



Safety Data Sheet

Issue Date: 21-May-2013

Revision Date: 09-May-2017

Version 1

1. IDENTIFICATION

Product Identifier

Product Name PC CONCRETE EPOXY, PART A

Other means of identification

SDS # 130521-37B

Recommended use of the chemical and restrictions on use

Recommended Use Adhesives.

Details of the supplier of the safety data sheet

Supplier Address

Protective Coatings Co.
221 S Third St.
Allentown, PA 18102 USA

Emergency Telephone Number

Company Phone Number 610-432-3543 / 800-220-2103
Emergency Telephone (24 hr) INFOTRAC 1-352-323-3500 (International)
1-800-535-5053 (North America)

2. HAZARDS IDENTIFICATION

Appearance White paste

Physical state Paste

Odor Slight

Classification

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2
Skin sensitization	Category 1
Specific target organ toxicity (repeated exposure)	Category 2

Signal Word

Danger

Hazard statements

Causes serious eye irritation
Causes skin irritation
May cause an allergic skin reaction
May cause damage to organs through prolonged or repeated exposure



Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling
 Wear protective gloves/protective clothing/eye protection/face protection
 Contaminated work clothing must not be allowed out of the workplace
 Do not breathe dust/fume/gas/mist/vapors/spray

Precautionary Statements - Response

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

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Weight-%
Diglycidyl Ether of Bisphenol A	25085-99-8	30-60
Trimethylolethane triglycidyl ether	68460-21-9	7-15
Silica, Quartz	14808-60-7	5-15
*Non – Hazardous Proprietary Ingredients	Proprietary	10-20
Titanium(IV) Oxide	13463-67-7	1-5
Ethylene glycol	107-21-1	1-5

If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.

* Unlisted ingredients are not considered hazardous under the OSHA Hazard Communication Standard (29 CFR 1910.1200).
 (Titanium Dioxide and Quartz Silica Sand (Crystalline Silica)) Inhalation of particulates unlikely due to product's physical state.

4. FIRST AID MEASURES

First Aid Measures

General Advice	Provide this SDS to medical personnel for treatment. After first aid, get appropriate in-plant, paramedic, or community medical support.
Eye Contact	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. If eye irritation persists: Get medical advice/attention.
Skin Contact	Wash with soap and water. Remove and wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical advice/attention.
Inhalation	Remove to fresh air. If breathing is difficult, give oxygen. If breathing has stopped, give artificial respiration. Get medical attention immediately.
Ingestion	Clean mouth with water and drink afterwards plenty of water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Remove stomach contents by medical personnel only. Immediate medical attention is required.

Most important symptoms and effects

Symptoms	Causes eye irritation. Direct contact may cause temporary redness and discomfort. Causes skin irritation. May cause respiratory irritation. Ingestion may cause nausea, vomiting, dizziness, and headache, Coma. May cause an allergic skin reaction.
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Indication of any immediate medical attention and special treatment needed

Notes to Physician	Skin and eye conditions may be aggravated by long term exposure. Medical Conditions Aggravated by Long-Term Exposure: skin disorders and allergies and eye conditions.
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5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Carbon dioxide (CO₂), Dry chemical, Alcohol foam.

Unsuitable Extinguishing Media Not determined.

Specific Hazards Arising from the Chemical

Ignition will give rise to a Class B fire. May generate toxic or irritating combustion products. May generate carbon monoxide gas.

Hazardous Combustion Products Carbon monoxide. Carbon dioxide (CO₂),

Explosion Data**Protective equipment and precautions for firefighters**

Keep containers cool with water spray. As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Do not release runoff from fire control methods to sewers or waterways. NFPA Class IIIB.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions Wear protective gloves/protective clothing and eye/face protection. Remove any contaminated clothing and wash thoroughly before reuse.

For Emergency Responders Follow applicable OSHA regulations (29 CFR 1910.120).

Environmental precautions

Environmental precautions See Section 12 for additional Ecological Information.

Methods and material for containment and cleaning up

Methods for Containment Prevent further leakage or spillage if safe to do so. For large spills, dike far ahead of liquid spill for later disposal.

Methods for Clean-Up Collect and place in suitable, properly labeled container for recovery or disposal. Dispose of contents/container to an approved waste disposal plant. For waste disposal, see section 13 of the SDS.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on Safe Handling

Handle in accordance with good industrial hygiene and safety practice. Use personal protection recommended in Section 8. Do not eat, drink or smoke when using this product. Wash face, hands and any exposed skin thoroughly after handling. Avoid breathing dust/fume/gas/mist/vapors/spray. Contaminated work clothing must not be allowed out of the workplace.

Conditions for safe storage, including any incompatibilities

Storage Conditions

Keep containers tightly closed in a dry, cool and well-ventilated place. Store contents under <90F (32C) . NFPA Class IIIB storage.

Incompatible Materials

Strong acids, peroxides, and other oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Silica, Quartz 14808-60-7	TWA: 0.025 mg/m ³ respirable particulate matter	TWA: 50 µg/m ³ TWA: 50 µg/m ³ excludes construction work, agricultural operations, and exposures that result from the processing of sorptive clays (vacated) TWA: 0.1 mg/m ³ respirable dust : (250)/(%SiO ₂ + 5) mppcf TWA respirable fraction : (10)/(%SiO ₂ + 2) mg/m ³ TWA respirable fraction	IDLH: 50 mg/m ³ respirable dust TWA: 0.05 mg/m ³ respirable dust
Ethylene glycol 107-21-1	STEL: 50 ppm vapor fraction STEL: 10 mg/m ³ inhalable particulate matter, aerosol only TWA: 25 ppm vapor fraction	(vacated) Ceiling: 50 ppm (vacated) Ceiling: 125 mg/m ³	-
Titanium(IV) Oxide 13463-67-7	TWA: 10 mg/m ³	TWA: 15 mg/m ³ total dust (vacated) TWA: 10 mg/m ³ total dust	IDLH: 5000 mg/m ³

Other Information

If product is sanded, appropriate respirator should be worn to avoid breathing dust. Pre-existing respiratory disorders may be aggravated by exposure. If sanded, this material may generate silica / titanium dust. Inhaled silica / titanium has been classified by IARC as a human carcinogen (see section 11).

Appropriate engineering controls

Engineering Controls

Provide general or local exhaust ventilation systems if possible. Make emergency eyewash stations, safety/quick-drench showers, and washing facilities available in work area.

Individual protection measures, such as personal protective equipment

Eye/Face Protection

Chemical safety goggles/faceshield.

Skin and Body Protection

Wear chemically protective gloves to prevent skin contact. Contaminated Equipment: Separate contaminated work clothes from street clothes. Launder before reuse. Remove this material from your shoes and clean personal protective equipment.

Respiratory Protection

None normally required. Use a NIOSH approved organic vapor chemical cartridge respirator when air movement is inadequate to control vapor build-up.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice. Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Paste	Odor	Slight
Appearance	White paste	Odor Threshold	Not determined
Color	White		
<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>	
pH	> / = 2.0 - < / = 12.0		
Melting Point/Freezing Point	Not determined		
Boiling Point/Boiling Range	Not determined		
Flash Point	Not determined		
Evaporation Rate	Not determined		
Flammability (Solid, Gas)	Not determined		
Flammability Limits in Air			
Upper Flammability Limits	Not available		
Lower Flammability Limit	Not available		
Vapor Pressure	Not determined		
Vapor Density	Not determined		
Relative Density	1.4	(1=Water)	
Water Solubility	Insoluble in water		
Solubility in other solvents	Not determined		
Partition Coefficient	Not determined		
Auto-ignition Temperature	Not determined		
Decomposition Temperature	Not determined		
Kinematic Viscosity	Not determined		
Dynamic Viscosity	Not determined		
Explosive Properties	Not determined		
Oxidizing Properties	Not determined		

10. STABILITY AND REACTIVITY

Reactivity

Not reactive under normal conditions.

Chemical Stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

None under normal processing.

Hazardous Polymerization Hazardous polymerization does not occur.

Conditions to Avoid

Keep out of reach of children.

Incompatible Materials

Strong acids, peroxides, and other oxidizing agents.

Hazardous Decomposition Products

Thermal oxidative decomposition can produce CO, CO₂ in a fire.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Eye Contact	Causes serious eye irritation.
Skin Contact	Causes skin irritation. May cause an allergic skin reaction.
Inhalation	May cause irritation of respiratory tract.
Ingestion	May cause nausea, vomiting, stomach ache, and diarrhea.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
*Non – Hazardous Proprietary Ingredients	> 90 mL/kg (Rat)	-	-
Ethylene glycol 107-21-1	= 4700 mg/kg (Rat)	= 10600 mg/kg (Rat) = 9530 µL/kg (Rabbit)	-
Titanium(IV) Oxide 13463-67-7	> 10000 mg/kg (Rat)	-	-

Information on physical, chemical and toxicological effects

Symptoms Please see section 4 of this SDS for symptoms.

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

Sensitization May cause an allergic skin reaction.

Carcinogenicity Silica (quartz) is a possible carcinogen when it appears as a respirable dust. Titanium dioxide is a possible carcinogen when it appears as a respirable dust.

Chemical Name	ACGIH	IARC	NTP	OSHA
Silica, Quartz 14808-60-7	A2	Group 1	Known	X
Titanium(IV) Oxide 13463-67-7		Group 2B		X

Legend

ACGIH (American Conference of Governmental Industrial Hygienists)

A2 - Suspected Human Carcinogen

IARC (International Agency for Research on Cancer)

Group 1 - Carcinogenic to Humans

Group 2B - Possibly Carcinogenic to Humans

NTP (National Toxicology Program)

Known - Known Carcinogen

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

X - Present

STOT - repeated exposure May cause damage to organs through prolonged or repeated exposure.

12. ECOLOGICAL INFORMATION

Ecotoxicity

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Component Information

Chemical Name	Algae/aquatic plants	Fish	Crustacea
Ethylene glycol 107-21-1	6500 - 13000: 96 h Pseudokirchneriella subcapitata mg/L EC50	41000: 96 h Oncorhynchus mykiss mg/L LC50 16000: 96 h Poecilia reticulata mg/L LC50 static 14 - 18: 96 h Oncorhynchus mykiss mL/L LC50 static 27540: 96 h Lepomis macrochirus mg/L LC50 static 40000 - 60000: 96 h Pimephales promelas mg/L LC50 static 40761: 96 h Oncorhynchus mykiss mg/L LC50 static	46300: 48 h Daphnia magna mg/L EC50

Persistence/Degradability

Not determined.

Bioaccumulation

Not determined.

Mobility

Chemical Name	Partition Coefficient
Ethylene glycol 107-21-1	-1.93

Other Adverse Effects

Not determined

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods

Disposal of Wastes

Contact your supplier or a licensed contractor for detailed recommendations. Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated Packaging

Disposal should be in accordance with applicable regional, national and local laws and regulations.

14. TRANSPORT INFORMATION

Note

Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.

DOT

Not regulated

IATA

Not regulated

IMDG

Not regulated

15. REGULATORY INFORMATION

International Inventories

Chemical Name	TSCA	DSL/NDL	EINECS/E LINCS	ENCS	IECSC	KECL	PICCS	AICS
Diglycidyl Ether of Bisphenol A	X	X		Present	X	Present	X	X
Trimethylolethane triglycidyl ether	X	X			X			X
Silica, Quartz	X	X	X	Present	X	Present	X	X
*Non – Hazardous Proprietary Ingredients	X	X	X	X	X	Present	X	X
Ethylene glycol	X	X	X	Present	X	Present	X	X
Titanium(IV) Oxide	X	X	X	Present	X	Present	X	X

Legend:

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 Chemical Substances/European 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

US Federal Regulations

CERCLA

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Ethylene glycol 107-21-1	5000 lb		RQ 5000 lb final RQ RQ 2270 kg final RQ

SARA 311/312 Hazard Categories

Acute Health Hazard Yes
Chronic Health Hazard Yes

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 40 of the Code of Federal Regulations, Part 372

Chemical Name	CAS No.	Weight-%	SARA 313 - Threshold Values %
Ethylene glycol - 107-21-1	107-21-1	1-5	1.0

US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals.

Chemical Name	California Proposition 65
Silica, Quartz - 14808-60-7	Carcinogen
Ethylene glycol - 107-21-1	Developmental
Titanium(IV) Oxide - 13463-67-7	Carcinogen

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Diglycidyl Ether of Bisphenol A 25085-99-8	X	X	X
Silica, Quartz 14808-60-7	X	X	X
Ethylene glycol 107-21-1	X	X	X
Titanium(IV) Oxide 13463-67-7	X	X	X

16. OTHER INFORMATION

<u>NFPA</u>	Health Hazards	Flammability	Instability	Special Hazards
	2	1	0	Not determined
<u>HMIS</u>	Health Hazards	Flammability	Physical hazards	Personal Protection
	2*	1	0	B- Safety Glasses, Gloves

Chronic Hazard Star Legend

* = Chronic Health Hazard

Issue Date: 21-May-2013
Revision Date: 09-May-2017
Revision Note: New format

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet



Safety Data Sheet

Issue Date: 21-May-2013

Revision Date: 09-May-2017

Version 1

1. IDENTIFICATION

Product Identifier

Product Name PC CONCRETE EPOXY, PART B

Other means of identification

SDS # 130521-38B

UN/ID No UN1760

Recommended use of the chemical and restrictions on use

Recommended Use Adhesives.

Details of the supplier of the safety data sheet

Supplier Address

Protective Coatings Co.
221 S Third St.
Allentown, PA 18102 USA

Emergency Telephone Number

Company Phone Number 610-432-3543 / 800-220-2103
Emergency Telephone (24 hr) INFOTRAC 1-352-323-3500 (International)
1-800-535-5053 (North America)

2. HAZARDS IDENTIFICATION

Appearance Black paste

Physical state Paste

Odor Slight

Classification

Acute toxicity - Dermal	Category 4
Skin corrosion/irritation	Category 1 Sub-category C
Serious eye damage/eye irritation	Category 1
Skin sensitization	Category 1
Reproductive toxicity	Category 2

Signal Word

Danger

Hazard statements

Harmful in contact with skin
Causes severe skin burns and eye damage
May cause an allergic skin reaction
Suspected of damaging fertility or the unborn child

**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
 Do not breathe dust/fume/gas/mist/vapors/spray
 Wash face, hands and any exposed skin thoroughly after handling
 Contaminated work clothing must not be allowed out of the workplace
 Wear protective gloves

Precautionary Statements - Response

Immediately 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
 Immediately call a poison center or doctor/physician
 Wash contaminated clothing before reuse
 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
 Call a poison center or doctor/physician if you feel unwell
 If skin irritation or rash occurs: Get medical advice/attention
 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
 Immediately call a poison center or doctor/physician
 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting
 Immediately call a poison center or doctor/physician

Precautionary Statements - Storage

Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Other hazards

Very toxic to aquatic life with long lasting effects

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Weight-%
Silica, Quartz	14808-60-7	25-40
Nonyl phenol	84852-15-3	15-30
1-(2-Aminoethyl) piperazine	140-31-8	5-15
2,4,6-tri(dimethylaminomethyl)phenol	90-72-2	3-7
Benzyl alcohol	100-51-6	1-5
Ethylene glycol	107-21-1	0.1-1.0

If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.

* Unlisted ingredients are not considered hazardous under the OSHA Hazard Communication Standard (29 CFR 1910.1200).
 (Quartz Silica Sand (Crystalline Silica)) Inhalation of particulates unlikely due to product's physical state.

4. FIRST AID MEASURES

First Aid Measures

Eye Contact	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediate medical attention is required.
Skin Contact	Wash with soap and water. Remove and wash contaminated clothing before reuse. Call a poison center or doctor/physician if you feel unwell. If skin irritation or rash occurs: Get medical advice/attention.
Inhalation	Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
Ingestion	Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Immediate medical attention is required.

Most important symptoms and effects

Symptoms	Causes severe skin burns and eye damage. Ingestion may cause severe burns to mouth, throat or stomach. May cause an allergic skin reaction. May be harmful if swallowed. Harmful in contact with skin.
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Indication of any immediate medical attention and special treatment needed

Notes to Physician	Skin and eye conditions may be aggravated by long term exposure.
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5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Dry chemical, CO2 or water spray.

Unsuitable Extinguishing Media Not determined.

Specific Hazards Arising from the Chemical

Not determined.

Hazardous Combustion Products Carbon monoxide. Carbon dioxide (CO2). Aldehydes. Nitrogen oxides (NOx).

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. Do not release runoff from fire control methods to sewers or waterways. NFPA Class IIIB.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions	Wear protective gloves/protective clothing and eye/face protection. Remove any contaminated clothing and wash thoroughly before reuse.
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Environmental precautions

Environmental precautions	See Section 12 for additional Ecological Information.
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Methods and material for containment and cleaning up

Methods for Containment	Prevent further leakage or spillage if safe to do so.
Methods for Clean-Up	Dispose of contents/container to an approved waste disposal plant.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on Safe Handling

Handle in accordance with good industrial hygiene and safety practice. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust/fume/gas/mist/vapors/spray. Wear appropriate personal protective equipment. Wash face, hands and any exposed skin thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace. Do not eat, drink or smoke when using this product. Use personal protection recommended in Section 8.

Conditions for safe storage, including any incompatibilities

Storage Conditions

Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up.

Incompatible Materials

Strong acids, peroxides, and other oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Silica, Quartz 14808-60-7	TWA: 0.025 mg/m ³ respirable particulate matter	TWA: 50 µg/m ³ TWA: 50 µg/m ³ excludes construction work, agricultural operations, and exposures that result from the processing of sorptive clays (vacated) TWA: 0.1 mg/m ³ respirable dust : (250)/(%SiO ₂ + 5) mppcf TWA respirable fraction : (10)/(%SiO ₂ + 2) mg/m ³ TWA respirable fraction	IDLH: 50 mg/m ³ respirable dust TWA: 0.05 mg/m ³ respirable dust
Ethylene glycol 107-21-1	STEL: 50 ppm vapor fraction STEL: 10 mg/m ³ inhalable particulate matter, aerosol only TWA: 25 ppm vapor fraction	(vacated) Ceiling: 50 ppm (vacated) Ceiling: 125 mg/m ³	-

Other Information

If product is sanded, appropriate respirator should be worn to avoid breathing dust. Pre-existing respiratory disorders may be aggravated by exposure. If sanded, this material may generate silica dust. Inhaled silica has been classified by IARC as a human carcinogen (see section 11).

Appropriate engineering controls

Engineering Controls

Provide general or local exhaust ventilation if product is sanded or ground.

Individual protection measures, such as personal protective equipment

Eye/Face Protection

Wear protective eyeglasses or chemical safety goggles.

Skin and Body Protection

Wear protective gloves and protective clothing.

Respiratory Protection

Ensure adequate ventilation, especially in confined areas. If engineering controls do not maintain airborne concentrations below recommended exposure limits, a NIOSH/MSHA approved respirator must be worn.

General Hygiene Considerations

Handle in accordance with good industrial hygiene and safety practice. After use, wash hands and exposed skin with soap and water. Do not eat, drink or smoke while handling product. Wash contaminated clothing before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Paste	Odor	Slight
Appearance	Black paste	Odor Threshold	Not determined
Color	Black		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	Not determined	
Melting Point/Freezing Point	Not determined	
Boiling Point/Boiling Range	Not determined	
Flash Point	Not determined	
Evaporation Rate	Not determined	
Flammability (Solid, Gas)	Not determined	
Flammability Limits in Air		
Upper Flammability Limits	Not determined	
Lower Flammability Limit	Not determined	
Vapor Pressure	Not determined	
Vapor Density	Not determined	
Relative Density	1.05	(1=Water)
Water Solubility	Insoluble in water	
Solubility in other solvents	Not determined	
Partition Coefficient	Not determined	
Auto-ignition Temperature	Not determined	
Decomposition Temperature	Not determined	
Kinematic Viscosity	Not determined	
Dynamic Viscosity	Not determined	
Explosive Properties	Not determined	
Oxidizing Properties	Not determined	

10. STABILITY AND REACTIVITY

Reactivity

Not reactive under normal conditions.

Chemical Stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

None under normal processing.

Hazardous Polymerization	Hazardous polymerization does not occur.
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Conditions to Avoid

Keep out of reach of children.

Incompatible Materials

Strong acids, peroxides, and other oxidizing agents.

Hazardous Decomposition Products

None known based on information supplied.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Eye Contact	Causes severe eye damage.
Skin Contact	Causes severe skin burns. May cause an allergic skin reaction. Harmful in contact with skin.
Inhalation	May cause irritation if inhaled.
Ingestion	May be harmful if swallowed. Ingestion may cause irritation to mucous membranes.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Nonyl phenol 84852-15-3	= 1300 mg/kg (Rat)	= 2000 mg/kg (Rabbit)	-
1-(2-Aminoethyl) piperazine 140-31-8	= 2140 µL/kg (Rat)	= 880 µL/kg (Rabbit)	-
2,4,6-tri(dimethylaminomethyl)phenol 90-72-2	= 1200 mg/kg (Rat)	= 1280 mg/kg (Rat)	-
Benzyl alcohol 100-51-6	= 1230 mg/kg (Rat)	= 2 g/kg (Rabbit)	= 8.8 mg/L (Rat) 4 h
Ethylene glycol 107-21-1	= 4700 mg/kg (Rat)	= 10600 mg/kg (Rat) = 9530 µL/kg (Rabbit)	-

Information on physical, chemical and toxicological effects

Symptoms Please see section 4 of this SDS for symptoms.

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

Sensitization May cause an allergic skin reaction.

Carcinogenicity Silica (quartz) is a possible carcinogen when it appears as a respirable dust.

Chemical Name	ACGIH	IARC	NTP	OSHA
Silica, Quartz 14808-60-7	A2	Group 1	Known	X

Legend

ACGIH (American Conference of Governmental Industrial Hygienists)

A2 - Suspected Human Carcinogen

IARC (International Agency for Research on Cancer)

Group 1 - Carcinogenic to Humans

NTP (National Toxicology Program)

Known - Known Carcinogen

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

X - Present

Reproductive toxicity Suspected of damaging fertility or the unborn child.

Numerical measures of toxicity

The following values are calculated based on chapter 3.1 of the GHS document .

ATEmix (oral) 2,493.76 mg/kg

ATEmix (dermal) 1,811.92 mg/kg

12. ECOLOGICAL INFORMATION

Ecotoxicity

Very toxic to aquatic life with long lasting effects.

Component Information

Chemical Name	Algae/aquatic plants	Fish	Crustacea
Nonyl phenol 84852-15-3	0.16 - 0.72: 72 h Pseudokirchneriella subcapitata mg/L EC50 static 0.36 - 0.48: 96 h Pseudokirchneriella subcapitata mg/L EC50 static 1.3: 72 h Desmodesmus subspicatus mg/L EC50	0.135: 96 h Pimephales promelas mg/L LC50 flow-through 0.1351: 96 h Lepomis macrochirus mg/L LC50 flow-through	0.14: 48 h Daphnia magna mg/L EC50
1-(2-Aminoethyl) piperazine 140-31-8	495: 72 h Pseudokirchneriella subcapitata mg/L EC50	1000: 96 h Poecilia reticulata mg/L LC50 semi-static 100: 96 h Oncorhynchus mykiss mg/L LC50 semi-static 1950 - 2460: 96 h Pimephales promelas mg/L LC50 flow-through	32: 48 h Daphnia magna mg/L EC50
Benzyl alcohol 100-51-6	35: 3 h Anabaena variabilis mg/L EC50	10: 96 h Lepomis macrochirus mg/L LC50 static 460: 96 h Pimephales promelas mg/L LC50 static	23: 48 h water flea mg/L EC50
Ethylene glycol 107-21-1	6500 - 13000: 96 h Pseudokirchneriella subcapitata mg/L EC50	41000: 96 h Oncorhynchus mykiss mg/L LC50 16000: 96 h Poecilia reticulata mg/L LC50 static 14 - 18: 96 h Oncorhynchus mykiss mL/L LC50 static 27540: 96 h Lepomis macrochirus mg/L LC50 static 40000 - 60000: 96 h Pimephales promelas mg/L LC50 static 40761: 96 h Oncorhynchus mykiss mg/L LC50 static	46300: 48 h Daphnia magna mg/L EC50

Persistence/Degradability

Not determined.

Bioaccumulation

Not determined.

Mobility

Chemical Name	Partition Coefficient
1-(2-Aminoethyl) piperazine 140-31-8	-1.48
Benzyl alcohol 100-51-6	1.1
Ethylene glycol 107-21-1	-1.93

Other Adverse Effects

Not determined

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods

Disposal of Wastes

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated Packaging

Disposal should be in accordance with applicable regional, national and local laws and regulations.

14. TRANSPORT INFORMATION

Note Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.

DOT Consumer commodity (If shipped in NON BULK packaging by ground transport)
UN/ID No UN1760
Proper Shipping Name Corrosive Liquids, n.o.s (aminoethylpiperazine, nonylphenol)
Hazard Class 8
Packing Group III

IATA
UN/ID No UN1760
Proper Shipping Name Corrosive Liquids, n.o.s (aminoethylpiperazine, nonylphenol)
Hazard Class 8
Packing Group III

IMDG
UN/ID No UN1760
Proper Shipping Name Corrosive Liquids, n.o.s (aminoethylpiperazine, nonylphenol)
Hazard Class 8
Packing Group III
Marine Pollutant Yes

15. REGULATORY INFORMATION

International Inventories

Chemical Name	TSCA	DSL/NDSL	EINECS/E LINCS	ENCS	IECSC	KECL	PICCS	AICS
Silica, Quartz	X	X	X	Present	X	Present	X	X
Nonyl phenol	X	X	X	Present	X	Present	X	X
1-(2-Aminoethyl) piperazine	X	X	X	Present	X	Present	X	X
Liquid polyamide resin	X	X	X	Present	X	Present	X	X
TOFA, reaction products with TEPA	X	X	X	Present	X	Present	X	X
2,4,6-tri(dimethylaminomethyl)phenol	X	X	X	Present	X	Present	X	X
Benzyl alcohol	X	X	X	Present	X	Present	X	X
Ethylene glycol	X	X	X	Present	X	Present	X	X

Legend:

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 Chemical Substances/European 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

US Federal Regulations**CERCLA**

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Ethylene glycol 107-21-1	5000 lb		RQ 5000 lb final RQ RQ 2270 kg final RQ

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	Yes

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 40 of the Code of Federal Regulations, Part 372

Chemical Name	CAS No.	Weight-%	SARA 313 - Threshold Values %
Nonyl phenol - 84852-15-3	84852-15-3	15-30	1.0
Ethylene glycol - 107-21-1	107-21-1	0.1-1.0	1.0

US State Regulations**California Proposition 65**

This product contains the following Proposition 65 chemicals.

Chemical Name	California Proposition 65
Silica, Quartz - 14808-60-7	Carcinogen
Ethylene glycol - 107-21-1	Developmental

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Silica, Quartz 14808-60-7	X	X	X
1-(2-Aminoethyl) piperazine 140-31-8	X	X	X
Benzyl alcohol 100-51-6		X	X
Ethylene glycol 107-21-1	X	X	X

16. OTHER INFORMATION

NFPA	Health Hazards	Flammability	Instability	Special Hazards
	3	1	0	Not determined
HMIS	Health Hazards	Flammability	Physical hazards	Personal Protection
	3*	1	0	B

Chronic Hazard Star Legend

* = Chronic Health Hazard

Issue Date: 21-May-2013
Revision Date: 09-May-2017
Revision Note: New format

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet