



# Safety Data Sheet

Issue Date 14-Aug-2018

Revision Date 14-Aug-2018

Revision Number 13

## 1. IDENTIFICATION

### Product identifier

**Product Code** 1074-00WHA  
**Product Name** ENDURA-SHIELD II TNE MEC WHITE

### Other means of identification

**Common Name** SERIES 1074, PART A  
**UN/ID no.** 1263  
**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 - Oral	Category 4
Acute toxicity - Inhalation (Vapors)	Category 4
Serious eye damage/eye irritation	Category 2
Germ cell mutagenicity	Category 1B
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**

Harmful if swallowed  
Harmful if inhaled  
Causes serious eye irritation  
May cause genetic defects  
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** 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  
 Do not eat, drink or smoke when using this product  
 Use only outdoors or in a well-ventilated area  
 Do not breathe dust/fume/gas/mist/vapors/spray  
 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  
 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  
 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell  
 Rinse mouth  
 In case of fire: Use CO<sub>2</sub>, 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)**

If product is in liquid or paste form, physical or health hazards listed related to dust are not considered significant. However, product may contain substances that could be potential hazards if caused to become airborne due to grinding, sanding or other abrasive processes.

**Other information**

May be harmful in contact with skin  
 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  
 SEE SAFETY DATA SHEET  
 Acute Toxicity 63.19825 % 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%
N-BUTYL ACETATE	123-86-4	10 - <30%
CRYSTALLINE SILICA (QUARTZ)	14808-60-7	1 - <10%
METHYL N-AMYL KETONE	110-43-0	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. If eye irritation persists, consult a specialist.
<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

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

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** Use personal protective equipment. Avoid contact with eyes, skin and clothing. 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** Wear personal protective equipment. 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. Keep away from open flames, hot surfaces and sources of ignition. Do not breathe vapours or spray mist. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapours). Do not ingest. Ensure adequate ventilation. Do not eat, drink or smoke when using this product. 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. Water, alcohols, amines, strong bases, metal components, surface active materials. caustic. Bases. Alkaline.

## 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>
N-BUTYL ACETATE 123-86-4	TWA: 50 ppm STEL: 150 ppm	TWA: 150 ppm TWA: 710 mg/m <sup>3</sup> STEL: 200 ppm STEL: 950 mg/m <sup>3</sup>	1700 ppm
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>
METHYL N-AMYL KETONE 110-43-0	TWA: 50 ppm	TWA: 100 ppm TWA: 465 mg/m <sup>3</sup>	800 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	TWA: 5 mg/m <sup>3</sup>	-	25 mg/m <sup>3</sup>

1314-23-4

**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.

**Skin and body protection** Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

**Respiratory protection** If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations. 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>	aromatic
<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>		
<b>Melting point / freezing point</b>	No data available	
<b>Boiling point / boiling range</b>	118 °C / 244.0 °F	
<b>Flash point</b>	37 °C / 98.0 °F	Seta closed cup
<b>Evaporation rate</b>		
<b>Flammability (solid, gas)</b>	No data available	
<b>Flammability Limit in Air</b>		
<b>Upper flammability limit</b>	N/A	
<b>Lower flammability limit</b>	1.1	
<b>Vapor pressure</b>		
<b>Vapor density</b>		
<b>Specific gravity</b>	1.34839	
<b>Water solubility</b>	Insoluble in cold water	
<b>Solubility in other solvents</b>		
<b>Partition coefficient: n-octanol/water</b>		
<b>Autoignition temperature</b>	No data available	
<b>Decomposition temperature</b>		
<b>Kinematic viscosity</b>		
<b>Dynamic viscosity</b>	700 centipoises	approx

**Other Information**

<b>Density</b>	11.24556 lbs/gal
<b>Volatile organic compounds (VOC) content</b>	2.68207 lbs/gal
<b>Total volatiles weight percent</b>	23.85 %
<b>Total volatiles volume percent</b>	37.28 %
<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. Reacts with air to form peroxides.

### Incompatible materials

Strong oxidizing agents, Water, alcohols, amines, strong bases, metal components, surface active materials, caustic, Bases, Alkaline

### 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 oxides. 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. IRRITATING TO RESPIRATORY SYSTEM. Respirable crystalline silica (quartz) can cause silicosis, a fibrosis (scarring) of the lungs.
<b>Eye contact</b>	Severely irritating to eyes.
<b>Skin contact</b>	Irritating to skin.
<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 )	-	-
N-BUTYL ACETATE 123-86-4	= 10768 mg/kg ( Rat )	> 17600 mg/kg ( Rabbit )	= 390 ppm ( Rat ) 4 h
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 - 4000 ppm ( Rat ) 6 h
AMORPHOUS SILICA 7631-86-9	= 7900 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

**Symptoms** Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. 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. Substances known to be mutagenic to man. Cancer hazard. Contains crystalline silica which can cause cancer. (Risk of cancer depends on duration and level of exposure).

**Sensitization** No information available.

**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
AMORPHOUS SILICA 7631-86-9		Group 1 Group 3	Known	

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

**Aspiration hazard** No information available.

**Acute Toxicity** 63.19825 % of the mixture consists of ingredient(s) of unknown toxicity.

**12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

106.31869284 % 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
N-BUTYL ACETATE 123-86-4	674.7: 72 h Desmodesmus subspicatus mg/L EC50	100: 96 h Lepomis macrochirus mg/L LC50 static 17 - 19: 96 h Pimephales promelas mg/L LC50 flow-through 62: 96 h Leuciscus idus mg/L LC50 static	72.8: 24 h Daphnia magna mg/L EC50
METHYL N-AMYL KETONE 110-43-0		126 - 137: 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

**Persistence and degradability**

No information available.

**Bioaccumulation**

No information available.

**Mobility in Environmental Media**

Chemical name	log Pow
N-BUTYL ACETATE 123-86-4	1.81
METHYL N-AMYL KETONE 110-43-0	1.98

**Other Adverse Effects** No information available

**13. DISPOSAL CONSIDERATIONS**

**Waste treatment methods**

**Disposal Methods** It must undergo special treatment, e.g. at suitable disposal site, to comply with local 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

ETHYLBENZENE 100-41-4	Included in waste stream: F039
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<b>Chemical name</b> N-BUTYL ACETATE 123-86-4	<b>CAWAST</b> Toxic
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**14. TRANSPORT INFORMATION**

**DOT**

UN/ID no. 1263  
 Proper Shipping Name PAINT  
 Hazard Class 3  
 Packing Group III  
 Emergency Response Guide Number 128

**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 Complies  
 EINECS/ELINCS Does Not Comply  
 ENCS Does Not Comply  
 IECSC Complies  
 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):

**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

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
N-BUTYL ACETATE	5000 lb			X



123-86-4			
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Chemical name	Hazardous Substances RQs	CERCLA EHS RQs	RQ
N-BUTYL ACETATE 123-86-4	5000 lb		RQ 5000 lb final RQ RQ 2270 kg final RQ

**California Prop. 65**

**WARNING:** This product can expose you to the following chemicals which are known to the State of California to cause cancer. 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
AMORPHOUS SILICA - 7631-86-9	Carcinogen
CARBON BLACK DUST & FUME - 1333-86-4	Carcinogen
ETHYLBENZENE - 100-41-4	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
N-BUTYL ACETATE 123-86-4	X	X	X
CRYSTALLINE SILICA (QUARTZ) 14808-60-7	X	X	X
METHYL N-AMYL KETONE 110-43-0	X	X	X
AMORPHOUS SILICA 7631-86-9		X	X
ZIRCONIUM OXIDE 1314-23-4		X	

**16. OTHER INFORMATION**

**NFPA** Health 2 Flammability 3 Instability 1 Physical hazard \*  
**HMIS (Hazardous Material Information System)** Health 2\* Flammability 3 Reactivity 1

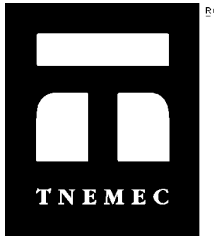
**Prepared By** Tnemec Regulatory Dept: 816-474-3400  
**Issue Date** 24-May-2017  
**Revision Date** 14-Aug-2018  
**Revision Summary**  
 1 5 6 7 10 8 9 11 14 15 2

**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 22-Aug-2018

Revision Date 16-Oct-2017

Revision Number 17

## 1. IDENTIFICATION

### Product identifier

**Product Code** 1074-1075B  
**Product Name** ENDURA-SHIELD II 1075/1075 CON

### Other means of identification

**Common Name** SERIES 1074/1074U/1075/1075U, 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
Acute toxicity - Inhalation (Dusts/Mists)	Category 4
Germ cell mutagenicity	Category 1B
Carcinogenicity	Category 1B
Specific target organ toxicity (single exposure)	Category 3
Specific target organ toxicity (repeated exposure)	Category 2
Flammable Liquids	Category 3

### Label elements

#### EMERGENCY OVERVIEW

#### **Danger**

#### **Hazard statements**

Harmful if inhaled  
May cause genetic defects  
May cause cancer  
May cause respiratory irritation. May cause drowsiness or dizziness  
May cause 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  
 Use only outdoors or in a well-ventilated area  
 Do not breathe dust/fume/gas/mist/vapors/spray  
 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/equipment

**Response**

IF exposed or concerned: 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 CO<sub>2</sub>, 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**

Causes mild skin irritation  
 Toxic to aquatic life with long lasting effects  
 SEE SAFETY DATA SHEET  
 Acute Toxicity 0 % 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%
PETROLEUM SOLVENT (NAPHTHA)	64742-95-6	1 - <10%
1,2,4-TRIMETHYLBENZENE	95-63-6	1 - <10%
N-BUTYL ACETATE	123-86-4	1 - <10%
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 eye irritation persists, consult a specialist.
<b>Skin contact</b>	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Consult a physician.
<b>Inhalation</b>	Remove to fresh air. Oxygen or artificial respiration if needed. 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

<b>Notes to physician</b>	Treat symptomatically.
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## 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. Hydrocarbons. Oxides of nitrogen. Hydrogen cyanide.

### 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

<b>Personal precautions</b>	Avoid contact with eyes, skin and clothing. Use personal protective equipment. Remove all sources of ignition.
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### Environmental Precautions

<b>Environmental precautions</b>	Prevent further leakage or spillage if safe to do so. Do not flush into surface water or sanitary sewer system.
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### Methods and material for containment and cleaning up

<b>Methods for containment</b>	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
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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**

Wear personal protective equipment. 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. Close container after each use. 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. caustic. Water, alcohols, amines, strong bases, metal components, surface active materials.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
N-BUTYL ACETATE 123-86-4	TWA: 50 ppm STEL: 150 ppm	TWA: 150 ppm TWA: 710 mg/m <sup>3</sup> STEL: 200 ppm STEL: 950 mg/m <sup>3</sup>	1700 ppm
HEXAMETHYLENE DIISOCYANATE (HDI) MONOMER 822-06-0	TWA: 0.005 ppm	-	

NIOSH IDLH: *Immediately Dangerous to Life or Health*

**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>		
<b>Melting point / freezing point</b>	No data available	
<b>Boiling point / boiling range</b>	72 °C / 162 °F	
<b>Flash point</b>	38 °C / 100.4 °F	Pensky Martens - Closed Cup
<b>Evaporation rate</b>		
<b>Flammability (solid, gas)</b>	No data available	
<b>Flammability Limit in Air</b>		
<b>Upper flammability limit</b>	N/A	
<b>Lower flammability limit</b>	N/A	
<b>Vapor pressure</b>		
<b>Vapor density</b>		
<b>Specific gravity</b>	1.12824	
<b>Water solubility</b>	Insoluble in cold water	
<b>Solubility in other solvents</b>		
<b>Partition coefficient: n-octanol/water</b>		
<b>Autoignition temperature</b>	No data available	
<b>Decomposition temperature</b>		
<b>Kinematic viscosity</b>		
<b>Dynamic viscosity</b>	875 centipoises	approx

### Other Information

<b>Density</b>	9.40955 lbs/gal
<b>Volatile organic compounds (VOC) content</b>	0.94096 lbs/gal
<b>Total volatiles weight percent</b>	10 %
<b>Total volatiles volume percent</b>	13.9 %
<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. Amines.

### Incompatible materials

Strong oxidizing agents, caustic, Water, alcohols, amines, strong bases, metal components, surface active materials

**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). Hydrocarbons. Hydrogen cyanide.

## 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. Symptoms of overexposure are dizziness, headache, tiredness, nausea, unconsciousness, cessation of breathing. May cause sensitization of susceptible persons.
<b>Eye contact</b>	Causes serious eye irritation.
<b>Skin contact</b>	May cause sensitization of susceptible persons. Irritating to skin.
<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
PETROLEUM SOLVENT (NAPHTHA) 64742-95-6	= 8400 mg/kg ( Rat )	> 2000 mg/kg ( Rabbit )	= 3400 ppm ( Rat ) 4 h
1,2,4-TRIMETHYLBENZENE 95-63-6	= 3280 mg/kg ( Rat )	> 3160 mg/kg ( Rabbit )	= 18 g/m <sup>3</sup> ( Rat ) 4 h
N-BUTYL ACETATE 123-86-4	= 10768 mg/kg ( Rat )	> 17600 mg/kg ( Rabbit )	= 390 ppm ( Rat ) 4 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** Symptoms of overexposure are dizziness, headache, tiredness, nausea, unconsciousness, cessation of breathing. Skin disorders. Respiratory disorders. Irritating to eyes and skin.

**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>	Respiratory system, Skin
<b>STOT - repeated exposure</b>	Causes damage to organs through prolonged or repeated exposure
<b>Target organ effects</b>	Central nervous system, Eyes, respiratory system, Skin, blood.
<b>Aspiration hazard</b>	Not applicable.

**Acute Toxicity** 0 % 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**

Toxic to aquatic life with long lasting effects

89.8 % 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
PETROLEUM SOLVENT (NAPHTHA) 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
N-BUTYL ACETATE 123-86-4	674.7: 72 h Desmodesmus subspicatus mg/L EC50	100: 96 h Lepomis macrochirus mg/L LC50 static 17 - 19: 96 h Pimephales promelas mg/L LC50 flow-through 62: 96 h Leuciscus idus mg/L LC50 static	72.8: 24 h Daphnia magna mg/L EC50
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**

Chemical name	log Pow
1,2,4-TRIMETHYLBENZENE 95-63-6	3.63
N-BUTYL ACETATE 123-86-4	1.81

**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.

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

**California Hazardous Waste Status**

This product contains one or more substances that are listed with the State of California as a hazardous waste

Chemical name	CAWAST
N-BUTYL ACETATE 123-86-4	Toxic

### 14. TRANSPORT INFORMATION

**DOT**

**Proper Shipping Name**

paint in oil 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**

<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 and Title 40n of the Code of Federal Regulations, Part 372:

Chemical name	SARA 313 - Threshold Values
1,2,4-TRIMETHYLBENZENE - 95-63-6	1.0
HEXAMETHYLENE DIISOCYANATE (HDI) MONOMER - 822-06-0	1.0

**SARA 311/312 Hazardous**

**Categorization**

<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	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
N-BUTYL ACETATE 123-86-4	5000 lb			X

Chemical name	Hazardous Substances RQs	CERCLA EHS RQs	RQ
N-BUTYL ACETATE 123-86-4	5000 lb		RQ 5000 lb final RQ RQ 2270 kg final RQ
HEXAMETHYLENE DIISOCYANATE (HDI) MONOMER 822-06-0	100 lb		RQ 100 lb final RQ RQ 45.4 kg final RQ

**California Prop. 65**

**WARNING:** None of the ingredients are listed with California Proposition 65.

**California SCAQMD Rule 443**

Contains Photochemically Reactive Solvent

**State Right-to-Know**

Chemical name	New Jersey	Massachusetts	Pennsylvania

1,2,4-TRIMETHYLBENZENE 95-63-6	X	X	X
N-BUTYL ACETATE 123-86-4	X	X	X
HEXAMETHYLENE DIISOCYANATE (HDI) MONOMER 822-06-0	X	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  
**Issue Date** 23-May-2017  
**Revision Date** 16-Oct-2017  
**Revision Summary**  
 9 4 5 7 10 8 11 2 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**