



Safety Data Sheet

Issue Date 24-Jun-2015

Revision Date 24-Jun-2015

Revision Number 8

1. IDENTIFICATION

Product identifier

Product Code 1074-00WHA
Product Name ENDURA-SHIELD II TNEMEC WHITE

Other means of identification

Common Name SERIES 1074, PART A
UN/ID no. 1263

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 - Oral	Category 4
Acute toxicity - Dermal	Category 4
Acute toxicity - Inhalation (Vapors)	Category 4
Serious eye damage/eye irritation	Category 2A
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 in contact with skin
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
Call a POISON CENTER or doctor/physician if you feel unwell
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
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
Rinse mouth
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

71.77048 % 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%
N-BUTYL ACETATE	123-86-4	10 - 30%
CRYSTALLINE SILICA (QUARTZ)	14808-60-7	1 - 10%
2-HEPTANONE	-	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%
ETHYL BENZENE	100-41-4	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

General advice	If symptoms persist, call a physician.
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms persist, call a physician.
Skin contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If symptoms persist, call a physician.
Inhalation	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.
Ingestion	If swallowed, do not induce vomiting. Get medical attention immediately.
Self-protection of the first aider	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 Pick up and transfer to properly labelled containers.

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. Alkalis.

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 ³	TWA: 10 mg/m ³ TWA: 15 mg/m ³	5000 mg/m ³
N-BUTYL ACETATE 123-86-4	TWA: 150 ppm STEL: 200 ppm	TWA: 150 ppm TWA: 710 mg/m ³ STEL: 200 ppm STEL: 950 mg/m ³	1700 ppm
CRYSTALLINE SILICA (QUARTZ) 14808-60-7	TWA: 0.025 mg/m ³	TWA: 0.1 mg/m ³	50 mg/m ³

2-HEPTANONE	TWA: 50 ppm	TWA: 100 ppm TWA: 465 mg/m ³	800 ppm
AMORPHOUS SILICA 7631-86-9	-	TWA: 6 mg/m ³	3000 mg/m ³
ALUMINUM HYDROXIDE 21645-51-2	TWA: 1 mg/m ³	-	
ZIRCONIUM OXIDE 1314-23-4	TWA: 5 mg/m ³	-	25 mg/m ³
ETHYL BENZENE 100-41-4	TWA: 20 ppm	TWA: 100 ppm TWA: 435 mg/m ³ STEL: 125 ppm STEL: 545 mg/m ³	800 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**

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

Physical state	liquid	Odor	aromatic
Appearance	opaque	Odor threshold	No information available
Color	No information available		
Property	Values	Remarks	
pH		No data available	
Melting point / freezing point		No data available	
Boiling point / boiling range	118 °C / 244.0 °F		
Flash point	37 °C / 98.0 °F		
Evaporation rate		Pensky Martens - Closed Cup	
Flammability (solid, gas)		No data available	
Flammability Limit in Air		Not applicable	
Upper flammability limit	N/A	No data available	
Lower flammability limit	1.1		
Vapor pressure		No data available	
Vapor density		No data available	
Specific gravity	1.35387	g/cm ³	
Water solubility	Insoluble in cold water		
Solubility in other solvents		No data available	

Partition coefficient: n-octanol/water

Autoignition temperature

Decomposition temperature

Kinematic viscosity

Dynamic viscosity 700 centipoises

No data available

No data available

No data available

No data available
approx**Other Information**

Density 11.26620 lbs/gal

Volatile organic compounds (VOC) 2.688 lbs/gal

content

Total volatiles weight percent 23.8580 %

Total volatiles volume percent 37.2873 %

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, Alkalies

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****Inhalation**

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.

Eye contact

Severely irritating to eyes.

Skin contact

Irritating to skin.

Ingestion

Harmful if swallowed.

Component	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) = 14.13 mg/kg (Rat)	> 17600 mg/kg (Rabbit)	= 390 ppm (Rat) 4 h
CRYSTALLINE SILICA (QUARTZ) 14808-60-7	= 500 mg/kg (Rat)		
2-HEPTANONE	= 1600 mg/kg (Rat) = 1670 mg/kg (Rat)	= 12.6 mL/kg (Rabbit) = 12600 µL/kg (Rabbit)	> 2000 ppm (Rat) 4 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)		
ETHYL BENZENE 100-41-4	= 3500 mg/kg (Rat)	= 15400 mg/kg (Rabbit)	= 17.2 mg/L (Rat) 4 h

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.

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
AMORPHOUS SILICA 7631-86-9		Group 3		
ETHYL BENZENE 100-41-4	A3	Group 2B		X

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.

Aspiration hazard No information available.

Acute Toxicity 71.77048 % of the mixture consists of ingredient(s) of unknown toxicity.

12. ECOLOGICAL INFORMATION**Ecotoxicity**

Component	Toxicity to algae	Toxicity to fish	Toxicity to daphnia
N-BUTYL ACETATE 123-86-4	674.7: 72 h Desmodesmus subspicatus mg/L EC50	62: 96 h Leuciscus idus mg/L LC50 static 100: 96 h Lepomis macrochirus mg/L LC50 static 17 - 19: 96 h Pimephales promelas mg/L LC50 flow-through	72.8: 24 h Daphnia magna mg/L EC50
2-HEPTANONE		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
ETHYL BENZENE 100-41-4	4.6: 72 h Pseudokirchneriella subcapitata mg/L EC50 438: 96 h Pseudokirchneriella subcapitata mg/L EC50 2.6 - 11.3: 72 h Pseudokirchneriella subcapitata mg/L EC50 static 1.7 - 7.6: 96 h Pseudokirchneriella subcapitata mg/L EC50 static	11.0 - 18.0: 96 h Oncorhynchus mykiss mg/L LC50 static 32: 96 h Lepomis macrochirus mg/L LC50 static 4.2: 96 h Oncorhynchus mykiss mg/L LC50 semi-static 7.55 - 11: 96 h Pimephales promelas mg/L LC50 flow-through 9.6: 96 h Poecilia reticulata mg/L LC50 static 9.1 - 15.6: 96 h Pimephales promelas mg/L LC50 static	1.8 - 2.4: 48 h Daphnia magna mg/L EC50

Persistence and degradability

No information available.

Bioaccumulation

No information available.

Mobility in Environmental Media

Component	log Pow
N-BUTYL ACETATE 123-86-4	1.81
2-HEPTANONE	1.98
ETHYL BENZENE 100-41-4	3.118

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.

Component	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
ETHYL BENZENE 100-41-4		Included in waste stream: F039		

Component	CAWAST
N-BUTYL ACETATE 123-86-4	Toxic
ETHYL BENZENE 100-41-4	Toxic Ignitable

14. TRANSPORT INFORMATION**DOT**

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

IATA

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

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/NDL 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/NDL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

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

Component

HAPS Data

ETHYL BENZENE

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

Component	SARA 313 - Threshold Values
ETHYL BENZENE - 100-41-4	0.1

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

Component	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
N-BUTYL ACETATE 123-86-4	5000 lb			X
ETHYL BENZENE 100-41-4	1000 lb	X	X	X

CERCLA

Component	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
ETHYL BENZENE 100-41-4	1000 lb		RQ 1000 lb final RQ RQ 454 kg final RQ

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
ETHYL BENZENE - 100-41-4	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
N-BUTYL ACETATE 123-86-4	X	X	X
CRYSTALLINE SILICA (QUARTZ) 14808-60-7	X	X	X
2-HEPTANONE	X	X	X
AMORPHOUS SILICA 7631-86-9	X	X	X
ZIRCONIUM OXIDE 1314-23-4		X	
ETHYL BENZENE 100-41-4	X	X	X

16. OTHER INFORMATION**NFPA**

Health 2

Flammability 3

Instability 1

Physical hazard *

HMIS (Hazardous

Health 2*

Flammability 3

Reactivity 1

Material Information**System)****Prepared By**

Tnemec Regulatory Dept: 816-474-3400

Revision Date

24-Jun-2015

Revision Summary

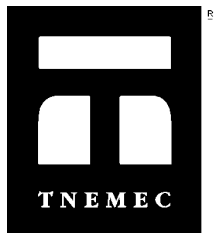
1 5 6 7 10 8 9 11 14 15

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 or 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 12

1. IDENTIFICATION

Product identifier

Product Code 1074-1075B
Product Name ENDURA-SHIELD II CONVERTER

Other means of identification

Common Name SERIES 1074/1074U/1075/1075U, 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
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 allergy or asthma symptoms or breathing difficulties if inhaled
May cause an allergic skin reaction
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**

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
 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
 Wear protective gloves/protective clothing/eye protection/face protection
 Keep cool

Response

Get medical advice/attention if you feel unwell
 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
 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 container tightly closed
 Store locked up
 Keep away from children

Disposal

Dispose of contents/container to an approved waste disposal plant

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

Toxic to aquatic life with long lasting effects

Acute Toxicity 89.8 % of the mixture consists of ingredient(s) of unknown toxicity.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS-No	Weight-%
HEXAMETHYLENE DIISOCYANATE (HDI) POLYMER	28182-81-2	60 - 100%
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

General advice	If symptoms persist, call a physician.
Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes. If eye irritation persists, consult a specialist.
Skin contact	Wash off immediately with soap and plenty of water. If symptoms persist, call a physician.
Inhalation	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.
Ingestion	If swallowed, do not induce vomiting. Get medical attention immediately.
Self-protection of the first aider	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. 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

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	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

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH
N-BUTYL ACETATE 123-86-4	TWA: 150 ppm STEL: 200 ppm	TWA: 150 ppm TWA: 710 mg/m ³ STEL: 200 ppm STEL: 950 mg/m ³	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

Physical state	liquid	Odor	Slight
Appearance	opaque	Odor threshold	No information available
Color	No information available		
<u>Property</u>	<u>Values</u>	<u>Remarks</u>	
pH		No data available	
Melting point / freezing point		No data available	
Boiling point / boiling range	72 °C / 162 °F		
Flash point	38 °C / 100.4 °F		
Evaporation rate		Pensky Martens - Closed Cup	
Flammability (solid, gas)		No data available	
Flammability Limit in Air		Not applicable	
Upper flammability limit	N/A	No data available	
Lower flammability limit	N/A		
Vapor pressure		No data available	
Vapor density		No data available	
Specific gravity	1.12104	g/cm ³	
Water solubility	Insoluble in cold water		
Solubility in other solvents		No data available	
Partition coefficient: n-octanol/water		No data available	
Autoignition temperature		No data available	
Decomposition temperature		No data available	
Kinematic viscosity		No data available	
Dynamic viscosity	875 centipoises	approx	

Other Information

Density	9.34946 lbs/gal
Volatile organic compounds (VOC) content	0.93495 lbs/gal
Total volatiles weight percent	10 %
Total volatiles volume percent	13.9 %

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. Keep away from children. 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

Inhalation	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.
Eye contact	Causes serious eye irritation.
Skin contact	May cause sensitization of susceptible persons. Irritating to skin.
Ingestion	Harmful if swallowed.

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
HEXAMETHYLENE DIISOCYANATE (HDI) POLYMER 28182-81-2			= 18500 mg/m ³ (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 ³ (Rat) 4 h
N-BUTYL ACETATE 123-86-4	= 10768 mg/kg (Rat) = 14.13 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

Chronic Toxicity	Avoid repeated exposure. Contains isocyanates. May produce an allergic reaction.
Sensitization	May cause sensitization of susceptible persons.
Mutagenicity	May cause genetic defects.
Carcinogenicity	There are no known carcinogenic chemicals in this product.
Reproductive effects	No information available.
STOT - single exposure	Respiratory system, Skin
STOT - repeated exposure	Causes damage to organs through prolonged or repeated exposure
Target organ effects	Central nervous system, Eyes, respiratory system, Skin, blood.
Aspiration hazard	Not applicable.
Acute Toxicity	89.8 % of the mixture consists of ingredient(s) of unknown toxicity.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Toxic to aquatic life with long lasting effects

98.801 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

Component	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	62: 96 h Leuciscus idus mg/L LC50 static 100: 96 h Lepomis macrochirus mg/L LC50 static 17 - 19: 96 h Pimephales promelas mg/L LC50 flow-through	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

Component	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.

California Hazardous Waste Status

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

Component	CAWAST
N-BUTYL ACETATE 123-86-4	Toxic

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

TSCA Complies
DSL/NDL Does not comply
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/NDL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

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

Component**HAPS Data**

HEXAMETHYLENE DIISOCYANATE (HDI) MONOMER

United States of America**SARA 313**

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

Component	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**

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

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

CERCLA

Component	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
---	--------	--	---

United States of America**California Prop. 65**

This product does not contain any Proposition 65 chemicals

California SCAQMD Rule 443

Contains Photochemically Reactive Solvent

State Right-to-Know

Component	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

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

Prepared By

Revision Date

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 or 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