

## PRODUCT SAFETY INFORMATION SHEET

This is a condensed document providing safety and health information pertinent to the product. For a complete regulatory MSDS please contact your Tnemec Representative at [www.tnemec.com](http://www.tnemec.com) or 1-800-TNEMEC1.

Preparation Date: 03-Apr-2009

Revision Date: 03-Apr-2009

Revision Number: 0

### 2. HAZARDS IDENTIFICATION

#### Emergency Overview

#### DANGER!

FLAMMABLE LIQUID AND VAPOR.  
 HARMFUL IF INHALED.  
 HARMFUL OR FATAL IF SWALLOWED.  
 MAY AFFECT THE BRAIN OR NERVOUS SYSTEM CAUSING DIZZINESS, HEADACHE OR NAUSEA.  
 MAY CAUSE EYE, SKIN, NOSE, THROAT AND RESPIRATORY TRACT IRRITATION.  
 MAY BE HARMFUL IF ABSORBED THROUGH SKIN.

#### Potential Health Effects

**Principle Routes of Exposure** Eye contact, Inhalation, Skin contact.

#### Acute Effects

**Eyes** Moderately irritating to the eyes.  
**Skin** Irritating to skin.  
**Inhalation** Irritating to respiratory system.  
**Ingestion** May be harmful if swallowed.

#### Chronic Effects

NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal.

#### Target Organ Effects

Blood, Central nervous system, Gastrointestinal tract, Eyes, Kidney, Liver, Lungs, Respiratory system, Skin

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### Hazardous Components

Component	CAS-No	Weight %
TITANIUM DIOXIDE (TOTAL DUST)	13463-67-7	25.38713
XYLENE	1330-20-7	23.38067
AMORPHOUS SILICA	7631-86-9	3.134214
N-BUTYL ACETATE	123-86-4	2.848959
ALUMINUM OXIDES	1344-28-1	2.820792
ETHYL BENZENE	100-41-4	1.27038

### 4. FIRST AID MEASURES

**Eye Contact** Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

**Skin Contact** Wash off immediately with soap and plenty of water. Consult a physician if necessary.

**Ingestion** If swallowed, do not induce vomiting. Get medical attention immediately.

**Inhalation** Move to fresh air. Oxygen or artificial respiration if needed. Consult a physician.

### 5. FIRE-FIGHTING MEASURES

**Flammable Properties** Flammable.

### Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Contact with water may cause violent frothing. Use: Carbon dioxide (CO<sub>2</sub>) - Foam - Dry chemical

**Hazardous Decomposition Products** Oxides of carbon, hydrocarbons. Oxides of nitrogen.

### 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.

### 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

Avoid contact with skin, eyes and clothing. Use personal protective equipment. Remove all sources of ignition.

### Environmental Precautions

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

### 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

### Handling

Close container after each use. Avoid contact with skin, eyes and clothing. Do not eat, drink or smoke when using this product. If splashes are likely to occur, wear goggles. Wear protective gloves/clothing. Do not burn, or use a cutting torch on, the empty drum. When used in a mixture, read the labels and safety data sheets of all components. Wash thoroughly after handling.

### Storage

Keep away from heat, sparks and flame. VAPORS MAY CAUSE FLASH FIRE. Use only in an area containing flame proof equipment. Do not smoke. Extinguish all flames and pilot lights, and turn off stoves, heaters, electric motors and other sources of ignition during use and until all vapors are gone. Prevent build-up of vapors by opening all windows and doors to achieve cross ventilation.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	Quebec TWAEV	Ontario TWAEV	Mexico OEL (TWA)
TITANIUM DIOXIDE (TOTAL DUST)	TWA: 10 mg/m <sup>3</sup>	TWA: 10 mg/m <sup>3</sup> TWA: 15 mg/m <sup>3</sup>	TWA: 10 mg/m <sup>3</sup>	TWA: 10 mg/m <sup>3</sup>	TWA: 10 mg/m <sup>3</sup> STEL: 20 mg/m <sup>3</sup>
XYLENE	TWA: 100 ppm STEL: 150 ppm	TWA: 435 mg/m <sup>3</sup> TWA: 100 ppm STEL: 150 ppm STEL: 655 mg/m <sup>3</sup>	TWA: 434 mg/m <sup>3</sup> TWA: 100 ppm STEL: 150 ppm STEL: 651 mg/m <sup>3</sup>	TWA: 100 ppm TWA: 435 mg/m <sup>3</sup> STEL: 150 ppm STEL: 650 mg/m <sup>3</sup>	TWA: 435 mg/m <sup>3</sup> TWA: 100 ppm STEL: 150 ppm STEL: 655 mg/m <sup>3</sup>
N-BUTYL ACETATE	TWA: 150 ppm STEL: 200 ppm	TWA: 710 mg/m <sup>3</sup> TWA: 150 ppm STEL: 200 ppm STEL: 950 mg/m <sup>3</sup>	TWA: 150 ppm TWA: 713 mg/m <sup>3</sup> STEL: 200 ppm STEL: 950 mg/m <sup>3</sup>	TWA: 150 ppm TWA: 710 mg/m <sup>3</sup> STEL: 200 ppm STEL: 950 mg/m <sup>3</sup>	TWA: 150 ppm TWA: 710 mg/m <sup>3</sup> STEL: 200 ppm STEL: 950 mg/m <sup>3</sup>
ALUMINUM OXIDES	TWA: 1 mg/m <sup>3</sup>	TWA: 10 mg/m <sup>3</sup> TWA: 5 mg/m <sup>3</sup> TWA: 15 mg/m <sup>3</sup>	TWA: 10 mg/m <sup>3</sup>	TWA: 10 mg/m <sup>3</sup>	TWA: 10 mg/m <sup>3</sup>
ETHYL BENZENE	TWA: 100 ppm STEL: 125 ppm	TWA: 435 mg/m <sup>3</sup> TWA: 100 ppm STEL: 545 mg/m <sup>3</sup> STEL: 125 ppm	TWA: 434 mg/m <sup>3</sup> TWA: 100 ppm STEL: 125 ppm STEL: 543 mg/m <sup>3</sup>	TWA: 100 ppm TWA: 435 mg/m <sup>3</sup> STEL: 125 ppm STEL: 540 mg/m <sup>3</sup>	TWA: 100 ppm TWA: 435 mg/m <sup>3</sup> STEL: 125 ppm STEL: 545 mg/m <sup>3</sup>

### Engineering Measures

Ensure adequate ventilation, especially in confined areas

### Personal Protective Equipment

#### Skin Protection

Lightweight protective clothing, Apron, Impervious gloves

#### Eye/face Protection

If splashes are likely to occur, wear Goggles.

#### Respiratory Protection

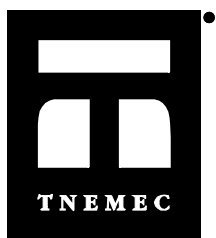
**Use only with adequate ventilation.** Do not breathe dust, vapors or spray mist. Ensure fresh air entry during application and drying. If you experience eye watering, headache or dizziness or if air monitoring demonstrates vapor/mist levels are above applicable limits, wear an appropriate, properly fitted respirator (NIOSH approved) during and after application. Follow respirator manufacturer's directions for respirator use.

### General Hygiene Considerations

Handle in accordance with good industrial hygiene and safety practice.

Avoid breathing dust created by cutting, sanding, or grinding.





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Preparation Date: 25-Mar-2009

Revision Date: 25-Mar-2009

Revision Number: 0

### 2. HAZARDS IDENTIFICATION

#### Emergency Overview

#### DANGER!

HARMFUL IF INHALED.  
 MAY CAUSE ALLERGIC RESPIRATORY REACTION; EFFECTS MAY BE PERMANENT.  
 MAY CAUSE ALLERGIC SKIN REACTION; EFFECTS MAY BE PERMANENT.  
 COMBUSTIBLE LIQUID AND VAPOR.  
 HARMFUL OR FATAL IF SWALLOWED.  
 MAY AFFECT THE BRAIN OR NERVOUS SYSTEM CAUSING DIZZINESS, HEADACHE OR NAUSEA.  
 MAY CAUSE EYE, SKIN, NOSE, THROAT AND RESPIRATORY TRACT IRRITATION.

#### Potential Health Effects

**Principle Routes of Exposure** Eye contact, Inhalation, Skin contact.

#### Acute Effects

##### Eyes

Moderately irritating to the eyes. Risk of serious damage to eyes.

##### Skin

Irritating to skin. May cause sensitization by skin contact.

##### Inhalation

Irritating to respiratory system. May cause allergic respiratory reaction.

##### Ingestion

May be harmful if swallowed.

#### Chronic Effects

NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal.

#### Target Organ Effects

Central nervous system, Eyes, Respiratory system, Skin

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### Hazardous Components

Component	CAS-No	Weight %
HEXAMETHYLENE DIISOCYANATE (HDI) POLYMER	28182-81-2	89.8
PETROLEUM SOLVENT (NAPHTHA)	64742-95-6	5
N-BUTYL ACETATE	123-86-4	5
HEXAMETHYLENE DIISOCYANATE (HDI) MONOMER	822-06-0	0.2

### 4. FIRST AID MEASURES

**Eye Contact** Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

**Skin Contact** Wash off immediately with soap and plenty of water. Consult a physician if necessary.

**Ingestion** If swallowed, do not induce vomiting. Get medical attention immediately.

**Inhalation** Move to fresh air. Oxygen or artificial respiration if needed. Consult a physician.

## 5. FIRE-FIGHTING MEASURES

### Flammable Properties

Combustible material.

### Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Contact with water may cause violent frothing. Use: Carbon dioxide (CO<sub>2</sub>) - Foam - Dry chemical

**Hazardous Decomposition Products** Oxides of carbon, hydrocarbons. Oxides of nitrogen. Hydrogen cyanide.

### 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.

### 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

Avoid contact with skin, eyes and clothing. Use personal protective equipment. Remove all sources of ignition.

### Environmental Precautions

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

### 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

### Handling

**Use only with adequate ventilation.** Avoid contact with skin, eyes and clothing. Handle in accordance with good industrial hygiene and safety practice. Remove and wash contaminated clothing before re-use. Use only in area provided with appropriate exhaust ventilation. 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.

### Storage

Close container after each use. Keep away from heat, sparks and flame. Use only in an area containing flame proof equipment. Prevent build-up of vapors by opening all windows and doors to achieve cross ventilation.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	Quebec TWAEV	Ontario TWAEV	Mexico OEL (TWA)
N-BUTYL ACETATE	TWA: 150 ppm STEL: 200 ppm	TWA: 710 mg/m <sup>3</sup> TWA: 150 ppm STEL: 200 ppm STEL: 950 mg/m <sup>3</sup>	TWA: 150 ppm TWA: 713 mg/m <sup>3</sup> STEL: 200 ppm STEL: 950 mg/m <sup>3</sup>	TWA: 150 ppm TWA: 710 mg/m <sup>3</sup> STEL: 200 ppm STEL: 950 mg/m <sup>3</sup>	TWA: 150 ppm TWA: 710 mg/m <sup>3</sup> STEL: 200 ppm STEL: 950 mg/m <sup>3</sup>
HEXAMETHYLENE DIISOCYANATE (HDI) MONOMER	TWA: 0.005 ppm		TWA: 0.034 mg/m <sup>3</sup> TWA: 0.005 ppm	TWA: 0.005 ppm TWA: 0.2 µmol/m <sup>3</sup> CEV: 0.02 ppm CEV: 0.8 µmol/m <sup>3</sup>	

### Engineering Measures

Ensure adequate ventilation, especially in confined areas

### Personal Protective Equipment

#### Skin Protection

Lightweight protective clothing, Apron, Impervious gloves

#### Eye/face Protection

Safety glasses with side-shields

#### 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.

