



# Material Safety Data Sheet

Print Date 16-Jun-2011

Revision Date 15-Jun-2011

Revision Number 2

## 1. PRODUCT AND COMPANY IDENTIFICATION

<b>Common name</b>	SERIES 84 PART A
<b>Product code</b>	F084-00WHA
<b>Trade name</b>	CERAMLON ENV TNEMEC WHITE
<b>Product Class</b>	MODIFIED POLYAMINE PAINT
<b>Manufacturer</b>	Tnemec Company, Inc. 6800 Corporate Drive, Kansas City, MO 64120-1372
<b>Emergency telephone</b>	800-535-5053 (INFOTRAC) - TNEMEC REGULATORY DEPT: 816-474-3400

## 2. HAZARDS IDENTIFICATION

### Emergency Overview

#### DANGER!

FLAMMABLE LIQUID AND VAPOR.  
CORROSIVE.  
CAUSES SKIN AND EYE BURNS.  
HARMFUL OR FATAL IF SWALLOWED.  
HARMFUL IF INHALED.  
MAY CAUSE ALLERGIC SKIN REACTION; EFFECTS MAY BE PERMANENT.  
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**

Causes burns.

**Skin**

Causes burns. May cause sensitization by skin contact.

**Inhalation**

Irritating to respiratory system. Respirable crystalline silica (quartz) can cause silicosis, a fibrosis (scarring) of the lungs.

**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.

See Section 11 for additional Toxicological information.

#### Aggravated Medical Conditions

Central nervous system. Gastrointestinal tract. Kidney disorders. Liver disorders. Skin disorders. Respiratory disorders.

#### Interactive effects

Use of alcoholic beverages may enhance toxic effects.

#### Potential environmental effects

See Section 12 for additional Ecological Information

**Target Organ Effects**

Blood, Central nervous system, Central Vascular System (CVS), Gastrointestinal tract, Eyes, Kidney, Liver, Lungs, Respiratory system, Skin

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Hazardous Components**

Component	CAS-No	Weight %
BARIUM SULFATE (TOTAL DUST)	7727-43-7	10 - 30
TITANIUM DIOXIDE (TOTAL DUST)	13463-67-7	10 - 30
CRYSTALLINE SILICA (QUARTZ)	14808-60-7	10 - 30
POLYOXYPROPYLENETRIAMINE	39423-51-3	5 - 10
XYLENE	1330-20-7	5 - 10
TALC (RESPIRABLE DUST)	14807-96-6	1 - 5
BENZYL ALCOHOL	100-51-6	1 - 5
MODIFIED ALIPHATIC AMINE		1 - 5
N-BUTYL ALCOHOL	71-36-3	1 - 5
AMORPHOUS SILICA	7631-86-9	1 - 5
ALUMINUM OXIDES	1344-28-1	1 - 5
ETHYL BENZENE	100-41-4	1 - 5

### 4. FIRST AID MEASURES

<b>Eye contact:</b>	Rinse thoroughly with plenty of water for at least 15 minutes.
<b>Skin contact:</b>	Wash off immediately with soap and plenty of water.
<b>Ingestion:</b>	If swallowed, do not induce vomiting. Get medical attention immediately.
<b>Inhalation:</b>	Move to fresh air. Oxygen or artificial respiration if needed.

### 5. FIRE-FIGHTING MEASURES

<b>Flammable properties</b>	Flammable.
<b>Suitable extinguishing media</b>	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
<b>Hazardous decomposition products</b>	Oxides of carbon, hydrocarbons.

**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

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

**Other information**

Not applicable

## 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. 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)
BARIUM SULFATE (TOTAL DUST)	: 10 mg/m <sup>3</sup> TWA : 0.5 mg/m <sup>3</sup> TWA (as Ba)	: 10 mg/m <sup>3</sup> TWA (total dust); 5 mg/m <sup>3</sup> TWA (respirable fraction) : 15 mg/m <sup>3</sup> TWA (total dust); 5 mg/m <sup>3</sup> TWA (respirable fraction)	TWA: 10 ppm TWAEV (total dust, containing no asbestos and less than 1% crystalline silica); 5 ppm TWAEV (respirable dust, containing no asbestos and less than 1% crystalline silica) TWA: 0.5 mg/m <sup>3</sup> TWAEV (as Ba)	TWA: 10 mg/m <sup>3</sup> TWA (total dust) TWA: 0.5 mg/m <sup>3</sup> TWA (as Ba)	TWA: 0.5 mg/m <sup>3</sup>
TITANIUM DIOXIDE (TOTAL DUST)	: 10 mg/m <sup>3</sup> TWA	: 10 mg/m <sup>3</sup> TWA (total dust) : 15 mg/m <sup>3</sup> TWA (total dust)	TWA: 10 mg/m <sup>3</sup> TWAEV (total dust, containing no asbestos and less than 1% crystalline silica)	TWA: 10 mg/m <sup>3</sup> TWA (total dust)	: 10 mg/m <sup>3</sup> TWA (as Ti) : 20 mg/m <sup>3</sup> STEL (as Ti)
CRYSTALLINE SILICA (QUARTZ)	: 0.025 mg/m <sup>3</sup> TWA (respirable fraction)	: 0.1 mg/m <sup>3</sup> TWA (respirable dust)	TWA: 0.1 mg/m <sup>3</sup> TWAEV (respirable dust)	TWA: 0.10 mg/m <sup>3</sup> TWA (designated substance regulation, respirable)	: 0.1 mg/m <sup>3</sup> TWA (respirable fraction)
XYLENE	: 100 ppm TWA : 150 ppm STEL	: 100 ppm TWA; 435 mg/m <sup>3</sup> TWA : 150 ppm STEL; 655 mg/m <sup>3</sup> STEL	TWA: 100 ppm TWAEV; 434 mg/m <sup>3</sup> TWAEV STEL: 150 ppm STEV; 651 mg/m <sup>3</sup> STEV	TWA: 100 ppm TWA STEL: 150 ppm STEL	: 100 ppm TWA; 435 mg/m <sup>3</sup> TWA : 150 ppm STEL; 655 mg/m <sup>3</sup> STEL
TALC (RESPIRABLE DUST)	: 2 mg/m <sup>3</sup> TWA (particulate matter containing no asbestos and <1% crystalline silica, respirable fraction)	: 2 mg/m <sup>3</sup> TWA (<1% Crystalline silica, containing no Asbestos, respirable dust)	TWA: 3 mg/m <sup>3</sup> TWAEV (respirable dust)	TWA: 2 mg/m <sup>3</sup> TWA (containing no Asbestos and <1% Crystalline silica, respirable)	: 2 mg/m <sup>3</sup> TWA (respirable fraction)
N-BUTYL ALCOHOL	: 20 ppm TWA	Skin : 50 ppm Ceiling; 150 mg/m <sup>3</sup> Ceiling : 100 ppm TWA; 300 mg/m <sup>3</sup> TWA	Ceiling: 50 ppm Ceiling; 152 mg/m <sup>3</sup> Ceiling Skin	TWA: 20 ppm TWA	: 50 ppm Peak; 150 mg/m <sup>3</sup> Peak
ALUMINUM OXIDES	TWA: 1 mg/m <sup>3</sup>	: 10 mg/m <sup>3</sup> TWA (total dust); 5 mg/m <sup>3</sup> TWA (respirable fraction) : 15 mg/m <sup>3</sup> TWA (total dust); 5 mg/m <sup>3</sup> TWA (respirable fraction)	TWA: 10 mg/m <sup>3</sup> TWAEV (total dust, containing no asbestos and less than 1% crystalline silica, as Al)	TWA: 10 mg/m <sup>3</sup>	: 10 mg/m <sup>3</sup> TWA

ETHYL BENZENE	: 100 ppm TWA : 125 ppm STEL	: 100 ppm TWA; 435 mg/m <sup>3</sup> TWA : 125 ppm STEL; 545 mg/m <sup>3</sup> STEL	TWA: 100 ppm TWAEV; 434 mg/m <sup>3</sup> TWAEV STEL: 125 ppm STEV; 543 mg/m <sup>3</sup> STEV	TWA: 100 ppm TWA STEL: 125 ppm STEL	: 100 ppm TWA; 435 mg/m <sup>3</sup> TWA : 125 ppm STEL; 545 mg/m <sup>3</sup> STEL
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**Engineering measures**

Ensure adequate ventilation, especially in confined areas

**Personal Protective Equipment**

**Skin protection**

Lightweight protective clothing, Apron, Impervious gloves

**Eye/face protection**

Goggles. If splashes are likely to occur, wear face-shield.

**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.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

Flash point	Not applicable
Boiling range	116 - 142°C / 241.0 - 288.0°F
Upper explosion limit	No information available
Lower explosion limit	No information available
Evaporation rate	No information available
Vapor pressure	No information available
Vapor density	No information available
Specific Gravity	1.90495 g/cm <sup>3</sup>
Density	15.85206 lbs/gal
Volatile organic compounds (VOC) content	2.151 lbs/gal
Volatile by weight	13.5740 %
Volatile by volume	30.0515 %

**10. STABILITY AND REACTIVITY**

<b>Chemical stability</b>	Stable.	<b>Conditions to avoid</b>	Heat, flames and sparks.
<b>Incompatible products</b>	Strong oxidizing agents. Bases. Acids.	<b>Possibility of hazardous reactions</b>	None under normal processing

**11. TOXICOLOGICAL INFORMATION**

**Acute toxicity**

**Component Information**

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
TITANIUM DIOXIDE (TOTAL DUST)	10000 mg/kg ( Rat )		
CRYSTALLINE SILICA (QUARTZ)	500 mg/kg ( Rat )		
XYLENE	4300 mg/kg ( Rat )	1700 mg/kg ( Rabbit )	5000 ppm ( Rat ) 4 h 47635 mg/L ( Rat ) 4 h
BENZYL ALCOHOL	1230 mg/kg ( Rat )	2000 mg/kg ( Rabbit )	8.8 mg/L ( Rat ) 4 h
N-BUTYL ALCOHOL	790 mg/kg ( Rat )	3400 mg/kg ( Rabbit )	8000 ppm ( Rat ) 4 h 17.7 mg/L ( Rat ) 4 h

## 11. TOXICOLOGICAL INFORMATION

AMORPHOUS SILICA	5000 mg/kg ( Rat )	2000 mg/kg ( Rabbit )	2.2 mg/L ( Rat ) 1 h
ALUMINUM OXIDES	5000 mg/kg ( Rat )		
ETHYL BENZENE	3500 mg/kg ( Rat )	15354 mg/kg ( Rabbit )	17.2 mg/L ( Rat ) 4 h

**Irritation** No information available  
**Corrosivity** No information available  
**Sensitization** No information available

### Chronic toxicity

#### Carcinogenicity

The table below indicates whether each agency has listed any ingredient as a carcinogen

Component	ACGIH	IARC	NTP	OSHA	Mexico
TITANIUM DIOXIDE (TOTAL DUST)		Group 2B		X	
CRYSTALLINE SILICA (QUARTZ)	A2	Group 1	Known	X	
ETHYL BENZENE	A3	Group 2B		X	

**Mutagenicity** No information available  
**Reproductive effects** No information available  
**Developmental effects** No information available  
**Teratogenicity** No information available  
**Target Organ Effects** Blood, Central nervous system, Central Vascular System (CVS), Gastrointestinal tract, Eyes, Kidney, Liver, Lungs, Respiratory system, Skin.  
**Endocrine Disruptor Information** No information available

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

Component	Toxicity to algae	Toxicity to fish	Toxicity to microorganisms	Toxicity to daphnia
XYLENE		LC50= 13.4 mg/L Pimephales promelas 96 h LC50 2.661-4.093 mg/L Oncorhynchus mykiss 96 h LC50 13.5-17.3 mg/L Oncorhynchus mykiss 96 h LC50 13.1-16.5 mg/L Lepomis macrochirus 96 h LC50= 19 mg/L Lepomis macrochirus 96 h LC50 7.711-9.591 mg/L Lepomis macrochirus 96 h LC50 23.53-29.97 mg/L Pimephales promelas 96 h LC50= 780 mg/L Cyprinus carpio 96 h LC50> 780 mg/L Cyprinus carpio 96 h LC50 30.26-40.75 mg/L Poecilia reticulata 96 h	EC50 = 0.0084 mg/L 24 h	EC50 = 3.82 mg/L 48 h LC50 = 0.6 mg/L 48 h
TALC (RESPIRABLE DUST)		LC50> 100 g/L Brachydanio rerio 96 h		
BENZYL ALCOHOL	EC50 = 35 mg/L 3 h	LC50= 10 mg/L Lepomis macrochirus 96 h LC50= 460 mg/L Pimephales promelas 96 h	EC50 = 63.7 mg/L 5 min EC50 = 63.7 mg/L 15 min EC50 = 71.4 mg/L 30 min EC50 = 50 mg/L 5 min	EC50 = 23 mg/L 48 h

Component	Toxicity to algae	Toxicity to fish	Toxicity to microorganisms	Toxicity to daphnia
N-BUTYL ALCOHOL	EC50 > 500 mg/L 96 h EC50 > 500 mg/L 72 h	LC50 100000-500000 µg/L Lepomis macrochirus 96 h LC50 1730-1910 mg/L Pimephales promelas 96 h LC50= 1740 mg/L Pimephales promelas 96 h LC50= 1910000 µg/L Pimephales promelas 96 h	EC50 = 2041.4 mg/L 5 min EC50 = 2186 mg/L 30 min EC50 = 4400 mg/L 17 h EC50 = 3980 mg/L 24 h	EC50 1897 - 2072 mg/L 48 h EC50 = 1983 mg/L 48 h
AMORPHOUS SILICA	EC50 = 440 mg/L 72 h	LC50= 5000 mg/L Brachydanio rerio 96 h		EC50 = 7600 mg/L 48 h
ETHYL BENZENE	EC50 = 4.6 mg/L 72 h EC50 > 438 mg/L 96 h EC50 2.6 - 11.3 mg/L 72 h EC50 1.7 - 7.6 mg/L 96 h	LC50 11.0-18.0 mg/L Oncorhynchus mykiss 96 h LC50= 4.2 mg/L Oncorhynchus mykiss 96 h LC50 7.55-11 mg/L Pimephales promelas 96 h LC50= 32 mg/L Lepomis macrochirus 96 h LC50 9.1- 15.6 mg/L Pimephales promelas 96 h LC50= 9.6 mg/L Poecilia reticulata 96 h	EC50 = 9.68 mg/L 30 min EC50 = 96 mg/L 24 h	EC50 1.8 - 2.4 mg/L 48 h

### 13. DISPOSAL CONSIDERATIONS

#### Waste 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 for local recycling, recovery or waste disposal

### 14. TRANSPORT INFORMATION

#### DOT

Ground Transportation Only. Call TNE MEC Traffic Department - 816-474-3400 for other modes of Transportation.

#### Proper shipping name

UN2924, FLAMMABLE LIQUID, CORROSIVE, N.O.S. (XYLENE, POLYOXYPROPYLENETRIAMINE), 3(8), PGIII, ERG 132

### 15. REGULATORY INFORMATION

#### International Inventories

TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Complies
CHINA	Complies
ENCS	Does not Comply
KECL	Does not Comply
PICCS	Does not Comply
AICS	Does not Comply

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

Component  
XYLENE  
ETHYL BENZENE

#### United States of America Federal Regulations

#### SARA 313

Component	CAS-No	Weight %	SARA 313 - Threshold Values
BARIUM SULFATE (TOTAL DUST)	7727-43-7	10 - 30	1.0
XYLENE	1330-20-7	5 - 10	1.0 % de minimis concentration
N-BUTYL ALCOHOL	71-36-3	1 - 5	1.0 % de minimis concentration
ALUMINUM OXIDES	1344-28-1	1 - 5	1.0 % de minimis concentration (fibrous forms)
ETHYL BENZENE	100-41-4	1 - 5	0.1 % de minimis concentration

**SARA 311/312 Hazardous Categorization**

Chronic Health Hazard	yes
Acute 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
XYLENE	100 lb RQ			X
ETHYL BENZENE	1000 lb RQ	X	X	X

**CERCLA****United States of America State Regulations****California Prop. 65**

This product contains the following Proposition 65 chemicals:

Component	CAS-No	California Prop. 65
CRYSTALLINE SILICA (QUARTZ)	14808-60-7	Carcinogen
ETHYL BENZENE	100-41-4	Carcinogen

**State Right-to-Know**

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
BARIUM SULFATE (TOTAL DUST)	X	X	X		X
TITANIUM DIOXIDE (TOTAL DUST)	X	X	X		X
CRYSTALLINE SILICA (QUARTZ)	X	X	X		X
XYLENE	X	X	X	X	X
TALC (RESPIRABLE DUST)	X	X	X		X
BENZYL ALCOHOL	X		X		
N-BUTYL ALCOHOL	X	X	X		X
AMORPHOUS SILICA	X		X		
ALUMINUM OXIDES	X	X	X		X
ETHYL BENZENE	X	X	X	X	X

**Other international regulations****Canada**

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.

**WHMIS Classification**

B2 Flammable liquid  
 D2A Very toxic materials  
 E Corrosive material



Component	NPRI
XYLENE	Part 1, Group 1 Substance; Part 5 Substance
N-BUTYL ALCOHOL	Part 1, Group 1 Substance
ALUMINUM OXIDES	Part 1, Group 1 Substance (fibrous form)
ETHYL BENZENE	Part 1, Group 1 Substance

**Legend**

NPRI - National Pollutant Release Inventory

16. OTHER INFORMATION

Revision Date 15-Jun-2011

Revision Note No information available

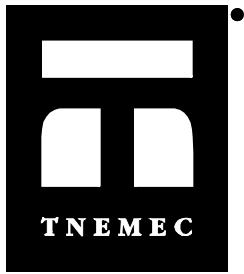
HMIS (Hazardous Material Information System)      Health 3\*      Flammability 3      Reactivity 1

**Disclaimer**

For specific information regarding occupational safety and health standards, please refer to the Code of Federal Regulations, Title 29, Part 1910.

To the best of our knowledge, the information contained herein is accurate. However, neither the Tnemec Company or any of its subsidiaries assume any liability whatsoever for the accuracy of completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown health hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards which exist.

**End of MSDS**



# Material Safety Data Sheet

Print Date 24-May-2011

Revision Date 24-May-2011

Revision Number 2

## 1. PRODUCT AND COMPANY IDENTIFICATION

<b>Common name</b>	SERIES 84 PART B
<b>Product code</b>	F084-0084B
<b>Trade name</b>	CERAMLON ENV CONVERTER
<b>Product Class</b>	EPOXY RESIN PAINT
<b>Manufacturer</b>	Tnemec Company, Inc. 6800 Corporate Drive, Kansas City, MO 64120-1372
<b>Emergency telephone</b>	800-535-5053 (INFOTRAC) - TNE MEC REGULATORY DEPT: 816-474-3400

## 2. HAZARDS IDENTIFICATION

### Emergency Overview

#### DANGER!

COMBUSTIBLE LIQUID AND VAPOR.  
HARMFUL OR FATAL IF SWALLOWED.  
HARMFUL IF INHALED.  
MAY CAUSE ALLERGIC SKIN REACTION; EFFECTS MAY BE PERMANENT.  
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

<b>Eyes</b>	Moderately irritating to the eyes.
<b>Skin</b>	Irritating to skin. May cause sensitization by skin contact.
<b>Inhalation</b>	Irritating to respiratory system. Respirable crystalline silica (quartz) can cause silicosis, a fibrosis (scarring) of the lungs.
<b>Ingestion</b>	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. Cancer hazard. Contains crystalline silica which can cause cancer. (Risk of cancer depends on duration and level of exposure).

See Section 11 for additional Toxicological information.

**Aggravated Medical Conditions** Central nervous system. Gastrointestinal tract. Kidney disorders. Liver disorders. Skin disorders. Respiratory disorders.

**Interactive effects** Use of alcoholic beverages may enhance toxic effects.

**Potential environmental effects** See Section 12 for additional Ecological Information

**Target Organ Effects**

Blood, Central nervous system, Central Vascular System (CVS), Gastrointestinal tract, Eyes, Kidney, Liver, Lungs, Respiratory system, Skin

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Hazardous Components**

Component	CAS-No	Weight %
EPOXY RESIN (LER)	25085-99-8	30 - 60
BARIUM SULFATE (TOTAL DUST)	7727-43-7	10 - 30
CRYSTALLINE SILICA (QUARTZ)	14808-60-7	5 - 10
EPOXY RESIN (LER)	67924-34-9	5 - 10
TALC (RESPIRABLE DUST)	14807-96-6	5 - 10
XYLENE	1330-20-7	1 - 5
PROPRIETARY	15625-89-5	1 - 5
METHYL ISOBUTYL KETONE	108-10-1	1 - 5
PROPRIETARY	13048-33-4	1 - 5
EPOXY RESIN	30499-70-8	1 - 5

### 4. FIRST AID MEASURES

<b>Eye contact:</b>	Rinse thoroughly with plenty of water for at least 15 minutes.
<b>Skin contact:</b>	Wash off immediately with soap and plenty of water.
<b>Ingestion:</b>	If swallowed, do not induce vomiting. Get medical attention immediately.
<b>Inhalation:</b>	Move to fresh air. Oxygen or artificial respiration if needed.

### 5. FIRE-FIGHTING MEASURES

<b>Flammable properties</b>	Combustible material.
<b>Suitable extinguishing media</b>	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
<b>Hazardous decomposition products</b>	Oxides of carbon, hydrocarbons. Aldehydes.

**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

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

**Other information** Not applicable

## 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. 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)
BARIUM SULFATE (TOTAL DUST)	: 10 mg/m <sup>3</sup> TWA : 0.5 mg/m <sup>3</sup> TWA (as Ba)	: 10 mg/m <sup>3</sup> TWA (total dust); 5 mg/m <sup>3</sup> TWA (respirable fraction) : 15 mg/m <sup>3</sup> TWA (total dust); 5 mg/m <sup>3</sup> TWA (respirable fraction)	TWA: 10 ppm TWAEV (total dust, containing no asbestos and less than 1% crystalline silica); 5 ppm TWAEV (respirable dust, containing no asbestos and less than 1% crystalline silica) TWA: 0.5 mg/m <sup>3</sup> TWAEV (as Ba)	TWA: 10 mg/m <sup>3</sup> TWA (total dust) TWA: 0.5 mg/m <sup>3</sup> TWA (as Ba)	TWA: 0.5 mg/m <sup>3</sup>
CRYSTALLINE SILICA (QUARTZ)	: 0.025 mg/m <sup>3</sup> TWA (respirable fraction)	: 0.1 mg/m <sup>3</sup> TWA (respirable dust)	TWA: 0.1 mg/m <sup>3</sup> TWAEV (respirable dust)	TWA: 0.10 mg/m <sup>3</sup> TWA (designated substance regulation, respirable)	: 0.1 mg/m <sup>3</sup> TWA (respirable fraction)
TALC (RESPIRABLE DUST)	: 2 mg/m <sup>3</sup> TWA (particulate matter containing no asbestos and <1% crystalline silica, respirable fraction)	: 2 mg/m <sup>3</sup> TWA (<1% Crystalline silica, containing no Asbestos, respirable dust)	TWA: 3 mg/m <sup>3</sup> TWAEV (respirable dust)	TWA: 2 mg/m <sup>3</sup> TWA (containing no Asbestos and <1% Crystalline silica, respirable)	: 2 mg/m <sup>3</sup> TWA (respirable fraction)
XYLENE	: 100 ppm TWA : 150 ppm STEL	: 100 ppm TWA; 435 mg/m <sup>3</sup> TWA : 150 ppm STEL; 655 mg/m <sup>3</sup> STEL	TWA: 100 ppm TWAEV; 434 mg/m <sup>3</sup> TWAEV STEL: 150 ppm STEV; 651 mg/m <sup>3</sup> STEV	TWA: 100 ppm TWA STEL: 150 ppm STEL	: 100 ppm TWA; 435 mg/m <sup>3</sup> TWA : 150 ppm STEL; 655 mg/m <sup>3</sup> STEL
METHYL ISOBUTYL KETONE	: 20 ppm TWA : 75 ppm STEL	: 50 ppm TWA; 205 mg/m <sup>3</sup> TWA : 75 ppm STEL; 300 mg/m <sup>3</sup> STEL : 100 ppm TWA; 410 mg/m <sup>3</sup> TWA	TWA: 50 ppm TWAEV; 205 mg/m <sup>3</sup> TWAEV STEL: 75 ppm STEV; 307 mg/m <sup>3</sup> STEV	TWA: 50 ppm TWA STEL: 75 ppm STEL	: 50 ppm TWA; 205 mg/m <sup>3</sup> TWA : 75 ppm STEL; 307 mg/m <sup>3</sup> STEL

**Engineering measures**      Ensure adequate ventilation, especially in confined areas

**Personal Protective Equipment**

**Skin protection**

**Eye/face protection**

**Respiratory protection**

Lightweight protective clothing, Apron, Impervious gloves  
If splashes are likely to occur, wear Goggles.

**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.  
Handle in accordance with good industrial hygiene and safety practice.  
Avoid breathing dust created by cutting, sanding, or grinding.

**General hygiene considerations**

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Flash point</b>	42°C / 108.0°F
<b>Boiling range</b>	114 - 142°C / 237.0 - 288.0°F
<b>Upper explosion limit</b>	No information available
<b>Lower explosion limit</b>	No information available
<b>Evaporation rate</b>	No information available
<b>Vapor pressure</b>	No information available
<b>Vapor density</b>	No information available
<b>Specific Gravity</b>	1.58877 g/cm <sup>3</sup>
<b>Density</b>	13.22093 lbs/gal
<b>Volatile organic compounds (VOC) content</b>	.904 lbs/gal
<b>Volatile by weight</b>	6.8350 %
<b>Volatile by volume</b>	12.9013 %

## 10. STABILITY AND REACTIVITY

<b>Chemical stability</b>	Stable.	<b>Conditions to avoid</b>	Heat, flames and sparks. Amines. Primary and secondary amines, acids, alkalies, free radical producing inhibitors.
<b>Incompatible products</b>	Strong oxidizing agents. Bases. Acids. Amines. Direct heating, dirt of chemical contamination, sunlight, ultraviolet light or ionizing radiation.	<b>Possibility of hazardous reactions</b>	May occur.

## 11. TOXICOLOGICAL INFORMATION

### Acute toxicity

#### Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
CRYSTALLINE SILICA (QUARTZ)	500 mg/kg ( Rat )		
XYLENE	4300 mg/kg ( Rat )	1700 mg/kg ( Rabbit )	5000 ppm ( Rat ) 4 h 47635 mg/L ( Rat ) 4 h
PROPRIETARY	5190 µL/kg ( Rat )	5000 mg/kg ( Rabbit )	
METHYL ISOBUTYL KETONE	2080 mg/kg ( Rat )	16000 mg/kg ( Rabbit )	8.2 mg/L ( Rat ) 4 h
PROPRIETARY	5 g/kg ( Rat )	3600 µL/kg ( Rabbit )	

**Irritation** No information available  
**Corrosivity** No information available  
**Sensitization** No information available

**Chronic toxicity**

**Carcinogenicity** The table below indicates whether each agency has listed any ingredient as a carcinogen

Component	ACGIH	IARC	NTP	OSHA	Mexico
CRYSTALLINE SILICA (QUARTZ)	A2	Group 1	Known	X	
METHYL ISOBUTYL KETONE	A3				

**Mutagenicity** No information available  
**Reproductive effects** No information available  
**Developmental effects** No information available  
**Teratogenicity** No information available  
**Target Organ Effects** Blood, Central nervous system, Central Vascular System (CVS), Gastrointestinal tract, Eyes, Kidney, Liver, Lungs, Respiratory system, Skin.

**Endocrine Disruptor Information** No information available

Component	EU - Endocrine Disruptors Candidate List	EU - Endocrine Disruptors - Evaluated Substances	Japan - Endocrine Disruptor Information
EPOXY RESIN (LER)	Group III Chemical		

## 12. ECOLOGICAL INFORMATION

**Ecotoxicity**

Component	Toxicity to algae	Toxicity to fish	Toxicity to microorganisms	Toxicity to daphnia
TALC (RESPIRABLE DUST)		LC50> 100 g/L <i>Brachydanio rerio</i> 96 h		
XYLENE		LC50= 13.4 mg/L <i>Pimephales promelas</i> 96 h LC50 2.661-4.093 mg/L <i>Oncorhynchus mykiss</i> 96 h LC50 13.5-17.3 mg/L <i>Oncorhynchus mykiss</i> 96 h LC50 13.1-16.5 mg/L <i>Lepomis macrochirus</i> 96 h LC50= 19 mg/L <i>Lepomis macrochirus</i> 96 h LC50 7.711-9.591 mg/L <i>Lepomis macrochirus</i> 96 h LC50 23.53-29.97 mg/L <i>Pimephales promelas</i> 96 h LC50= 780 mg/L <i>Cyprinus carpio</i> 96 h LC50> 780 mg/L <i>Cyprinus carpio</i> 96 h LC50 30.26-40.75 mg/L <i>Poecilia reticulata</i> 96 h	EC50 = 0.0084 mg/L 24 h	EC50 = 3.82 mg/L 48 h LC50 = 0.6 mg/L 48 h
METHYL ISOBUTYL KETONE	EC50 = 400 mg/L 96 h	LC50 496-514 mg/L <i>Pimephales promelas</i> 96 h	EC50 = 79.6 mg/L 5 min	EC50 = 170 mg/L 48 h

## 13. DISPOSAL CONSIDERATIONS

**Waste 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 for local recycling, recovery or waste disposal

**14. TRANSPORT INFORMATION**

**DOT** Ground Transportation Only. Call TNEMEC Traffic Department - 816-474-3400 for other modes of Transportation.

**Proper shipping name** PAINT IN OIL

**15. REGULATORY INFORMATION**

**International Inventories**

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

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

Component  
 XYLENE  
 METHYL ISOBUTYL KETONE

**United States of America Federal Regulations**

**SARA 313**

Component	CAS-No	Weight %	SARA 313 - Threshold Values
BARIUM SULFATE (TOTAL DUST)	7727-43-7	10 - 30	1.0
XYLENE	1330-20-7	1 - 5	1.0 % de minimis concentration
METHYL ISOBUTYL KETONE	108-10-1	1 - 5	1.0 % de minimis concentration

**SARA 311/312 Hazardous Categorization**

<b>Chronic Health Hazard</b>	yes
<b>Acute Health Hazard</b>	yes
<b>Fire Hazard</b>	yes
<b>Sudden Release of Pressure Hazard</b>	no
<b>Reactive Hazard</b>	no

Component	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
XYLENE	100 lb RQ			X

**CERCLA**

**United States of America State Regulations**

**California Prop. 65**

This product contains the following Proposition 65 chemicals:

Component	CAS-No	California Prop. 65
CRYSTALLINE SILICA (QUARTZ)	14808-60-7	Carcinogen

**State Right-to-Know**

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
BARIUM SULFATE (TOTAL DUST)	X	X	X		X
CRYSTALLINE SILICA (QUARTZ)	X	X	X		X
TALC (RESPIRABLE DUST)	X	X	X		X
XYLENE	X	X	X	X	X
METHYL ISOBUTYL KETONE	X	X	X	X	X

Other international regulations

**Canada**

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.

**WHMIS Classification**

B3 Combustible liquid  
D2B Toxic materials



Component	NPRI
XYLENE	Part 1, Group 1 Substance; Part 5 Substance
METHYL ISOBUTYL KETONE	Part 1, Group 1 Substance; Part 5 Substance

**Legend**

NPRI - National Pollutant Release Inventory

**16. OTHER INFORMATION**

Revision Date 24-May-2011

Revision Note No information available

HMIS (Hazardous Material Information System)      Health 2\*      Flammability 3      Reactivity 1

**Disclaimer**

For specific information regarding occupational safety and health standards, please refer to the Code of Federal Regulations, Title 29, Part 1910.

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**End of MSDS**