Safety Data Sheet

Issue Date 14-Aug-2018 **Revision Date** 14-Aug-2018 **Revision Number** 12

1. IDENTIFICATION

Product identifier

Product Code 1224-1288A
Product Name EPOXOLINE WB OFF-WHITE

Other means of identification

Common Name SERIES 1224, PART A
Synonyms None

Recommended use of the chemical and restrictions on use

Recommended Use industrial paint.
Uses advised against Consumer use, For professional use only. Not for residential use.

Details of the supplier of the safety data sheet

Manufacturer Address
Tnemec Company, Inc. 6800 Corporate Drive, Kansas City, MO 64120-1372 816-474-3400

Distributor
Tnemec Company, Inc. 86 Boul, des Entreprises, Ste. 203, Boisbriand, Quebec Canada J7G 2T3

Emergency telephone number

Company Phone Number Tnemec Regulatory Dept: 816-474-3400
24 Hour Emergency Phone Number 800-535-5053 (Infotrac)

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status
This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity - Oral	Category 4
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A
Skin sensitization	Category 1A
Specific target organ toxicity (single exposure)	Category 1
Specific target organ toxicity (repeated exposure)	Category 1

Label elements

EMERGENCY OVERVIEW

Danger

Hazard statements
Harmful if swallowed
Causes skin irritation
Causes serious eye irritation
May cause an allergic skin reaction
Causes damage to organs
Causes damage to organs through prolonged or repeated exposure

Appearance opaque **Physical state** liquid **Odor** Slight

Precautionary Statements
Prevention
Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Wear protective gloves/protective clothing/eye protection/face protection
Contaminated work clothing should not be allowed out of the workplace
Do not breathe dust/fume/gas/mist/vapors/spray

Response
IF exposed: Call a POISON CENTER or doctor/physician
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: Wash with plenty of soap and water
Take off contaminated clothing and wash before reuse
If skin irritation or rash occurs: Get medical advice/attention
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
Rinse mouth

Storage
Store locked up
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
Inhalation of metallic zinc dust may result in symptoms known as metal fume fever. Symptoms include chills, fever, muscular pain, nausea and vomiting
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 15.9783859 % 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%
CRYSTALLINE SILICA (QUARTZ)	14808-60-7	10 - <30%
BARIUM SULFATE (TOTAL DUST)	7727-43-7	1 - <10%
AMORPHOUS CALCIUM ALUMINOSILICATE	65997-17-3	1 - <10%
AMORPHOUS SILICA	7631-86-9	1 - <10%
MODIFIED ALIPHATIC AMINE	1477-55-0	1 - <10%
ZINC COMPOUNDS	7779-90-0	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

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. Call a physician immediately.

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. Oxides of nitrogen. Hydrocarbons.

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. Ensure adequate ventilation. 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 Ensure adequate ventilation. Wear personal protective equipment. Avoid contact with eyes, skin and clothing. Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharges. Avoid breathing vapors or mists. Wash thoroughly after handling. Close container after each use.

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 Acids. Strong oxidizing agents. Reducing agents.

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/m³	TWA: 10 mg/m³ TWA: 15 mg/m³	5000 mg/m³
CRYSTALLINE SILICA (QUARTZ) 14808-60-7	TWA: 0.025 mg/m³	TWA: 0.1 mg/m³ TWA: 50 µg/m³	50 mg/m³
BARIUM SULFATE (TOTAL DUST) 7727-43-7	TWA: 5 mg/m³	TWA: 10 mg/m³ TWA: 5 mg/m³ TWA: 15 mg/m³	
AMORPHOUS CALCIUM ALUMINOSILICATE 65997-17-3	TWA: 1 fiber/cm3 TWA: 5 mg/m³	-	
AMORPHOUS SILICA 7631-86-9	-	TWA: 6 mg/m³	3000 mg/m³
MODIFIED ALIPHATIC AMINE 1477-55-0	Skin Ceiling: 0.1 mg/m³	Skin Ceiling: 0.1 mg/m³	
ALUMINUM HYDROXIDE 21645-51-2	TWA: 1 mg/m³	-	
ZIRCONIUM OXIDE 1314-23-4	TWA: 5 mg/m³	-	25 mg/m³

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 Tightly fitting safety goggles 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	Use only with adequate ventilation. Do not breathe vapors, spray mist, or dust. Ensure fresh air entry during application and drying. If you experience eye watering, headache or dizziness or if air monitoring demonstrates vapor/mist or dust levels are above applicable limits, wear an appropriate, properly fitted respirator (NIOSH/MSHA approved) during and after application. Follow respirator manufacturer's directions for respirator use. 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		
Appearance	opaque	**Odor**	Slight
Color	No information available	**Odor threshold**	No information available

Property	**Values**	**Remarks**
pH		No data available
Melting point / freezing point	No data available	No data available
Boiling point / boiling range	100 °C / 212.0 °F	
Flash point	110 °C / 230.0 °F	Seta closed cup
Evaporation rate		No data available
Flammability (solid, gas)	No data available	No information available
Flammability Limit in Air		No data available
Upper flammability limit	N/A	
Lower flammability limit	N/A	
Vapor pressure		No data available
Vapor density		No data available
Specific gravity	1.8066	g/cm3
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	No data available
Decomposition temperature		No data available
Kinematic viscosity		No data available
Dynamic viscosity	8000 centipoises	approx

Other Information

Density	15.06702 lbs/gal
Volatile organic compounds (VOC) content	0 lbs/gal
Total volatiles weight percent	28.63 %
Total volatiles volume percent	51.79 %
Bulk density	No information available

10. STABILITY AND REACTIVITY

Reactivity
No data available

Chemical stability
Stable under recommended storage conditions.

Possibility of hazardous reactions
None under normal processing.

Conditions to avoid
Heat, flames and sparks.

Incompatible materials
Acids, Strong oxidizing agents, Reducing agents

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. May cause irritation. Respirable crystalline silica (quartz) can cause silicosis, a fibrosis (scarring) of the lungs.

Eye contact Causes serious eye irritation.

Skin contact Irritating to skin. May cause sensitization by skin contact.

Ingestion Harmful if swallowed.

Chemical name	LD50 Oral	LD50 Dermal	LC50 Inhalation
TITANIUM DIOXIDE (TOTAL DUST) 13463-67-7	> 10000 mg/kg (Rat)	-	-
BARIUM SULFATE (TOTAL DUST) 7727-43-7	= 307000 mg/kg (Rat)	-	-
AMORPHOUS SILICA 7631-86-9	= 7900 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	> 2.2 mg/L (Rat) 1 h
MODIFIED ALIPHATIC AMINE 1477-55-0	= 660 mg/kg (Rat)	= 2 g/kg (Rabbit)	= 700 ppm (Rat) 1 h
ZINC COMPOUNDS 7779-90-0	> 5000 mg/kg (Rat)	-	-
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. Skin disorders. Irritating to eyes and skin.

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

Skin corrosion/irritation Irritating to skin.
Eye damage/irritation Irritating to eyes.
Chronic Toxicity Cancer hazard. Contains crystalline silica which can cause cancer. (Risk of cancer depends on duration and level of exposure). Skin sensitizer.
Sensitization May cause sensitization of susceptible persons.
Mutagenicity No information available.
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 CALCIUM ALUMINOSILICATE 65997-17-3		Group 3	-	
AMORPHOUS SILICA 7631-86-9		Group 1 Group 3	Known	

Reproductive effects No information available.

STOT - single exposure Eyes, Skin, Central Nervous System (CNS)
STOT - repeated exposure Causes damage to organs through prolonged or repeated exposure
Target organ effects Eyes, kidney, liver, respiratory system, Skin.
Aspiration hazard No information available.

Acute Toxicity 15.9783859 % of the mixture consists of ingredient(s) of unknown toxicity.

12. ECOLOGICAL INFORMATION

Ecotoxicity

30.43905 % of the mixture consists of components(s) of unknown hazards to the aquatic environment

Chemical name	Toxicity to algae	Toxicity to fish	Toxicity to daphnia
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

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	CAWAST
ZINC COMPOUNDS 7779-90-0	Toxic

14. TRANSPORT INFORMATION

DOT
Proper Shipping Name paint,water base freezable

Description Call TNEMEC Traffic Department - 816-474-3400 for additional information or other modes of Transportation.

Proper Shipping Name paint,water base freezable

Additional information Call TNEMEC Traffic Department - 816-474-3400 for additional information or other modes of Transportation.

15. REGULATORY INFORMATION

International Inventories
TSCA Complies
DSL/NDSL Complies

EINECS/ELINCS	Does Not Comply
ENCS	Does Not Comply
IECSC	Complies
KECL	Complies
PICCS	Complies
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 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
BARIUM SULFATE (TOTAL DUST) - 7727-43-7	1.0
ZINC COMPOUNDS - 7779-90-0	1.0

SARA 311/312 Hazardous Categorization

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

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
ZINC COMPOUNDS 7779-90-0		X		

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.

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
CRYSTALLINE SILICA (QUARTZ) - 14808-60-7	Carcinogen
TITANIUM DIOXIDE - 13463-67-7	Carcinogen

California SCAQMD Rule 443

Does Not Contain Photochemically Reactive Solvent

State Right-to-Know

Chemical name	New Jersey	Massachusetts	Pennsylvania
TITANIUM DIOXIDE (TOTAL DUST) 13463-67-7	X	X	X
CRYSTALLINE SILICA (QUARTZ) 14808-60-7	X	X	X
BARIUM SULFATE (TOTAL DUST)	X	X	X

7727-43-7			
AMORPHOUS SILICA 7631-86-9		X	X
MODIFIED ALIPHATIC AMINE 1477-55-0	X	X	X
ZINC COMPOUNDS 7779-90-0	X		X
ZIRCONIUM OXIDE 1314-23-4		X	

16. OTHER INFORMATION

NFPA	**Health** 3	**Flammability** 0	**Instability** 0	**Physical hazard** -
HMIS (Hazardous Material Information System)	**Health** 3	**Flammability** 0	**Reactivity** 0	

Prepared By Tnemec Regulatory Dept: 816-474-3400
Revision Date 14-Aug-2018
Revision Summary
9 4 5 6 7 10 8 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 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 14-Aug-2018 **Revision Date** 14-Aug-2018 **Revision Number** 13

1. IDENTIFICATION

Product identifier

Product Code 1224-0000B
Product Name EPOXOLINE WB CLEAR

Other means of identification

Common Name SERIES 1224, 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)

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 1
Skin sensitization	Category 1

Label elements

EMERGENCY OVERVIEW

Danger

Hazard statements
Causes skin irritation
Causes serious eye damage
May cause an allergic skin reaction

Appearance opaque	**Physical state** liquid	**Odor** Slight

Precautionary Statements
Prevention
Wash face, hands and any exposed skin thoroughly after handling
Wear protective gloves/protective clothing/eye protection/face protection
Avoid breathing dust/fume/gas/mist/vapors/spray
Contaminated work clothing should not be allowed out of the workplace

Response
Get medical advice/attention if you feel unwell
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
Immediately call a POISON CENTER or doctor/physician
IF ON SKIN: Wash with plenty of soap and water
Take off contaminated clothing and wash before reuse
If skin irritation or rash occurs: Get medical advice/attention

Storage
Store in a dry place. Store in a closed container
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
SEE SAFETY DATA SHEET
Acute Toxicity 96.90444 % of the mixture consists of ingredient(s) of unknown toxicity.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	CAS No	Weight-%
CALCIUM ALUMINATE CEMENT	65997-16-2	30 - <60%
EPOXY RESIN (LER)	25085-99-8	30 - <60%
NON-REACTIVE DILUENT	26139-75-3	1 - <10%
SYNTHETIC VITREOUS (SILICATE) FIBRES	65997-17-3	1 - <10%
AMORPHOUS SILICA	69012-64-2	1 - <10%
SODIUM OXIDE	1313-59-3	0.1 - <1%
POTASSIUM OXIDE	12136-45-7	0.1 - <1%
CALCIUM OXIDE	1305-78-8	0.1 - <1%
AMORPHOUS SILICA	7631-86-9	0.1 - <1%
ALUMINUM OXIDES	1344-28-1	0.1 - <1%
ZIRCONIUM OXIDE	1314-23-4	0.1 - <1%
PROPRIETARY	-	0.1 - <1%
FATTY ACID ESTER	-	0.1 - <1%
PROPRIETARY	-	0.1 - <1%
CALCIUM OXIDE	1305-78-8	0.1 - <1%
PROPRIETARY	-	0.1 - <1%
CRYSTALLINE SILICA (QUARTZ)	14808-60-7	0 - <0.1%
ETHYL BENZENE	100-41-4	0 - <0.1%

*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. Call a physician immediately.

Skin contact Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Call a physician immediately.

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. Aldehydes. 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. Ensure adequate ventilation. 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 Ensure adequate ventilation. Wear personal protective equipment. Avoid contact with eyes, skin and clothing. Keep away from open flames, hot surfaces and sources of ignition. Do not breathe vapours or spray mist. 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 Acids. Bases. Amines. Strong oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure guidelines .

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
SYNTHETIC VITREOUS (SILICATE) FIBRES 65997-17-3	TWA: 1 fiber/cm3 TWA: 5 mg/m³	-	
CALCIUM OXIDE 1305-78-8	TWA: 2 mg/m³	TWA: 5 mg/m³	25 mg/m³
AMORPHOUS SILICA 7631-86-9	-	TWA: 6 mg/m³	3000 mg/m³
ALUMINUM OXIDES 1344-28-1	TWA: 1 mg/m³	TWA: 10 mg/m³ TWA: 5 mg/m³ TWA: 15 mg/m³	
ZIRCONIUM OXIDE 1314-23-4	TWA: 5 mg/m³	-	25 mg/m³
CALCIUM OXIDE 1305-78-8	TWA: 2 mg/m³	TWA: 5 mg/m³	25 mg/m³
CRYSTALLINE SILICA (QUARTZ) 14808-60-7	TWA: 0.025 mg/m³	TWA: 0.1 mg/m³ TWA: 50 µg/m³	50 mg/m³
ETHYL BENZENE 100-41-4	TWA: 20 ppm	TWA: 100 ppm TWA: 435 mg/m³ STEL: 125 ppm STEL: 545 mg/m³	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 Tightly fitting safety goggles 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 Use only with adequate ventilation. Do not breathe vapors, spray mist, or dust. Ensure fresh air entry during application and drying. If you experience eye watering, headache or dizziness or if air monitoring demonstrates vapor/mist or dust levels are above applicable limits, wear an appropriate, properly fitted respirator (NIOSH/MSHA approved) during and after application. Follow respirator manufacturer's directions for respirator use.

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		
Appearance	opaque	**Odor**	Slight
Color	No information available	**Odor threshold**	No information available

Property	**Values**	**Remarks**
pH		No data available
Melting point / freezing point	No data available	No data available
Boiling point / boiling range	72 °C / 162 °F	
Flash point	No information available	Not applicable
Evaporation rate		No data available
Flammability (solid, gas)	No data available	No information available
Flammability Limit in Air		No data available
Upper flammability limit	N/A	
Lower flammability limit	N/A	
Vapor pressure		No data available
Vapor density		No data available
Specific gravity	1.67924	g/cm3
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	No data available
Decomposition temperature		No data available
Kinematic viscosity		No data available
Dynamic viscosity	35000 centipoises	approx

Other Information

Density	14.00483
Volatile organic compounds (VOC) content	0.0126
Total volatiles weight percent	0.09 %
Total volatiles volume percent	0.18 %
Bulk density	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
Acids, Bases, Amines, Strong oxidizing agents

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. Aldehydes. 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. May cause irritation.

Eye contact Causes serious eye damage.

Skin contact May cause sensitization by skin contact. May cause irritation.

Ingestion Harmful if swallowed.

Chemical name	LD50 Oral	LD50 Dermal	LC50 Inhalation
CALCIUM OXIDE 1305-78-8	= 500 mg/kg (Rat)	-	-
AMORPHOUS SILICA 7631-86-9	= 7900 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	> 2.2 mg/L (Rat) 1 h
ALUMINUM OXIDES 1344-28-1	> 5000 mg/kg (Rat)	-	-
CALCIUM OXIDE 1305-78-8	= 500 mg/kg (Rat)	-	-
ETHYL BENZENE 100-41-4	= 3500 mg/kg (Rat)	= 15400 mg/kg (Rabbit)	= 17.4 mg/L (Rat) 4 h

Information on toxicological effects

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

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

Skin corrosion/irritation Irritating to skin.
Eye damage/irritation Risk of serious damage to eyes.
Corrosivity Corrosive to the eyes and may cause severe damage including blindness.
Chronic Toxicity Skin sensitizer.
Sensitization May cause sensitization of susceptible persons.
Mutagenicity No information available.
Carcinogenicity There are no known carcinogenic chemicals in this product.

Chemical name	ACGIH	IARC	NTP	OSHA
SYNTHETIC VITREOUS (SILICATE) FIBRES 65997-17-3		Group 3	-	
AMORPHOUS SILICA 7631-86-9		Group 1 Group 3	Known	
CRYSTALLINE SILICA (QUARTZ) 14808-60-7	A2	Group 1	Known	X
ETHYL BENZENE 100-41-4	A3	Group 2B	-	X

Reproductive effects No information available.
STOT - single exposure No information available
STOT - repeated exposure No information available
Aspiration hazard No information available.

Acute Toxicity 96.90444 % of the mixture consists of ingredient(s) of unknown toxicity.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Toxic to aquatic life with long lasting effects

63.20203 % of the mixture consists of components(s) of unknown hazards to the aquatic environment

Chemical name	Toxicity to algae	Toxicity to fish	Toxicity to daphnia
EPOXY RESIN (LER) 25085-99-8	11 mg/L 72 hr	2 mg/L 96 hr Oncorhynchus mykiss	1.8 mg/L 48h
CALCIUM OXIDE 1305-78-8		1070: 96 h Cyprinus carpio mg/L LC50 static	
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
CALCIUM OXIDE 1305-78-8		1070: 96 h Cyprinus carpio mg/L LC50 static	
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 9.1 - 15.6: 96 h Pimephales promelas mg/L LC50 static 32: 96 h Lepomis macrochirus mg/L LC50 static 9.6: 96 h Poecilia reticulata mg/L LC50 static 7.55 - 11: 96 h Pimephales promelas mg/L LC50 flow-through 4.2: 96 h Oncorhynchus mykiss mg/L LC50 semi-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

Chemical name	log Pow
EPOXY RESIN (LER) 25085-99-8	3
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.

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
ETHYL BENZENE 100-41-4		Included in waste stream: F039		
MALEIC ANHYDRIDE 108-31-6	U147	Included in waste streams: K023, K093		U147

Chemical name	CAWAST
CALCIUM OXIDE 1305-78-8	Corrosive
CALCIUM OXIDE 1305-78-8	Corrosive
ETHYL BENZENE 100-41-4	Toxic Ignitable

14. TRANSPORT INFORMATION

DOT

Proper Shipping Name	PAINT & RELATED MATERIAL
Description	Call TNEMEC Traffic Department - 816-474-3400 for additional information or other modes of Transportation.
UN/ID no.	3082
Proper Shipping Name	Environmentally hazardous substance, liquid, n.o.s, (Epoxy Resin)
Hazard Class	9
Packing Group	III
EmS No.	F-A, S-F
Marine Pollutant	This product contains a chemical which is listed as a marine pollutant according to IMDG/IMO
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	Complies
PICCS	Does Not Comply
AICS	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):

Chemical name	**HAPS Data**
ETHYL BENZENE	

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.

Chemical name	SARA 313 - Threshold Values
ALUMINUM OXIDES - 1344-28-1	1.0
ETHYL BENZENE - 100-41-4	0.1

SARA 311/312 Hazardous Categorization

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

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances

ETHYL BENZENE 100-41-4	1000 lb	X	X	X

Chemical name	Hazardous Substances RQs	CERCLA EHS RQs	RQ
ETHYL BENZENE 100-41-4	1000 lb		RQ 1000 lb final RQ RQ 454 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.

Chemical name	California Prop. 65
AMORPHOUS SILICA - 7631-86-9	Carcinogen
CRYSTALLINE SILICA (QUARTZ) - 14808-60-7	Carcinogen
ETHYL BENZENE - 100-41-4	Carcinogen

California SCAQMD Rule 443
Does Not Contain Photochemically Reactive Solvent

State Right-to-Know

Chemical name	New Jersey	Massachusetts	Pennsylvania
AMORPHOUS SILICA 69012-64-2	X	X	
POTASSIUM OXIDE 12136-45-7	X		
CALCIUM OXIDE 1305-78-8	X	X	X
AMORPHOUS SILICA 7631-86-9		X	X
ALUMINUM OXIDES 1344-28-1	X	X	X
ZIRCONIUM OXIDE 1314-23-4		X	
CALCIUM OXIDE 1305-78-8	X	X	X
CRYSTALLINE SILICA (QUARTZ) 14808-60-7	X	X	X
ETHYL BENZENE 100-41-4	X	X	X

16. OTHER INFORMATION

NFPA	**Health** 2	**Flammability** 0	**Instability** 1	**Physical hazard** -
HMIS (Hazardous Material Information System)	**Health** 2	**Flammability** 0	**Reactivity** 1	

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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 SDS