PRO MORTAR RESIN PART A
SAFETY DATA SHEET

SECTION 1: IDENTIFICATION

Product Identifier

Product Form: Mixture

Intended Use of the Product

Use of the Substance/Mixture: Parapro Liquid Resin system. For professional use only.

Name, Address, and Telephone of the Responsible Party

Company
Siplast, Inc.
14911 Quorum Drive, Ste. 600
Dallas, TX 75254
T 800-922-8800
www.siplast.com

Manufacturer
Siplast, Inc.
35 McClellan Blvd
Arkadelphia, AR 71923
T 870-246-9000

Emergency Telephone Number

Emergency Number : 800-424-9300 (CHEMTREC)

SECTION 2: HAZARDS IDENTIFICATION

Classification of the Substance or Mixture

Classification (GHS-US)

Flam. Liq. 2	H225
Acute Tox. 4 (Oral)	H302
Skin Irrit. 2	H315
Eye Irrit. 2A	H319
Resp. Sens. 1	H334
Skin Sens. 1	H317
Muta. 1B	H340
Carc. 1B	H350
Carc. 2	H351
STOT SE 3	H335
STOT SE 3	H336
Aquatic Acute 3	H402
Aquatic Chronic 3	H412

Label Elements

GHS-US Labeling

Hazard Pictograms (GHS-US) :

GHS02 GHS07 GHS08

Signal Word (GHS-US) : Danger

Hazard Statements (GHS-US) : H225 - Highly flammable liquid and vapor.
H302 - Harmful if swallowed.
H315 - Causes skin irritation.
H317 - May cause an allergic skin reaction.
H319 - Causes serious eye irritation.
H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335 - May cause respiratory irritation.
H336 - May cause drowsiness or dizziness.
H340 - May cause genetic defects.
H350 - May cause cancer.
H351 – Suspected of causing cancer.H360 - May damage fertility or the unborn child.
H402 - Harmful to aquatic life.
H412 - Harmful to aquatic life with long lasting effects.

Precautionary Statements (GHS-US) : P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P210 - Keep away from heat, sparks, open flames, hot surfaces. - No smoking.
P233 - Keep container tightly closed.
P240 - Ground/bond container and receiving equipment.
P241 - Use explosion-proof electrical, ventilating, and lighting equipment.
P242 - Use only non-sparking tools.
P243 - Take precautionary measures against static discharge.
P260 - Do not breathe vapors, mist, spray.
P264 - Wash hands, forearms, and other exposed areas thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P271 - Use only outdoors or in a well-ventilated area.
P272 - Contaminated work clothing must not be allowed out of the workplace.
P273 - Avoid release to the environment.
P280 - Wear protective gloves, protective clothing, eye protection, face protection, respiratory protection.
P284 - [In case of inadequate ventilation] wear respiratory protection.
P301+P312 - If swallowed: Call a poison center/doctor if you feel unwell.
P302+P352 - If on skin: Wash with plenty of water.
P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340 - IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313 - If exposed or concerned: Get medical advice/attention.
P321 - Specific treatment (see section 4).
P330 - Rinse mouth.
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.
P337+P313 - If eye irritation persists: Get medical advice/attention.
P342+P311 - If experiencing respiratory symptoms: Call a poison center/doctor.
P362+P364 - Take off contaminated clothing and wash it before reuse.
P370+P378 - In case of fire: Use appropriate media to extinguish.
P403+P233+ P235 - Store in a well-ventilated place. Keep container tightly closed. Keep cool.
P405 - Store locked up.
P501 - Dispose of contents/container in accordance with local, regional, national, territorial, provincial, and international regulations.

Other Hazards

Exposure may aggravate those with pre-existing eye, skin, or respiratory conditions. Flammable vapors can accumulate in head space of closed systems.

Unknown Acute Toxicity (GHS-US) Not available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Mixture

Name	Product Identifier	% (w/w)	Classification (GHS-US)
Methyl methacrylate	(CAS No) 80-62-6	30 - 60	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Eye Irrit. 2B, H320 Resp. Sens. 1, H334 Skin Sens. 1, H317 STOT SE 3, H335 Aquatic Acute 3, H402
2-Ethylhexyl acrylate	(CAS No) 103-11-7	10 - 30	Flam. Liq. 4, H227 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Skin Sens. 1, H317 STOT SE 3, H336 Aquatic Acute 3, H402 Aquatic Chronic 3, H412
Titanium dioxide	(CAS No) 13463-67-7	0 - 5	Carc. 2, H351
2-Propanol, 1,1'-[(4-methylphenyl)imino]bis-	(CAS No) 38668-48-3	0 - 5	Acute Tox. 3 (Oral), H301 Eye Irrit. 2A, H319 Aquatic Acute 3, H402 Aquatic Chronic 3, H412
Quartz	(CAS No) 14808-60-7	0 - 2	Carc. 1A, H350 STOT SE 3, H335 STOT RE 1, H372
Naphtha, petroleum, hydrodesulfurized heavy	(CAS No) 64742-82-1	< 0.1	Flam. Liq. 1, H224 Skin Irrit. 2, H315 Muta. 1B, H340 Carc. 1B, H350 Repr. 2, H361 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411
Fatty acids, C18, unsaturated, dimers, reaction products with N,N-dimethyl-1,3-propanediamine and 1,3-propanediamine	(CAS No) 162627-17-0	< 0.1	Skin Sens. 1, H317
Solvent naphtha, petroleum, light aromatic	(CAS No) 64742-95-6	< 0.1	Flam. Liq. 1, H224 Skin Irrit. 2, H315 Muta. 1B, H340 Carc. 1B, H350 Repr. 2, H361 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Acute 2, H401 Aquatic Chronic 2, H411

Multiple WHMIS ranges have been utilized due to varying composition.
Full text of H-phrases: see section 16

SECTION 4: FIRST AID MEASURES

Description of First Aid Measures

General: Never give anything by mouth to an unconscious person. IF exposed or concerned: Get medical advice/attention.

Inhalation: When symptoms occur: go into open air and ventilate suspected area. Remove to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER/doctor/physician if you feel unwell.

Skin Contact: Remove contaminated clothing. Drench affected area with water for at least 15 minutes. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical advice/attention.

Eye Contact: Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention.

Ingestion: Rinse mouth. Do NOT induce vomiting. Seek medical attention.

Most Important Symptoms and Effects Both Acute and Delayed

General: Harmful if swallowed. Causes eye irritation. Skin irritation. May cause an allergic skin reaction. Irritation of respiratory tract. May damage fertility. May damage the unborn child. Inhalation may cause allergic respiratory reaction with asthma-like symptoms and difficulty breathing. Vapors may cause drowsiness and dizziness. May cause cancer. May cause heritable genetic damage.

Inhalation: May cause respiratory irritation. Exposure may produce an allergic reaction. May cause drowsiness or dizziness.

Skin Contact: Causes skin irritation. May cause an allergic skin reaction.

Eye Contact: Causes eye irritation.

Ingestion: Swallowing a small quantity of this material will result in serious health hazard.

Chronic Symptoms: May damage fertility. May damage the unborn child. May cause heritable genetic damage. May cause cancer.

Indication of Any Immediate Medical Attention and Special Treatment Needed

If exposed or concerned, get medical advice and attention.

SECTION 5: FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media: Water spray, dry chemical, foam, carbon dioxide.

Unsuitable Extinguishing Media: Do not use a heavy water stream. Use of heavy stream of water may spread fire.

Special Hazards Arising From the Substance or Mixture

Fire Hazard: Highly flammable liquid and vapor.

Explosion Hazard: May form flammable/explosive vapor-air mixture.

Reactivity: Product may polymerize at 60°C (>140°F), causing an exothermic reaction which may cause container damage or fire. May react with peroxides, oxidizers, and incompatibilities.

Advice for Firefighters

Precautionary Measures Fire: Exercise caution when fighting any chemical fire.

Firefighting Instructions: Use water spray or fog for cooling exposed containers.

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

Hazardous Combustion Products: Carbon oxides (CO, CO_2). Nitrogen oxides. Hydrocarbons. Black smoke. Methyl methacrylate. Oxides of titanium. May release flammable gases. May liberate toxic gases.

Other Information: Do not allow run-off from firefighting to enter drains or water courses.

Reference to Other Sections

Refer to section 9 for flammability properties.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: Use special care to avoid static electric charges. Keep away from heat/sparks/open flames/hot surfaces. – No smoking. Avoid all eye and skin contact and do not breathe vapor and mist. Do not allow product to spread into the environment. Handle in accordance with good industrial hygiene and safety practice.

For Non-Emergency Personnel

Protective Equipment: Use appropriate personal protection equipment (PPE).

Emergency Procedures: Evacuate unnecessary personnel.

For Emergency Personnel

Protective Equipment: Equip cleanup crew with proper protection. Use appropriate personal protection equipment (PPE).

Emergency Procedures: Ventilate area.

Environmental Precautions

Prevent entry to sewers and public waters. Avoid release to the environment.

Methods and Material for Containment and Cleaning Up

For Containment: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

Methods for Cleaning Up: Clear up spills immediately and dispose of waste safely. Absorb and/or contain spill with inert material, then place in suitable container. Do not take up in combustible material such as: saw dust or cellulosic material. Contact competent authorities after a spill. Use only non-sparking tools.

Reference to Other Sections

See heading 8, Exposure Controls and Personal Protection.

SECTION 7: HANDLING AND STORAGE

Precautions for Safe Handling

Additional Hazards When Processed: Handle empty containers with care because residual vapors are flammable. Product may polymerize at 60°C (>140°F), causing an exothermic reaction which may cause container damage or fire. May react with peroxides, oxidizers, and incompatibilities. When heated to decomposition, emits toxic fumes.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking, or smoking and again when leaving work. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product.

Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures: Proper grounding procedures to avoid static electricity should be followed. Ground/bond container and receiving equipment. Use explosion-proof electrical, ventilating, and lighting equipment.

Storage Conditions: Store in a dry, cool and well-ventilated place. Keep container closed when not in use. Keep in fireproof place. Keep/Store away from extremely high or low temperatures, ignition sources, combustible materials, heat, direct sunlight, incompatible materials.

Incompatible Materials: Strong acids. Strong bases. Strong oxidizers.

Specific End Use(s)

Parapro Liquid Resin system. For professional use only.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Methyl methacrylate (80-62-6)		
Mexico	OEL TWA (mg/m³)	410 mg/m³
Mexico	OEL TWA (ppm)	100 ppm
Mexico	OEL STEL (mg/m³)	510 mg/m³
Mexico	OEL STEL (ppm)	125 ppm
USA ACGIH	ACGIH TWA (ppm)	50 ppm
USA ACGIH	ACGIH STEL (ppm)	100 ppm
USA OSHA	OSHA PEL (TWA) (mg/m³)	410 mg/m³
USA OSHA	OSHA PEL (TWA) (ppm)	100 ppm
USA NIOSH	NIOSH REL (TWA) (mg/m³)	410 mg/m³
USA NIOSH	NIOSH REL (TWA) (ppm)	100 ppm
USA IDLH	US IDLH (ppm)	1000 ppm
Alberta	OEL STEL (mg/m³)	410 mg/m³
Alberta	OEL STEL (ppm)	100 ppm
Alberta	OEL TWA (mg/m³)	205 mg/m³
Alberta	OEL TWA (ppm)	50 ppm
British Columbia	OEL STEL (ppm)	100 ppm
British Columbia	OEL TWA (ppm)	50 ppm
Manitoba	OEL STEL (ppm)	100 ppm
Manitoba	OEL TWA (ppm)	50 ppm
New Brunswick	OEL TWA (mg/m³)	410 mg/m³
New Brunswick	OEL TWA (ppm)	100 ppm

Newfoundland & Labrador	OEL STEL (ppm)	100 ppm
Newfoundland & Labrador	OEL TWA (ppm)	50 ppm
Nova Scotia	OEL STEL (ppm)	100 ppm
Nova Scotia	OEL TWA (ppm)	50 ppm
Nunavut	OEL STEL (mg/m³)	510 mg/m³
Nunavut	OEL STEL (ppm)	125 ppm
Nunavut	OEL TWA (mg/m³)	410 mg/m³
Nunavut	OEL TWA (ppm)	100 ppm
Northwest Territories	OEL STEL (mg/m³)	510 mg/m³
Northwest Territories	OEL STEL (ppm)	125 ppm
Northwest Territories	OEL TWA (mg/m³)	410 mg/m³
Northwest Territories	OEL TWA (ppm)	100 ppm
Ontario	OEL STEL (ppm)	100 ppm
Ontario	OEL TWA (ppm)	50 ppm
Prince Edward Island	OEL STEL (ppm)	100 ppm
Prince Edward Island	OEL TWA (ppm)	50 ppm
Québec	VEMP (mg/m³)	205 mg/m³
Québec	VEMP (ppm)	50 ppm
Saskatchewan	OEL STEL (ppm)	100 ppm
Saskatchewan	OEL TWA (ppm)	50 ppm
Yukon	OEL STEL (mg/m³)	510 mg/m³
Yukon	OEL STEL (ppm)	125 ppm
Yukon	OEL TWA (mg/m³)	410 mg/m³
Yukon	OEL TWA (ppm)	100 ppm
Quartz (14808-60-7)		
Mexico	OEL TWA (mg/m³)	0.1 mg/m³ (respirable fraction)
USA ACGIH	ACGIH TWA (mg/m³)	0.025 mg/m³ (respirable fraction)
USA OSHA	OSHA PEL (STEL) (mg/m³)	250 mppcf/%SiO_2+5, 10mg/m³/%SiO_2+2
USA NIOSH	NIOSH REL (TWA) (mg/m³)	0.05 mg/m³ (respirable dust)
USA IDLH	US IDLH (mg/m³)	50 mg/m³ (respirable dust)
Alberta	OEL TWA (mg/m³)	0.025 mg/m³ (respirable particulate)
British Columbia	OEL TWA (mg/m³)	0.025 mg/m³ (respirable)
Manitoba	OEL TWA (mg/m³)	0.025 mg/m³ (respirable fraction)
New Brunswick	OEL TWA (mg/m³)	0.1 mg/m³ (respirable fraction)
Newfoundland & Labrador	OEL TWA (mg/m³)	0.025 mg/m³ (respirable fraction)
Nova Scotia	OEL TWA (mg/m³)	0.025 mg/m³ (respirable fraction)
Nunavut	OEL TWA (mg/m³)	0.1 mg/m³ (respirable mass)
Northwest Territories	OEL TWA (mg/m³)	0.1 mg/m³ (respirable mass)
Ontario	OEL TWA (mg/m³)	0.10 mg/m³ (designated substances regulation-respirable)
Prince Edward Island	OEL TWA (mg/m³)	0.025 mg/m³ (respirable fraction)
Québec	VEMP (mg/m³)	0.1 mg/m³ (respirable dust)
Saskatchewan	OEL TWA (mg/m³)	0.05 mg/m³ (respirable fraction)
Yukon	OEL TWA (mg/m³)	300 particle/mL
Titanium dioxide (13463-67-7)		
Mexico	OEL TWA (mg/m³)	10 mg/m³
Mexico	OEL STEL (mg/m³)	20 mg/m³
USA ACGIH	ACGIH TWA (mg/m³)	10 mg/m³
USA OSHA	OSHA PEL (TWA) (mg/m³)	15 mg/m³ (total dust)
USA IDLH	US IDLH (mg/m³)	5000 mg/m³
Alberta	OEL TWA (mg/m³)	10 mg/m³
British Columbia	OEL TWA (mg/m³)	10 mg/m³ (total dust)

Manitoba	OEL TWA (mg/m³)	10 mg/m³
New Brunswick	OEL TWA (mg/m³)	10 mg/m³
Newfoundland & Labrador	OEL TWA (mg/m³)	10 mg/m³
Nova Scotia	OEL TWA (mg/m³)	10 mg/m³
Nunavut	OEL TWA (mg/m³)	5 mg/m³ (respirable mass)
Northwest Territories	OEL TWA (mg/m³)	5 mg/m³ (respirable mass)
Ontario	OEL TWA (mg/m³)	10 mg/m³
Prince Edward Island	OEL TWA (mg/m³)	10 mg/m³
Québec	VEMP (mg/m³)	10 mg/m³ (containing no Asbestos and <1% Crystalline silica-total dust)
Saskatchewan	OEL STEL (mg/m³)	20 mg/m³
Saskatchewan	OEL TWA (mg/m³)	10 mg/m³
Yukon	OEL STEL (mg/m³)	20 mg/m³
Yukon	OEL TWA (mg/m³)	30 mppcf

Exposure Controls

Appropriate Engineering Controls: Ensure all national/local regulations are observed. Gas detectors should be used when flammable gases/vapors may be released. Proper grounding procedures to avoid static electricity should be followed. Use explosion-proof equipment. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas.

Personal Protective Equipment: Protective clothing. Gloves. Insufficient ventilation: wear respiratory protection. Protective goggles.

Materials for Protective Clothing: Chemically resistant materials and fabrics. Wear fire/flame resistant/retardant clothing.

Hand Protection: Wear chemically resistant protective gloves.

Eye Protection: Chemical goggles or safety glasses.

Skin and Body Protection: Wear suitable protective clothing.

Respiratory Protection: Use NIOSH-approved air-purifying or supplied-air respirator where airborne concentrations of vapor or mist are expected to exceed exposure limits.

Thermal Hazard Protection: Wear suitable protective clothing.

Other Information: When using, do not eat, drink or smoke.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on Basic Physical and Chemical Properties

Physical State	:	Liquid
Appearance	:	White, pebble gray, gray, beige
Odor	:	Methyl methacrylate, Light Floral Scent
Odor Threshold	:	Not available
pH	:	Not available
Evaporation Rate	:	Not available
Melting Point	:	Not available
Freezing Point	:	Not available
Boiling Point	:	Not available
Flash Point	:	10 °C (50.00 °F)
Auto-ignition Temperature	:	Not available
Decomposition Temperature	:	Not available
Flammability (solid, gas)	:	Not available
Lower Flammable Limit	:	Not available
Upper Flammable Limit	:	Not available

Vapor Pressure	:	> 1000 hPa @50°C (122°F)
Relative Vapor Density at 20 °C	:	Not available
Relative Density	:	Not available
Specific gravity / density	:	0.97 - 1.4 g/l @21°C (69.8°F)
Specific Gravity	:	Not available
Solubility	:	Insoluble in water.
Partition Coefficient: N-octanol/water	:	Not available
Viscosity	:	25- 42 dPa*s @20°C (68°F)
Explosion Data – Sensitivity to Mechanical Impact	:	Not expected to present an explosion hazard due to mechanical impact.
Explosion Data – Sensitivity to Static Discharge	:	Static discharge could act as an ignition source.

SECTION 10: STABILITY AND REACTIVITY

Reactivity: Product may polymerize at 60°C (>140°F), causing an exothermic reaction which may cause container damage or fire. May react with peroxides, oxidizers, and incompatibilities.

Chemical Stability: Highly flammable liquid and vapor. May form flammable/explosive vapor-air mixture.

Possibility of Hazardous Reactions: Hazardous polymerization may occur.

Conditions to Avoid: Direct sunlight. Extremely high or low temperatures. Heat. Ignition sources. Incompatible materials.

Incompatible Materials: Strong acids. Strong bases. Strong oxidizers.

Hazardous Decomposition Products: Carbon oxides (CO, CO2). May release flammable gases. Toxic gases. Nitrogen oxides. Hydrocarbons. Methyl methacrylate. Oxides of titanium.

SECTION 11: TOXICOLOGICAL INFORMATION

Information on Toxicological Effects - Product

Acute Toxicity: Harmful if swallowed.

LD50 and LC50 Data:

Pro Mortar Resin Part A	
ATE US (oral)	1749.78 mg/kg body weight

Skin Corrosion/Irritation: Causes skin irritation.

Serious Eye Damage/Irritation: Causes serious eye irritation.

Respiratory or Skin Sensitization: May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction.

Germ Cell Mutagenicity: May cause genetic defects.

Teratogenicity: Not available

Carcinogenicity: May cause cancer.

Specific Target Organ Toxicity (Repeated Exposure): Not classified

Reproductive Toxicity: May damage fertility or the unborn child.

Specific Target Organ Toxicity (Single Exposure): May cause respiratory irritation. May cause drowsiness or dizziness.

Aspiration Hazard: Not classified

Symptoms/Injuries After Inhalation: May cause respiratory irritation. Exposure may produce an allergic reaction. May cause drowsiness or dizziness.

Symptoms/Injuries After Skin Contact: Causes skin irritation. May cause an allergic skin reaction.

Symptoms/Injuries After Eye Contact: Causes eye irritation.

Symptoms/Injuries After Ingestion: Swallowing a small quantity of this material will result in serious health hazard.

Chronic Symptoms: May damage fertility. May damage the unborn child. May cause heritable genetic damage. May cause cancer.

Information on Toxicological Effects - Ingredient(s)

LD50 and LC50 Data:

2-Propanol, 1,1'-[(4-methylphenyl)imino]bis- (38668-48-3)	
LD50 Oral Rat	200 mg/kg
Methyl methacrylate (80-62-6)	
LD50 Oral Rat	7900 mg/kg
LC50 Inhalation Rat	4632 ppm/4h

2-Ethylhexyl acrylate (103-11-7)	
LD50 Oral Rat	4435 mg/kg
LD50 Dermal Rabbit	7522 mg/kg

Quartz (14808-60-7)	
LD50 Oral Rat	> 5000 mg/kg
LD50 Dermal Rat	> 5000 mg/kg

Titanium dioxide (13463-67-7)	
LD50 Oral Rat	> 10000 mg/kg

Naphtha, petroleum, hydrodesulfurized heavy (64742-82-1)	
LD50 Oral Rat	> 5000 mg/kg
LD50 Dermal Rabbit	> 3160 mg/kg

Solvent naphtha, petroleum, light aromatic (64742-95-6)	
LD50 Dermal Rabbit	> 2000 mg/kg
LC50 Inhalation Rat	3400 ppm/4h
ATE US (gases)	3,400.00 ppmV/4h

Methyl methacrylate (80-62-6)	
IARC Group	3

2-Ethylhexyl acrylate (103-11-7)	
IARC Group	3

Quartz (14808-60-7)	
IARC Group	1
National Toxicity Program (NTP) Status	Known Human Carcinogens.

Titanium dioxide (13463-67-7)	
IARC Group	2B

SECTION 12: ECOLOGICAL INFORMATION

Toxicity

Ecology - General: Harmful to aquatic life with long lasting effects.

2-Propanol, 1,1'-[(4-methylphenyl)imino]bis- (38668-48-3)	
LC50 Fish 1	17 mg/l
EC50 Daphnia 1	28.8 mg/l

Methyl methacrylate (80-62-6)	
LC50 Fish 1	243 - 275 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
EC50 Daphnia 1	69 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC 50 Fish 2	125.5 - 190.7 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])

2-Ethylhexyl acrylate (103-11-7)	
EC50 Daphnia 1	17.45 mg/l (Exposure time: 48 h - Species: Daphnia magna)

1-Methyl-2-pyrrolidone (872-50-4)	
LC50 Fish 1	832 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])
EC50 Daphnia 1	4897 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC 50 Fish 2	1072 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])

Solvent naphtha, petroleum, light aromatic (64742-95-6)	
LC50 Fish 1	9.22 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss)
EC50 Daphnia 1	6.14 mg/l (Exposure time: 48 h - Species: Daphnia magna)

Persistence and Degradability Not available

Bioaccumulative Potential

Bioaccumulative Potential	Not established.
Methyl methacrylate (80-62-6)	
Log Pow	0.7
2-Ethylhexyl acrylate (103-11-7)	
Log Pow	4.64 (at 25 °C)

Mobility in Soil Not available

Other Adverse Effects

Other Information: Avoid release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Recommendations: Dispose of waste material in accordance with all local, regional, national, provincial, territorial and international regulations.

Additional Information: Handle empty containers with care because residual vapors are flammable.

SECTION 14: TRANSPORT INFORMATION

In Accordance with DOT

Proper Shipping Name : PAINT
Hazard Class : 3
Identification Number : UN1263
Label Codes : 3
Packing Group : II
ERG Number : 128

In Accordance with IMDG

Proper Shipping Name : PAINT
Hazard Class : 3
Identification Number : UN1263
Packing Group : II
Label Codes : 3
EmS-No. (Fire) : F-E
EmS-No. (Spillage) : S-E

In Accordance with IATA

Proper Shipping Name : PAINT
Packing Group : II
Identification Number : UN1263
Hazard Class : 3
Label Codes : 3
ERG Code (IATA) : 3L

In Accordance with TDG

Proper Shipping Name : PAINT
Packing Group : II
Hazard Class : 3
Identification Number : UN1263
Label Codes : 3

SECTION 15: REGULATORY INFORMATION

US Federal Regulations

SARA Section 311/312 Hazard Classes	Fire hazard Immediate (acute) health hazard Delayed (chronic) health hazard

2-Propanol, 1,1'-[(4-methylphenyl)imino]bis- (38668-48-3)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Methyl methacrylate (80-62-6)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Listed on United States SARA Section 313	
SARA Section 313 - Emission Reporting	1.0 %

2-Ethylhexyl acrylate (103-11-7)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Quartz (14808-60-7)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Titanium dioxide (13463-67-7)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

EPA TSCA Regulatory Flag	T - T - indicates a substance that is the subject of a Section 4 test rule under TSCA.
SARA Section 313 - Emission Reporting	1.0 %

Naphtha, petroleum, hydrodesulfurized heavy (64742-82-1)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Solvent naphtha, petroleum, light aromatic (64742-95-6)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

US State Regulations

Quartz (14808-60-7)	
U.S. - California - Proposition 65 - Carcinogens List	WARNING: This product contains chemicals known to the State of California to cause cancer.

Titanium dioxide (13463-67-7)	
U.S. - California - Proposition 65 - Carcinogens List	WARNING: This product contains chemicals known to the State of California to cause cancer.

Methyl methacrylate (80-62-6)
U.S. - California - Toxic Air Contaminant List (AB 1807, AB 2728)
U.S. - Colorado - Hazardous Wastes - Discarded Chemical Products, Off-Specification Species, Container and Spill Residues
U.S. - Connecticut - Hazardous Air Pollutants - HLVs (30 min)
U.S. - Connecticut - Hazardous Air Pollutants - HLVs (8 hr)
U.S. - Delaware - Pollutant Discharge Requirements - Reportable Quantities
U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Acceptable Ambient Concentrations
U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Emission Levels (ELs)
U.S. - Idaho - Occupational Exposure Limits - TWAs
U.S. - Illinois - Toxic Air Contaminants
U.S. - Louisiana - Reportable Quantity List for Pollutants
U.S. - Maine - Air Pollutants - Hazardous Air Pollutants
U.S. - Massachusetts - Allowable Ambient Limits (AALs)
U.S. - Massachusetts - Allowable Threshold Concentrations (ATCs)
U.S. - Massachusetts - Oil & Hazardous Material List - Groundwater Reportable Concentration - Reporting Category 1
U.S. - Massachusetts - Oil & Hazardous Material List - Groundwater Reportable Concentration - Reporting Category 2
U.S. - Massachusetts - Oil & Hazardous Material List - Reportable Quantity

U.S. - Massachusetts - Oil & Hazardous Material List - Soil Reportable Concentration - Reporting Category 1
U.S. - Massachusetts - Oil & Hazardous Material List - Soil Reportable Concentration - Reporting Category 2
RTK - U.S. - Massachusetts - Right To Know List
U.S. - Massachusetts - Threshold Effects Exposure Limits (TELs)
U.S. - Massachusetts - Toxics Use Reduction Act
U.S. - Michigan - Occupational Exposure Limits - TWAs
U.S. - Michigan - Polluting Materials List
U.S. - Minnesota - Chemicals of High Concern
U.S. - Minnesota - Hazardous Substance List
U.S. - Minnesota - Permissible Exposure Limits - TWAs
U.S. - New Hampshire - Regulated Toxic Air Pollutants - Ambient Air Levels (AALs) - 24-Hour
U.S. - New Hampshire - Regulated Toxic Air Pollutants - Ambient Air Levels (AALs) - Annual
U.S. - New Jersey - Discharge Prevention - List of Hazardous Substances
U.S. - New Jersey - Environmental Hazardous Substances List
RTK - U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - New Jersey - Special Health Hazards Substances List
U.S. - New York - Occupational Exposure Limits - TWAs
U.S. - New York - Reporting of Releases Part 597 - List of Hazardous Substances
U.S. - North Dakota - Air Pollutants - Guideline Concentrations - 1-Hour
U.S. - North Dakota - Air Pollutants - Guideline Concentrations - 8-Hour
U.S. - North Dakota - Hazardous Wastes - Discarded Chemical Products, Off-Specification Species, Container and Spill Residues
U.S. - Oregon - Permissible Exposure Limits - TWAs
RTK - U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List
RTK - U.S. - Pennsylvania - RTK (Right to Know) List
U.S. - Rhode Island - Air Toxics - Acceptable Ambient Levels - 24-Hour
U.S. - South Carolina - Toxic Air Pollutants - Maximum Allowable Concentrations
U.S. - South Carolina - Toxic Air Pollutants - Pollutant Categories
U.S. - Tennessee - Occupational Exposure Limits - TWAs
U.S. - Texas - Effects Screening Levels - Long Term
U.S. - Texas - Effects Screening Levels - Short Term
U.S. - Vermont - Hazardous Waste - Hazardous Constituents
U.S. - Vermont - Permissible Exposure Limits - TWAs
U.S. - Washington - Dangerous Waste - Dangerous Waste Constituents List
U.S. - Washington - Dangerous Waste - Discarded Chemical Products List
U.S. - Washington - Permissible Exposure Limits - STELs
U.S. - Washington - Permissible Exposure Limits - TWAs
U.S. - Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Heights 25 Feet to Less Than 40 Feet
U.S. - Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Heights 40 Feet to Less Than 75 Feet
U.S. - Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Heights 75 Feet or Greater
U.S. - Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Heights Less Than 25 Feet
2-Ethylhexyl acrylate (103-11-7)
U.S. - Massachusetts - Oil & Hazardous Material List - Groundwater Reportable Concentration - Reporting Category 1
U.S. - Massachusetts - Oil & Hazardous Material List - Groundwater Reportable Concentration - Reporting Category 2
U.S. - Massachusetts - Oil & Hazardous Material List - Reportable Quantity
U.S. - Massachusetts - Oil & Hazardous Material List - Soil Reportable Concentration - Reporting Category 1
U.S. - Massachusetts - Oil & Hazardous Material List - Soil Reportable Concentration - Reporting Category 2
RTK - U.S. - Massachusetts - Right To Know List
RTK - U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - New Jersey - Special Health Hazards Substances List
RTK - U.S. - Pennsylvania - RTK (Right to Know) List
U.S. - Texas - Effects Screening Levels - Long Term
U.S. - Texas - Effects Screening Levels - Short Term

Quartz (14808-60-7)
U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Acceptable Ambient Concentrations
U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Emission Levels (ELs)
U.S. - Idaho - Occupational Exposure Limits - Mineral Dusts
U.S. - Illinois - Toxic Air Contaminant Carcinogens
U.S. - Illinois - Toxic Air Contaminants
U.S. - Maine - Chemicals of High Concern
RTK - U.S. - Massachusetts - Right To Know List
U.S. - Michigan - Occupational Exposure Limits - TWAs
U.S. - Minnesota - Chemicals of High Concern
U.S. - Minnesota - Hazardous Substance List
U.S. - Minnesota - Permissible Exposure Limits - TWAs
U.S. - New Hampshire - Regulated Toxic Air Pollutants - Ambient Air Levels (AALs) - 24-Hour
U.S. - New Hampshire - Regulated Toxic Air Pollutants - Ambient Air Levels (AALs) - Annual
RTK - U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - New Jersey - Special Health Hazards Substances List
U.S. - New York - Occupational Exposure Limits - Mineral Dusts
U.S. - New York - Occupational Exposure Limits - TWAs
U.S. - Oregon - Permissible Exposure Limits - Mineral Dusts
RTK - U.S. - Pennsylvania - RTK (Right to Know) List
U.S. - Tennessee - Occupational Exposure Limits - TWAs
U.S. - Texas - Effects Screening Levels - Long Term
U.S. - Texas - Effects Screening Levels - Short Term
U.S. - Vermont - Permissible Exposure Limits - TWAs
U.S. - Washington - Permissible Exposure Limits - STELs
U.S. - Washington - Permissible Exposure Limits - TWAs

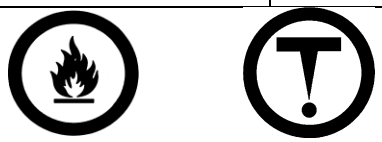
Titanium dioxide (13463-67-7)
U.S. - Connecticut - Hazardous Air Pollutants - HLVs (30 min)
U.S. - Connecticut - Hazardous Air Pollutants - HLVs (8 hr)
U.S. - Idaho - Occupational Exposure Limits - TWAs
U.S. - Illinois - Toxic Air Contaminant Carcinogens
RTK - U.S. - Massachusetts - Right To Know List
U.S. - Michigan - Occupational Exposure Limits - TWAs
U.S. - Minnesota - Chemicals of High Concern
U.S. - Minnesota - Hazardous Substance List
U.S. - Minnesota - Permissible Exposure Limits - TWAs
U.S. - New Hampshire - Regulated Toxic Air Pollutants - Ambient Air Levels (AALs) - 24-Hour
U.S. - New Hampshire - Regulated Toxic Air Pollutants - Ambient Air Levels (AALs) - Annual
RTK - U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - New York - Occupational Exposure Limits - TWAs
U.S. - North Dakota - Air Pollutants - Guideline Concentrations - 8-Hour
U.S. - Oregon - Permissible Exposure Limits - TWAs
RTK - U.S. - Pennsylvania - RTK (Right to Know) List
U.S. - Tennessee - Occupational Exposure Limits - TWAs
U.S. - Texas - Effects Screening Levels - Long Term
U.S. - Texas - Effects Screening Levels - Short Term
U.S. - Vermont - Permissible Exposure Limits - TWAs
U.S. - Washington - Permissible Exposure Limits - STELs
U.S. - Washington - Permissible Exposure Limits - TWAs

Naphtha, petroleum, hydrodesulfurized heavy (64742-82-1)
U.S. - Maine - Chemicals of High Concern
U.S. - Minnesota - Chemicals of High Concern
U.S. - Minnesota - Chemicals of High Concern - Persistent Bioaccumulative Toxins

U.S. - Texas - Effects Screening Levels - Long Term U.S. - Texas - Effects Screening Levels - Short Term
Solvent naphtha, petroleum, light aromatic (64742-95-6)
U.S. - Texas - Effects Screening Levels - Long Term U.S. - Texas - Effects Screening Levels - Short Term

Canadian Regulations

Pro Mortar Resin Part A	
WHMIS Classification	Class B Division 2 - Flammable Liquid Class D Division 2 Subdivision A - Very toxic material causing other toxic effects Class D Division 2 Subdivision B - Toxic material causing other toxic effects



2-Propanol, 1,1'-[(4-methylphenyl)imino]bis- (38668-48-3)	
Listed on the Canadian DSL (Domestic Substances List)	
WHMIS Classification	Class D Division 1 Subdivision A - Very toxic material causing immediate and serious toxic effects Class D Division 2 Subdivision B - Toxic material causing other toxic effects

Methyl methacrylate (80-62-6)	
Listed on the Canadian DSL (Domestic Substances List) Listed on the Canadian IDL (Ingredient Disclosure List)	
IDL Concentration 1 %	
WHMIS Classification	Class B Division 2 - Flammable Liquid Class D Division 2 Subdivision B - Toxic material causing other toxic effects Class D Division 2 Subdivision A - Very toxic material causing other toxic effects

2-Ethylhexyl acrylate (103-11-7)	
Listed on the Canadian DSL (Domestic Substances List) Listed on the Canadian IDL (Ingredient Disclosure List)	
IDL Concentration 1 %	
WHMIS Classification	Class B Division 3 - Combustible Liquid Class D Division 2 Subdivision B - Toxic material causing other toxic effects

Quartz (14808-60-7)	
Listed on the Canadian DSL (Domestic Substances List) Listed on the Canadian IDL (Ingredient Disclosure List)	
IDL Concentration 1 %	
WHMIS Classification	Class D Division 2 Subdivision A - Very toxic material causing other toxic effects

Titanium dioxide (13463-67-7)	
Listed on the Canadian DSL (Domestic Substances List)	
WHMIS Classification	Class D Division 2 Subdivision A - Very toxic material causing other toxic effects

Naphtha, petroleum, hydrodesulfurized heavy (64742-82-1)	
Listed on the Canadian DSL (Domestic Substances List)	
WHMIS Classification	Class D Division 2 Subdivision A - Very toxic material causing other toxic effects Class D Division 2 Subdivision B - Toxic material causing other toxic effects Class B Division 2 - Flammable Liquid

Solvent naphtha, petroleum, light aromatic (64742-95-6)
Listed on the Canadian DSL (Domestic Substances List)

WHMIS Classification	Class B Division 3 - Combustible Liquid Class D Division 2 Subdivision B - Toxic material causing other toxic effects

Fatty acids, C18, unsaturated, dimers, reaction products with N,N-dimethyl-1,3-propanediamine and 1,3-propanediamine (162627-17-0)	
WHMIS Classification	Class D Division 2 Subdivision B - Toxic material causing other toxic effects

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all of the information required by CPR.

SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Revision Date : 10/20/2022

Other Information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

GHS Full Text Phrases:

Acute Tox. 3 (Oral)	Acute toxicity (oral) Category 3
Acute Tox. 4 (Dermal)	Acute toxicity (dermal) Category 4
Acute Tox. 4 (Inhalation: vapor)	Acute toxicity (inhalation: vapor) Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Aquatic Acute 1	Hazardous to the aquatic environment - Acute Hazard Category 1
Aquatic Acute 2	Hazardous to the aquatic environment - Acute Hazard Category 2
Aquatic Acute 3	Hazardous to the aquatic environment - Acute Hazard Category 3
Aquatic Chronic 1	Hazardous to the aquatic environment - Chronic Hazard Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment - Chronic Hazard Category 2
Aquatic Chronic 3	Hazardous to the aquatic environment - Chronic Hazard Category 3
Asp. Tox. 1	Aspiration hazard Category 1
Carc. 1A	Carcinogenicity Category 1A
Carc. 1B	Carcinogenicity Category 1B
Carc. 2	Carcinogenicity Category 2
Comb. Dust	Combustible Dust
Eye Irrit. 2A	Serious eye damage/eye irritation Category 2A
Eye Irrit. 2B	Serious eye damage/eye irritation Category 2B
Flam. Liq. 1	Flammable liquids Category 1
Flam. Liq. 2	Flammable liquids Category 2
Flam. Liq. 3	Flammable liquids Category 3
Flam. Liq. 4	Flammable liquids Category 4
Muta. 1B	Germ cell mutagenicity Category 1B
Repr. 2	Reproductive toxicity Category 2
Resp. Sens. 1	Respiratory sensitization Category 1
Skin Irrit. 2	Skin corrosion/irritation Category 2
Skin Sens. 1	Skin sensitization Category 1
STOT RE 1	Specific target organ toxicity (repeated exposure) Category 1
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H224	Extremely flammable liquid and vapor
H225	Highly flammable liquid and vapor
H226	Flammable liquid and vapor
H227	Combustible liquid
	May form combustible dust concentrations in air
H301	Toxic if swallowed

H302	Harmful if swallowed
H304	May be fatal if swallowed and enters airways
H312	Harmful in contact with skin
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
H320	Causes eye irritation
H332	Harmful if inhaled
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled
H335	May cause respiratory irritation
H336	May cause drowsiness or dizziness
H340	May cause genetic defects
H350	May cause cancer
H351	Suspected of causing cancer
H361	Suspected of damaging fertility or the unborn child
H372	Causes damage to organs through prolonged or repeated exposure
H400	Very toxic to aquatic life
H401	Toxic to aquatic life
H402	Harmful to aquatic life
H410	Very toxic to aquatic life with long lasting effects
H411	Toxic to aquatic life with long lasting effects
H412	Harmful to aquatic life with long lasting effects

Party Responsible for the Preparation of This Document

Todd Franks
Siplast, Inc.
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Arkadelphia, AR 71923
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This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

PRO MORTAR RESIN PART B
SAFETY DATA SHEET

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE, AND OF THE COMPANY/UNDERTAKING

1.1 Product Name: Pro Mortar Aggregate

1.2 Product Description: Crystalline Silica

1.3 Identification of the substance or preparation
Product identifiers: Silica Sand, Quartz, Novaculite, Silicon Dioxide, Silica Flour.

1.4 Other means of identification
Odorless, gray granular powder.

1.5 Recommended use and restrictions on use
Main applications of silica (non-exhaustive list): glass Ingredient, silica chemical processing, foundry sand, refractory ingredient, filler for resins, composites, artificial stone, textured coatings, glues and mortars.

DO NOT USE THIS PRODUCT FOR SANDBLASTING.

1.6 Supplier

Company Name:	Siplast, Inc.	Emergency number: 800-424-9300
Address:	14911 Quorum Dr., Ste 600	Information number: 800-922-8800
	Dallas, TX 75254	Prepared: November, 2022

2. HAZARDS IDENTIFICATION

2.1 Classification in accordance with 29 CFR §1910.1200(d)
STOT RE 1; Carcinogen 1A

2.2 Signal word, hazard statements, symbol and precautionary statements

Danger — Causes damage to lungs, kidneys, through prolonged or repeated exposure. May cause cancer by prolonged or repeated inhalation.

Do not breathe dust. Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. Obtain special instructions before use. Do not handle until all safety instructions have been read and understood. Wear eye and respiratory protection. If exposed or concerned: Get medical attention. Store locked up. Dispose of contents in accordance with local, regional and national regulations.

2.3 Hazards not otherwise classified
Increased risk of systemic autoimmune disease (scleroderma, rheumatoid arthritis, and systemic lupus erythematosus) through prolonged or repeated inhalation. Increased risk of tuberculosis through prolonged or repeated inhalation. Smoking increases the risk of lung function impairment and chronic obstructive pulmonary disease COPD through prolonged or repeated inhalation.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Chemical name and composition

Component	CAS Number	EINECS Number	Percent
Silicon dioxide (quartz)	14808-60-7	238-878-4	98.7 - 99.9
Aluminum Oxide	1344-28-1	215-691-6	<1.1
Iron Oxide	1309-37-1	215-168-2	<0.1
Titanium Oxide	13463-67-7	236-675-5	<0.1

3.2 Common name and synonyms
Silica, SiO_2, quartz, crystalline silica, Novaculite, cryptocrystalline quartz, microcrystalline quartz, sand, chert, flint, tripoli.

3.3 Impurities which are themselves classified and which contribute to the classification of the product
Contains 1% or greater respirable crystalline silica which is classified as STOT RE 1

4. FIRST AID MEASURES

4.1 Eye Exposure
Not classified as an eye irritant. May cause physical abrasion if it gets in eyes. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

4.2 Skin Exposure
Not applicable.

4.3 Inhalation
If exposed or concerned: Get medical attention.

4.4 Ingestion
Not applicable.

4.5 Most important symptoms/effects, acute and delayed
Dry chronic cough, sputum production, shortness of breath, wheezing, and reduced pulmonary function.

4.6 Indication of immediate medical attention and special treatment needed.
Symptoms of pulmonary impairment, such as shortness of breath, coughing, and wheezing.

5. FIRE-FIGHTING MEASURES

5.1 Suitable extinguishing media
Noncombustible and compatible with all extinguishing media.

5.2 Specific hazards arising from the chemical
Noncombustible. Thermal decomposition will not occur.

5.3 Special protective equipment and precautions for fire-fighters
Wear respiratory protection where airborne dust occurs.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment, and emergency procedures
Avoid generating airborne dust. Wear respiratory protection where airborne dust occurs. Keep unnecessary people away; isolate hazard area and deny entry.

6.2 Methods and materials for containment and cleaning up.
Do not dry sweep or use compressed air. Use water spraying, or a ventilated or HEPA filtered vacuum cleaning system.

7. HANDLING AND STORAGE

7.1 Precautions for safe Handling
Do not breathe dust. Obtain special instructions before use. Do not handle until all safety instructions have been read and understood. Wear eye and respiratory protection. Avoid airborne dust generation.

Use appropriate exhaust ventilation at places where airborne dust is generated, including during loading and unloading. Do not rely on your sight to determine if dust is in the air. Respirable crystalline silica dust may be invisible in the air. Handle packaged products carefully to prevent accidental bursting. Maintain and test ventilation and dust collection equipment. Use all available work practices to control dust exposures, such as water sprays. Practice good housekeeping. Do not permit dust to collect on walls, floors, sills, ledges, machinery, or equipment. Exposures to respirable crystalline silica can occur when cutting, sawing, grinding, drilling, and crushing this material or articles that contain this material.

7.2 Conditions for safe storage

Keep containers closed and store to avoid accidental tearing, breaking, or bursting. Inert and unreactive with most chemicals. Contact with powerful oxidizing agents such as fluorine, chlorine trifluoride, and oxygen difluoride may cause fires.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Exposure limits

OSHA PEL 8-hour time weighted average for respirable quartz expressed as millions of particles per cubic foot of air, based on impinger samples counted by light-field techniques:

$$\frac{250}{(\%SiO_2+5)}$$

The percentage of crystalline silica in the formula is the amount determined from airborne samples, except in those instances in which other methods have been shown to be applicable. OSHA PEL 8-hour time weighted average for respirable quartz expressed as milligrams per cubic meter:

$$\frac{10\ mg/m^3}{(\%SiO_2+2)}$$

Both concentration and percent quartz for the application of this limit are to be determined from the fraction passing a size-selector with the following characteristics:

Aerodynamic diameter (unit density sphere)	**Percent passing selector**
2	90
2.5	75
3.5	50
5	25
10	0

OSHA PEL 8-hour time weighted average for Quartz total dust expressed as milligrams per cubic meter

$$\frac{30\ mg/m^3}{(\%SiO_2+2)}$$

On September 12, 2013, OSHA published a preliminary quantitative risk assessment concluding that the available evidence indicates that employees exposed to respirable crystalline silica well below the current PELs are at increased risk of lung cancer mortality and silicosis.

CAL OSHA PEL 8-hour time weighted average for respirable quartz 0.1 mg/m^3
CAL OSHA PEL 8-hour time weighted average for quartz total dust 0.3 mg/m^3

ACGIH TLV 8-hour time weighted average for respirable α-quartz and cristobalite 0.025 mg/m^3
NIOSH REL up to 10 -hour time weighted average for respirable quartz ca 0.05 mg/m^3

8.2 Appropriate engineering controls

Avoid airborne dust generation. Use process enclosures and appropriate exhaust ventilation at places where airborne dust is generated, including during loading and unloading. Apply organizational measures, e.g. by isolating personnel from dusty areas. Remove and wash soiled clothing.

8.3 Individual protection measures, such as personal protective equipment

8.3.1 Eye / Face Protection

Wear appropriate safety glasses with side shields or chemical goggles.

8.3.2 Skin Protection

Wear body-covering clothing. Appropriate hand protection (e.g. gloves, barrier cream) is recommended for workers who suffer from dermatitis or sensitive skin. Wash hands at the end of each work session. Remove and wash soiled clothing.

8.3.3 Respiratory Protection

When engineering and work practice controls are not feasible, while they are being implemented, or when they do not reduce silica levels below OSHA PELs, employers must provide workers with respirators. Whenever respirators are used, the employer must have a respiratory protection program that meets the requirements of OSHA's Respiratory Protection standard (29 CFR 1910.134). This program must include proper respirator selection, fit testing, medical evaluations, and training. See, OSHA's Respiratory Protection eTool, available at www.osha.gov/SLTC/etools/respiratory/index.html

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	White, gray, or tan granular powder
Odor	Odorless
Odor Threshold	Not applicable
pH:	Water dispersions are neutral; pH 6 - 8
Specific Gravity:	2.65 g/cc
Melting Point:	3110°F/1710°C
Freezing Point:	Not applicable
Boiling Point:	4046°F/2230°C
Flashpoint:	Not applicable
Flammability:	Noncombustible
Flammable or Explosive Limits:	Not applicable
Vapor Pressure:	Not detectable
Vapor density:	Not applicable
Relative Density:	Not applicable
Solubility:	Dissolves in hydrofluoric acid and produces a corrosive gas, silicon tetrafluoride
Water Solubility:	Negligible
Partition Coefficient n-octanol/water:	Not applicable
Autoignition Temperature:	Not applicable
Decomposition Temperature:	Will not decompose
Viscosity:	Not applicable

10. STABILITY AND REACTIVITY

10.1 Reactivity
Stable and inert.

10.2 Chemical Stability
Will not decompose or react with containers or environmental materials

10.3 Possibility of hazardous reactions
Reacts only with powerful oxidizing agents such as fluorine, chlorine trifluoride, and oxygen difluoride which may cause fires. If crystalline silica (quartz) is heated to more than 870°C, it can change to tridymite crystalline silica; and if crystalline silica (quartz) is heated to more than 1470°C, it can change to cristobalite crystalline. The OSHA PEL for respirable tridymite and cristobalite is one-half of the OSHA PEL for crystalline silica (quartz).

10.4 Conditions to avoid
None.

10.5 Incompatible materials
Contact with powerful oxidizing agents such as fluorine, chlorine trifluoride and oxygen difluoride, which may cause fires.

10.6 Hazardous Decomposition Products
None. Will not decompose.

11. TOXICOLOGICAL INFORMATION

11.1 Likely routes of exposure
The relevant route for occupational exposure is by inhalation.

11.2 Symptoms related to the physical, chemical and toxicological characteristics
Dry chronic cough, sputum production, shortness of breath, wheezing, and reduced pulmonary function.

11.3 Delayed and immediate effects and also chronic effects from short- and long-term exposure

11.3.1 Short-term exposure
Acute silicosis can occur within a few weeks to months after inhalation exposure to extremely high levels of respirable crystalline silica. Acute silicosis causes decreased lung function and can result in heart disease secondary to the lung disease: heart failure and cor pulmonale. Death from acute silicosis can occur within months to a few years of disease onset, and persons with acute silicosis are at high risk of contracting other lung diseases including tuberculosis, atypical mycobacterial infections, and fungal superinfections. Quantitative information on the level of exposure that causes acute silicosis is not available, but available information indicates those levels are far in excess of permissible exposure limits. Animal studies also suggest that pulmonary reactions of rats to short-duration exposure to freshly fractured silica mimic those seen in acute silicosis in humans.

Accelerated silicosis results from exposure to high levels of airborne respirable crystalline silica, and usually occurs within 2 to 10 years of initial exposure. Accelerated silicosis causes decreased lung function and can result in heart disease secondary to the lung disease. Accelerated silicosis has a rapid, severe course and persons with this condition are at high risk of contracting other lung diseases including tuberculosis, atypical mycobacterial infections, fungal superinfections, and lung cancer. Quantitative information on the level of exposure that causes accelerated silicosis is not available, but available information indicates those levels are substantially in excess of permissible exposure limits.

11.3.2 Long term exposure

Chronic silicosis generally occurs after 10 years or more of inhalation exposure to respirable crystalline silica at levels below those associated with acute and accelerated silicosis. Chronic silicosis in most cases is a slowly progressive disease resulting in decreased lung function and can result in heart disease secondary to the lung disease. Its effects are disabling and may lead to death. Persons with chronic silicosis are at high risk of contracting other lung diseases including tuberculosis, atypical mycobacterial infections, fungal superinfections, and lung cancer. On September 12, 2013, OSHA published a preliminary quantitative risk assessment concluding that the available evidence indicates that employees exposed to respirable crystalline silica well below the current PELs are at increased risk of lung cancer mortality and silicosis.

Chronic obstructive pulmonary disease, COPD, including chronic bronchitis and emphysema, occurs in silica-exposed workers, including those who do not develop silicosis. Respirable crystalline silica exposure and smoking may be synergistic for COPD, that is, there is evidence that the combined effect of exposure to respirable crystalline silica and smoking may be greater than additive.

Respirable crystalline silica is recognized by OSHA, NTP and IARC as a cause of lung cancer. Respirable crystalline silica is an independent risk factor from smoking for lung cancer. Respirable crystalline silica exposure and smoking may be synergistic for lung cancer, that is, there is some evidence that the combined effect of exposure to respirable crystalline silica and smoking may be greater than additive.

There is substantial evidence suggesting an association between exposure to inhaled respirable crystalline silica and increased risks of renal (kidney) and systemic autoimmune disease (scleroderma, rheumatoid arthritis, and systemic lupus erythematosus).

11.4 Numerical measures of toxicity (such as acute toxicity estimates)

Crystalline silica is not acutely toxic. Reliable numerical measures of chronic toxicity do not exist.

12. ECOLOGICAL INFORMATION

12.1 Ecotoxicity (aquatic and terrestrial, where available

Crystalline silica (quartz) is ubiquitous in the natural environment. It is not ecotoxic; i.e., no data exists that demonstrate or suggests that crystalline silica (quartz) is toxic to animals, microorganisms, or plants.

12.2 Persistence and degradability

Because of its low solubility and slow rate of solution, crystalline silica (quartz) is persistent except on a geologic time-scale.

12.3 Bioaccumulative potential

Does not bioaccumulate. Some plants, such as gramanae (grasses) and animals such as Demospongiae (siliceous sponges) bioaccumulate silica, but this occurs by absorption of dissolved silica from natural waters.

12.4 Mobility in soil

Immobile in soil.

12.5 Other adverse effects

None.

13. DISPOSAL CONSIDERATIONS

13.1 Waste Disposal Method

Disposed material is not a hazardous waste. Where possible, recycling is preferable to disposal. Dispose in accordance with local, regional and national regulations.

13.2 Container Handling and Disposal

Avoid airborne dust generation from residues in packaging, and use suitable engineering controls and personal protection measures. Store used packaging in enclosed receptacles. Dispose of containers, residues and unused contents accordance with local, regional and national regulations

14. TRANSPORTATION INFORMATION

14.1 UN number

None. Not a regulated material for transportation purposes.

14.2 UN proper shipping name

None. Not a regulated material for transportation purposes.

14.3 Transport hazard class(es)

None. Not a regulated material for transportation purposes.

14.4 Packing group, if applicable

Not applicable.

14.5 Environmental hazards

None.

14.6 Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code)

Not applicable.

14.7 Special precautions

Do not breathe dust. Wash thoroughly after handling.. Do not eat, drink or smoke when using this product. Avoid generating airborne dust during loading and unloading. Use suitable engineering controls and personal protection measures. Handle packaged products carefully to prevent accidental bursting.

15. REGULATORY INFORMATION

15.1 Toxic Substances Control Act (TSCA) status

Crystalline silica (quartz) is listed on the EPA TSCA inventory under the CAS No 14808-60-7.

15.2 Resource Conservation and Recovery Act (RCRA) status

Disposed product is not a hazardous waste under RCRA.

15.3 Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) status

No CERCLA Reportable Quantity has been established for any ingredient in this product.

15.4 Emergency Planning and Community Right to Know Act (SARA Title III) status

Not an Extremely Hazardous Substance under §302. Not a Toxic Chemical under §313. Hazard Categories under §§311/312: Acute.

15.5 Clean Air Act status

This product is not processed with nor does it contain any Class I or Class II ozone depleting substances.

15.6 California Proposition 65 status

Crystalline silica (airborne particles of respirable size) is classified as a substance known to the State of California to be a carcinogen.

15.7 Massachusetts Toxic Use Reduction Act status

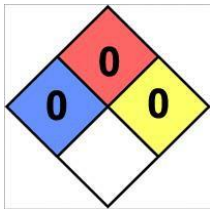
Silica, crystalline (respirable size, <10 microns) is "toxic" for purposes of the Massachusetts Toxic Use Reduction Act.

15.8 Pennsylvania Worker and Community Right to Know Act status

Quartz is a hazardous substance, but it is not a special hazardous substance or an environmental hazardous substance under the Pennsylvania Worker and Community Right to Know Act.

16. OTHER INFORMATION

16.1 NFPA 704: Standard System for the Identification of the Hazards of Materials for Emergency Response (Fire Diamond)



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