	Included in waste streams: F005, F024, F025, F039, K015, K036, K037, K149, K151		U220
1,4 DIOXANE 123-91-1	U108	Included in waste stream: F039		U108

**14. TRANSPORT INFORMATION**

**DOT**  
**Proper Shipping Name** paint,water base freezable

**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/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):  
**Chemical name** **HAPS Data**  
 ETHYLENE GLYCOL MONOBUTYL ETHER

**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:

Chemical name	SARA 313 - Threshold Values
ETHYLENE GLYCOL MONOBUTYL ETHER - 111-76-2	1.0
1,2,4-TRIMETHYLBENZENE - 95-63-6	1.0

**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

**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
CRYSTALLINE SILICA (QUARTZ) - 14808-60-7	Carcinogen
ETHYLENE GLYCOL MONOBUTYL ETHER - 111-76-2	Developmental
AMORPHOUS SILICA - 7631-86-9	Carcinogen
BUTYL CARBITOL -	*
TOLUENE - 108-88-3	Developmental
1,4 DIOXANE - 123-91-1	Carcinogen

**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
CRYSTALLINE SILICA (QUARTZ) 14808-60-7	X	X	X
ETHYLENE GLYCOL MONOBUTYL ETHER 111-76-2	X	X	X
AMORPHOUS SILICA 7631-86-9		X	X
1,2,4-TRIMETHYLBENZENE 95-63-6	X	X	X
ZIRCONIUM OXIDE 1314-23-4		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 20-Jul-2018

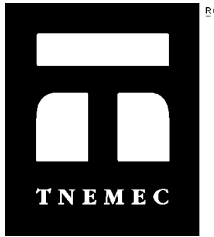
Revision Summary  
 9 4 5 7 10 8 11 14 1

**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 20-Jul-2018

Revision Date 20-Jul-2018

Revision Number 9

## 1. IDENTIFICATION

### Product identifier

**Product Code** 1080-1081B  
**Product Name** ENDURA-SHIELD WB CONVERTER

### Other means of identification

**Common Name** SERIES 1080/1081, PART B  
**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)

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
Flammable Liquids	Category 3

### 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  
Flammable liquid and vapor



**Appearance** opaque

**Physical state** liquid

**Odor** Slight

**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
- 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

**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 skin irritation or rash occurs: Get medical advice/attention
- IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
- 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
- In case of fire: Use CO2, dry chemical, or foam for extinction

**Storage**

- Store in a well-ventilated place. Keep cool
- 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

Contains isocyanates. May produce an allergic reaction

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

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Chemical name	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

<b>General advice</b>	If symptoms persist, call a physician.
<b>Eye contact</b>	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. If eye irritation persists, consult a specialist.
<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>	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. Never give anything by mouth to an unconscious person.
<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 powder. Dry chemical.

**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 In the event of fire, cool tanks with water spray The product causes irritation of eyes, skin and mucous membranes

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

##### Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

#### 6. ACCIDENTAL RELEASE MEASURES

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

**Personal precautions** Evacuate personnel to safe areas. Use personal protective equipment. Ensure adequate ventilation. Avoid contact with eyes, skin and clothing.

##### 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. Close container after each use.

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

Keep containers tightly closed in a cool, well-ventilated place. Keep out of the reach of children.

**Incompatible products**

Water, alcohols, amines, strong bases, metal components, surface active materials. Alcohols.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Control parameters****Exposure guidelines**

Chemical name	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
<b>Appearance</b>	opaque	<b>Odor threshold</b>	No information available
<b>Color</b>	No information available		

<u>Property</u>	<u>Values</u>	<u>Remarks</u>
<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>	74 °C / 165.00 °F	Pensky Martens - Closed Cup
<b>Evaporation rate</b>		No data available
<b>Flammability (solid, gas)</b>	No data 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>	1.16562	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>		No data available

### Other Information

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

Protect from water. Heat, flames and sparks. Amines.

### Incompatible materials

Water, alcohols, amines, strong bases, metal components, surface active materials, 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. Carbon oxides. Nitrogen oxides (NOx). Hydrogen cyanide.

## 11. TOXICOLOGICAL INFORMATION

**Information on Likely Routes of Exposure**

<b>Inhalation</b>	HARMFUL BY INHALATION. 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. May cause sensitization by inhalation.
<b>Eye contact</b>	Causes serious eye irritation.
<b>Skin contact</b>	Irritating to skin. May cause sensitization of susceptible persons.
<b>Ingestion</b>	Harmful if swallowed.

Chemical name	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	= 738 mg/kg ( Rat )	= 593 mg/kg ( Rabbit )	= 0.06 mg/L ( Rat ) 4 h

**Information on toxicological effects**

**Symptoms** Skin disorders. Respiratory disorders. Irritating to eyes and skin.

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

**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  
**Aspiration hazard** Not applicable.

**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

Chemical name	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

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>	Complies
<b>ENCS</b>	Does Not Comply
<b>IECSC</b>	Complies
<b>KECL</b>	Complies
<b>PICCS</b>	Complies
<b>AICS</b>	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>Chemical name</b>	<b>HAPS Data</b>
HEXAMETHYLENE DIISOCYANATE (HDI) MONOMER	

**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
HEXAMETHYLENE DIISOCYANATE (HDI) MONOMER - 822-06-0	1.0

**SARA 311/312 Hazardous**

<b>Categorization</b>	
<b>Acute Health Hazard</b>	Yes
<b>Chronic Health Hazard</b>	Yes
<b>Fire Hazard</b>	Yes
<b>Sudden Release of Pressure Hazard</b>	No
<b>Reactive Hazard</b>	No



Chemical name	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

**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**

Chemical name	New Jersey	Massachusetts	Pennsylvania
HEXAMETHYLENE DIISOCYANATE (HDI) MONOMER 822-06-0	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 20-Jul-2018

Revision Summary  
 5 7 10 8 9 11 14 15 1

**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**