

SECTION 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Generic Description:	Silicone Compound	PCI-Promatec
Physical Form:	Viscous Liquid/Dry Powders*	11707 West Sam Houston Parkway South Suite K
Color:	Off-White/Beige*/Gray**	Houston, TX 77031
Odor:	Some odor	281-933-7222

*When supplied as separate components; this is the normal packaging. See sections 3 and 11 of this MSDS.

**After combining of separate components. See Section 9 for separate components.

SECTION 2. CHEMICAL COMPOSITION & DATA

<u>CAS number</u>	<u>Wt %*</u>	<u>Wt %**</u>	<u>Component Name</u>
14808-60-7	>99%	<5%	Crystalline Silica (Quartz)
7440-66-6	90% - 98%	50% -60%	Zinc Metallic
1314-13-2	2% - 10%	<7%	Zinc Oxide

HMIS Profile: Health: *,0** Fire Hazard 3*1** Reactivity 1*0** Protective Equipment E*C**

NFPA Profile: Health: 0 Flammability 3*1** Reactivity 1*0**

* When supplied as separate components; this is the normal packaging. See sections 3 and 11 of this MSDS.

** When supplied premixed.

SECTION 3. HAZARDS IDENTIFICATION

The metallic aggregate, while it will not spontaneously ignite, may burn readily if ignited.

Acute Effects:

Eye: Direct eye contact may cause temporary redness and discomfort. Crystalline silica (quartz) and metallic aggregate may cause abrasion of the cornea.

Skin: No significant irritation expected from a single short-term exposure, (combined components). For the dry powders, avoid prolonged, repeated or excessive contact with skin; may cause drying or irritation. Seek medical attention if irritation persists.

Inhalation: No significant irritation expected from a single short-term exposure, when supplied premixed. Avoid prolonged, repeated or excessive inhalation of dry powders, which may irritate respiratory tract. For the dry powders, see below.

Oral: Low ingestion hazard in normal use. Although unlikely, if a gross ingestion of the dry powders occurs, seek medical attention.

Physical: Spills are slippery - (liquid component).

Prolonged/Repeated Exposure Effects:

Silica is chemically inert and is a non-combustible mineral. Excessive and long-term exposure to silica dust may cause lung disease and silicosis.

- Eye: Conjunctivitis of the eye is possible.
- Skin: No known applicable information for the blended product. For dry powders, dermatitis of the skin is possible; avoid prolonged, repeated or excessive contact with skin. If contact is expected, wear gloves to avoid skin dryness or irritation.
- Inhalation: No known applicable information for the blended product. Repeated inhalation of the dry powders can produce varying degrees of respiratory irritation. Crystalline silica is listed by NTP as a known human carcinogen, and it is classified by IARC in Group 1; materials for which there is sufficient evidence in humans for carcinogenicity. The adverse health effects – Silicosis, cancer, autoimmune diseases, tuberculosis, and nephrotoxicity are chronic effects. Dust and/or fumes from the metallic aggregate can cause nausea, gastric pain and irritation to the upper respiratory tract. (When supplied as separate components).
- | | |
|----------------------------|--|
| <u>Silicosis</u> | Respirable crystalline silica (quartz) can cause silicosis, a fibrosis (scarring) of the lungs. Silicosis may be progressive; it may lead to disability and death. |
| <u>Cancer</u> | Respirable crystalline silica (quartz) inhaled from occupational sources is classified as carcinogenic to humans. |
| <u>Autoimmune Diseases</u> | There are some studies that show excess numbers of cases of scleroderma and other connective tissue disorders in workers exposed to respirable crystalline silica. |
| <u>Tuberculosis</u> | Silicosis increases the risk of tuberculosis. |
| <u>Nephrotoxicity</u> | There are some studies that show an increased incidence of chronic kidney disease and end-stage renal disease in workers exposed to respirable crystalline silica. |
- Oral: No known applicable information.

Signs and Symptoms of Overexposure:

No known applicable information for the blended product. When supplied as separate components, metallic taste, respiratory irritation and, with metal fume fever, flu-like symptoms can occur from the metallic aggregate.

Medical Conditions Aggravated by Exposure:

The condition of individuals with lung disease (e.g. bronchitis, emphysema, chronic obstructive pulmonary disease) can be aggravated by exposure to respirable crystalline silica (quartz). (When supplied as separate components). Also, exposure to the dry powder components of this product may aggravate conjunctivitis of the eye, dermatitis of the skin, asthma and other respiratory diseases.

The above listed potential effects of overexposure are based on actual data, results of studies performed upon similar compositions, component data and/or expert review of base products by others. Please refer to section 11 for the detailed toxicology.

SECTION 4. FIRST AID MEASURES

- Eye: Remove contact lenses if present, immediately flush with water, if irritation persists, seek medical attention. Abrasion to the cornea is possible.

- Skin:** No first aid should be needed. For dry powders, if irritation develops, area may be flushed with water and a mild soap may be used if available. If symptoms persist, contact a poison control center, emergency room or physician for treatment information.
- Inhalation:** No first aid should be needed, however, if there is a gross inhalation of respirable dust, remove the person immediately to fresh air, give artificial respiration as needed, seek medical attention as needed.
- Oral:** No first aid should be needed, however, although unlikely, if a gross ingestion of the dry powders occurs, gently wipe or rinse the inside of the mouth with water. Sips of water can be given to a conscious person. If possible, have victim drink several glasses of water or milk. **DO NOT INDUCE VOMITING** unless directed by a poison control center, emergency room or physician, and obtain additional treatment information as necessary.
- Comments:** Treat symptomatically.

SECTION 5. FIRE FIGHTING MEASURES

- Flash Point:** >214°F />101.1°C (Closed Cup). Prior to curing; liquid state.
- Autoignition Temperature:** Not determined.
- Flammability Limits in Air:** Not determined
- Extinguishing Media:** On large fires use dry chemical, or foam. On small fires use carbon dioxide (CO₂), or dry chemical. (Prior to curing; liquid state.)
AVOID WATER use on dry components.
- Fire Fighting Measures:** Self-contained breathing apparatus and protective clothing should be worn in fighting large fires involving chemicals. Determine the need to evacuate or isolate the area according to your local emergency plan. (Prior to curing; liquid state.)
- Unusual Fire Hazards when product is supplied as separate components:** Dry zinc dust will not ignite spontaneously, but once ignited, may burn readily in air.
DO NOT SPREAD ZINC DUST. Smother and allow fire to go out. Wear self-contained breathing apparatus.
Bulk dust in contact with water or damp air evolves hydrogen. The heat produced during this reaction could ignite the hydrogen. An explosive condition may exist if this happens in a confined space.
Dry dust forms explosive mixtures with air, if ignited.

Hazardous Decomposition Products:

Thermal breakdown of the liquid component of this product during fire or very high heat conditions may evolve the following hazardous decomposition products: Metal oxides, carbon oxides and traces of incompletely burned carbon compounds, silicon dioxide, formaldehyde and quartz.

If crystalline silica (quartz) is heated to more than 1598 °F (870°C) it can change to a form of crystalline silica known as trydimite, and if crystalline silica is heated to more than 2646 °F (1470°C) it can change to a form of crystalline silica known as cristobalite. The OSHA PEL for crystalline silica as trydimite and cristobalite is one-half of the OSHA PEL for crystalline silica (quartz).

SECTION 6. ACCIDENTAL RELEASE MEASURES

Containment/Clean up:

Determine whether to evacuate or isolate the area according to your local emergency plan. Observe all personal protection equipment recommendations described in Sections 5 and 8¹. For large spills, provide diking or other appropriate containment to keep material from spreading. If diked material can be pumped store recovered material in appropriate container. For respirable crystalline silica (quartz) or zinc powder², use dustless methods (vacuum) and place into closable container for disposal. Do not dry sweep, avoid heavy concentrations of airborne dust. Avoid all ignition sources and prohibit smoking. Wear protective equipment specified below.

Clean up remaining materials from spill with suitable absorbent. Clean area as appropriate since some silicone materials, even in small quantities, may present a slipping hazard. Final cleaning may require the use of solvents or detergents. Avoid water when zinc powder is present. Avoid open flames or sparks of any kind near wet material (zinc). Dispose of saturated absorbent or cleaning materials appropriately, since spontaneous heating may occur. Local, state and federal laws and regulations may apply to releases and disposal of this material, as well as those materials and item employed in the clean up of releases. You will need to determine which federal, state and local laws and regulations are applicable. Sections 13 and 15 of this MSDS provide information regarding certain federal and state requirements.

Note 1: See Section 8 for personal Protective Equipment for spills.

Note 2: Substantially reduced when pre-blended material is supplied.

SECTION 7. HANDLING AND STORAGE

Use with adequate ventilation. Avoid eye and skin contact, and contact with clothing; avoid generating respirable dust, do not breathe dust, or ingest.

Use reasonable care and store away from oxidizing materials, moisture and/or water; keep containers closed.

Product evolves minute quantities of flammable hydrogen gas which can accumulate. Adequately ventilate to maintain vapors well below flammability limits and exposure guidelines. Do not repackage. Do not store in glass containers which may shatter due to pressure build-up. Clogged container vents may increase pressure build-up. Keep container closed and store away from water or moisture.

Do not breathe dust (respirable crystalline silica or metallic aggregate). Use adequate ventilation and appropriate dust collection. Keep airborne dust concentrations below PEL. Do not rely on your sight to determine if dust is in the air. Silica may be in the air without a visible dust cloud. If dust cannot be kept below permissible limits, wear a respirator approved for the specific dust when using, handling, storing or disposing of this product or bag. Practice good housekeeping. Do not permit dust to collect on walls, floors, sills, ledges, machinery, or equipment. Maintain, clean, and fit test respirators in accordance with OSHA regulations. Maintain and test ventilation and dust collection equipment. Wash or vacuum clothing that has become dusty. See also control measures in Section 8.

Precautions During Storage

Avoid breakage of bagged materials or spills of bulk respirable crystalline silica (quartz) material or zinc powder³. See also control measures in Section 8.

When material is supplied as separate components, it is essential to store in well-ventilated dry areas to prevent formation and build-up of hydrogen-air mixtures. Failure to vent may cause explosive concentrations. AVOID MOISTURE.

The OSHA Hazard Communication Standard, 29 CFR Sections 1910.1200, 1915.1200, 1917.28, 1918.90, 1926.59 and 1928.21, and state and local worker or community “right-to-know” laws and regulations should be strictly followed. WARN YOUR EMPLOYEES (AND YOUR CUSTOMERS IN THE CASE OF RESALE) BY POSTING AND OTHER MEANS OF THE HAZARDS AND THE REQUIRED OSHA PRECAUTIONS. PROVIDE TRAINING FOR YOUR EMPLOYEES ABOUT THE OSHA PRECAUTIONS.

See also the American Society for testing and Materials (ASTM) standard practice E 1132-99a, “Standard Practice for Health Requirements Relating to Occupational Exposure to Respirable Crystalline Silica.”

Note 3: Substantially reduced when pre-blended material is supplied.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Component Exposure Limits

See below.

Permissible Exposure Levels⁴:

For separate components:

Material Identification			Exposure Guidelines						
Component Crystalline Silica (quartz)	CAS No. 14808-60-7	Percentage (by wt.) >99.0	OSHA PEL		ACGIH TLV		NIOSH REL		Unit mg/m ³
			TWA	STEL	TWA	STEL	TWA	STEL	
			10/%SiO ₂ +2	None	0.025	None	0.05	None	
Component Zinc Metallic Oxide Fume	CAS No. 7440-66-6	Percentage (by wt.) 90.0 – 98.0	OSHA PEL		ACGIH TLV		NIOSH REL		Unit mg/m ³
			TWA	STEL	TWA	STEL	TWA	STEL	
			5	N.A.	5	10	N.A.	N.A.	
Component Zinc Oxide Total Dust	CAS No. 1314-13-2	Percentage (by wt.) 2.0 – 10.0	OSHA PEL		ACGIH TLV		NIOSH REL		Unit mg/m ³
			TWA	STEL	TWA	STEL	TWA	STEL	
			15	N.A.	10	N.A.	N.A.	N.A.	
Component Zinc Oxide Respirable (Fume)	CAS No. 1314-13-2	Percentage (by wt.) 2.0 – 10.0	OSHA PEL		ACGIH TLV		NIOSH REL		Unit mg/m ³
			TWA	STEL	TWA	STEL	TWA	STEL	
			5	N.A.	5	10	N.A.	N.A.	

N.A. = Not Available

Note 4: Substantially reduced when pre-blended material is supplied.

Engineering Controls

Local Ventilation⁵:

Use sufficient local exhaust to reduce the level of respirable dusts, if present, to below the applicable PEL. See ACGIH “Industrial Ventilation, A Manual of Recommended Practice” (latest edition).

General Ventilation:

Recommended.

Note 5: None should be needed when pre-blended material is supplied.

Personal Protective Equipment for Routine Handling

Eyes:

Use proper protection – safety glasses as a minimum. If powder exposure to the eyes is likely, use tight fitting chemical safety goggles.

Skin:	Washing at mealtime and at end of shift is adequate. For the dry powders, avoid repeated exposure to the skin.
Suitable Gloves:	No special protection needed for the blended product. For dry powders avoid prolonged, repeated or excessive contact with skin, if expected wear gloves to avoid skin dryness or irritation.
Inhalation:	No respiratory protection should be needed for the blended product. For dry powders, the specific respirator must be based on the airborne concentration, (above PEL), found in the workplace and must not exceed the working limits of the respirator
Suitable Respirator:	Where respirable dust is present above permissible exposure limits, use appropriate NIOSH approved dust filter respirator.

Personal Protective Equipment for Spills

Eyes:	Use proper protection – safety glasses as a minimum. If powder exposure to the eyes is likely, use tight fitting chemical safety goggles.
Skin:	Washing at mealtime and at end of shift is adequate. For the dry powders, avoid repeated exposure to the skin.
Gloves:	Recommended. (When handling dry powders)
Inhalation /Suitable Respirator:	See above.

Precautionary Measures: Avoid eye contact and/or the generation of dust clouds. Use reasonable care.

Comments: When heated to temperatures above 180°C (356°F) in the presence of air, product can form formaldehyde vapors. Formaldehyde is a potential cancer hazard, a known skin and respiratory sensitizer, and an irritant to the eyes, nose, throat, skin, and digestive system. Safe handling conditions may be maintained by keeping vapor concentrations within OSHA Permissible Exposure Limit (PEL) for formaldehyde. If crystalline silica (quartz) is heated to more than 1598 °F (870°C) it can change to a form of crystalline silica known as trydimite, and if crystalline silica is heated to more than 2646 °F (1470°C) it can change to a form of crystalline silica known as cristobalite. The OSHA PEL for crystalline silica as trydimite and cristobalite is one-half of the OSHA PEL for crystalline silica (quartz).

Note: These precautions are for room temperature handling. Use at elevated temperatures or aerosol/spray applications may require added precautions.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

The following is for the liquid component, when supplied as separate components:

Physical Form:	Liquid
Color:	Off-White/Beige*
Odor:	Some odor
Specific Gravity @ 25°C	1.33/1.33 (FC/RC)*
Viscosity:	2500/2000 cSt (FC/RC)*
Freezing/Melting Point:	Not determined
Boiling Point:	>170°C/>200°C (FC/RC)*
Vapor pressure @25°C	Not determined
Vapor Density:	Not determined
Solubility In Water:	Not determined
pH:	Not determined
Volatile Content:	Not determined
Flash Point:	>214°F / 101.1°C (Closed Cup)
Auto Ignition Temperature	Not determined
Flammability Limits in Air	Not determined

*FC= Fast Cure; RC = Regular Cure

When the material is supplied as separate components, additional components will be included and will have the following properties:

Appearance:	Powder
Color:	White or light gray
Odor:	None
Specific Gravity @ 25°C	2.65
Freezing/Melting Point:	Not determined
Vapor pressure (mm Hg)	10 mm@1732°C
Vapor Density (Air = 1):	N/A
Solubility In Water:	Insoluble in water
Melting Point	3110°F
Boiling Point:	4046°F
Evaporation Rate (Butyl Acetate =1):	None
Appearance:	Powder
Color:	Silver/Grey
Odor:	None
Specific Gravity @ 25°C	7.1
Melting Point:	788°F
Vapor pressure (mm Hg)	@1095°F = 10mm Hg
Vapor Density (Air = 1):	N/A
Solubility In Water:	Low
Boiling Point:	1665°F
Evaporation Rate (Butyl Acetate =1):	N/A
Flash Point	N/A

Note: The above information is not intended for use in preparing product specifications. Contact PCI-Promatec before writing specifications.

SECTION 10. STABILITY AND REACTIVITY

Chemical Stability (Pre-blended):	Stable under normal temperatures and pressures.
Chemical Stability (When supplied as separate components):	Zinc is stable in itself; however, avoid moisture alkalis or acids and storage in unventilated areas that could retain gases that may be formed.
Hazardous Polymerization:	Hazardous polymerization will not occur.
Conditions to avoid:	For the product after component blending, none known. For dry powder, generation of respirable dust. For crystalline silica exposure to temperatures >870°C may result in a more hazardous crystalline formation.
Materials to Avoid:	For crystalline silica (quartz) contact with powerful oxidizing agents such as fluorine, chlorine trifluoride manganese trioxide and oxygen difluoride may cause fires. For zinc powder, avoid moisture, alkalis and acids.
Hazardous Decomposition Product:	For the liquid component, water, alcohols, acidic or basic materials and many metals or metallic compounds, when in contact with the product, liberate flammable hydrogen gas, which can form explosive mixtures in air. Silica will dissolve in hydrofluoric acid and produce a corrosive gas – silicon tetrafluoride. Hydrogen gas, though not a decomposition product per se, may evolve from the zinc if in the presence of moisture, alkalis, acids or storage in unventilated areas.

SECTION 11. TOXICOLOGICAL INFORMATION**Special Hazard Information on Components**

No known applicable information for blended material; when supplied as separate components see below and also Section 3. For respirable crystalline silica (quartz): When crystalline silica is heated to more than 870°C it forms trydimite. Crystalline silica heated to more than 1470°C forms cristobalite. The OSHA PEL for crystalline silica as trydimite and cristobalite is one-half of the OSHA PEL for crystalline silica (quartz).

For respirable crystalline silica (quartz):

A. Silicosis

The major concern is silicosis, caused by inhalation and retention of respirable crystalline silica dust. Silicosis can exist in several forms, chronic (or ordinary), accelerated, or acute.

Chronic or Ordinary Silicosis (often referred to as Simple Silicosis) is the most common form of silicosis, and can occur after many years of exposure to relatively low levels of airborne respirable crystalline silica dust. It is further defined as either simple or complicated silicosis.

Simple silicosis is characterized by lung lesions (shown as radiographic opacities) less than 1 centimeter in diameter, primarily in the upper lung zones. Often, simple silicosis is not associated with symptoms, detectable changes in lung function or disability.

Simple silicosis may be progressive and may develop into complicated silicosis or progressive massive fibrosis (PMF). Complicated silicosis or PMF is characterized by lung lesions (shown as radiographic opacities) greater than 1 centimeter in diameter. Although there may be no symptoms associated with complicated silicosis or PMF, the symptoms, if present, are shortness of breath, wheezing, cough and sputum production. Complicated silicosis or PMF may be associated with decreased lung function and may be disabling. Advanced complicated silicosis or PMF may lead to death. Advanced complicated silicosis or PMF can result in heart disease secondary to the lung disease (corpumomale).

Accelerated Silicosis can occur with exposure to high concentrations of respirable crystalline silica over a relatively short period; the lung lesions can appear within five (5) years of the initial exposure. The progression can be rapid. Accelerated silicosis is similar to chronic or ordinary silicosis, except that the lung lesions appear earlier and the progression is more rapid.

Acute Silicosis can occur with exposures to very high concentrations of respirable crystalline silica over a very short time period, sometimes as short as a few months. The symptoms of acute silicosis include progressive shortness of breath, fever, cough and weight loss. Acute silicosis is fatal.

B. CANCER

IARC – The International Agency for Research on Cancer (“IARC”) concluded that there was “*sufficient evidence* in humans for the carcinogenicity of crystalline silica in the forms of quartz or cristobalite from occupational sources”, and that there is “*sufficient evidence* in experimental animals for the carcinogenicity of quartz and cristobalite.” The overall IARC evaluation was that “crystalline silica inhaled in the form of quartz or cristobalite from occupational sources is *carcinogenic to humans* (Group 1).” The IARC evaluation noted that “carcinogenicity was not detected in all industrial circumstances studies. Carcinogenicity may be dependent on inherent characteristics of the crystalline silica or on external factors affecting its biological activity or distribution of its polymorphs.” For further information on the IARC evaluation, see IARC Monographs on the Evaluation of Carcinogenic Risks to Humans, Volume 68, “Silica, Some Silicates...” (1997).

NTP – The National Toxicology Program, in its Ninth Annual Report on Carcinogens, classified “silica, crystalline (respirable)” as a known human carcinogen.

OSHA – Crystalline silica (quartz) is not regulated by the U.S. Occupational Safety and Health Administration as a carcinogen.

There have been many articles published on the carcinogenicity of crystalline silica, which the reader should consult for additional information; the following are examples of recently published articles: (1) “Crystalline Silica and Lung Cancer: The Problem of Conflicting Evidence”, Indoor Build Environ, Volume 8, pp. 121-176 (1998); (2) “Crystalline Silica and the risk of lung cancer on the potteries”, Occup. Environ. Med., Volume 55, pp. 779-785 (1998); (3) “Is Silicosis Required for Silica-Associated Lung Cancer?”, American Journal of Industrial Medicine, Volume 37, pp. 252-259 (2000); (4) “Silica, Silicosis, and Lung Cancer: A Risk Assessment”, American Journal of Industrial Medicine, Volume 38, pp. 8-18 (2000); (5) “Silica, Silicosis and Lung Cancer: A Response to a Recent Working Group Report”, Journal of Occupational and Environmental Medicine, Volume 42, pp. 704-720 (2000).

C. AUTOIMMUNE DISEASES

There is evidence that exposure to respirable crystalline silica (without silicosis) or that the disease silicosis is associated with the increased incidence of several autoimmune disorders, -- scleroderma, systemic lupus erythematosus, rheumatoid arthritis and diseases affecting the kidneys. For a review of the subject, the following may be consulted: “Occupational Exposure to Crystalline Silica and Autoimmune Disease”, Environmental Health Perspectives, Volume 107, Supplement 5, pp. 793-802 (1999); “Occupational Scleroderma”, Current Opinion on Rheumatology, Volume 11, pp. 490-494 (1999).

D. TUBERCULOSIS

Individuals with silicosis are at increased risk to develop pulmonary tuberculosis, if exposed to persons with tuberculosis. The following may be consulted for further information: Occupational Lung Disorders, Third Edition, Chapter 12, entitled “Silicosis and Related Diseases”, Parkes, W. Raymond (1994); “Risk of pulmonary tuberculosis relative to silicosis and exposure to silica dust in south African gold miners,” Occup Environ Med., Volume 55, pp. 496-502 (1998).

E. KIDNEY DISEASE

There is evidence that exposure to respirable crystalline silica (without silicosis) or that the disease silicosis is associated with the increased incidence of kidney diseases, including end stage renal disease. For additional information on the subject the following may be consulted: “Kidney Disease and Silicosis”, Nephron, Volume 85, pp. 14-19 (2000).

SECTION 12. ECOLOGICAL INFORMATION**Environmental Fate and Distribution**

Complete information is not yet available,

Environmental Effects

Complete information is not yet available, however, Crystalline silica (quartz) is not known to be ecotoxic; (i.e. there is no data which suggest that crystalline silica (quartz) is toxic to birds, fish, invertebrates, microorganisms or plants.) For additional information on crystalline silica (quartz), see Sections 9 (physical and chemical properties) and 10 (stability and reactivity) of this MSDS. The zinc powder itself and its products of degradation are not toxic.

Fate and Effects in Waste Water treatment Plants

Complete information is not yet available.

SECTION 13. DISPOSAL CONSIDERATIONS**RCRA Hazard Class (40 CFR 261)**

When a decision is made to discard this material, as received, is it classified as hazardous waste?
Yes.

Characteristic Waste:

Reactive: D003

Avoid dispersal of spilled material, runoff and contact with soil, waterways, drains and sewers. Disposal of this product, its sub-components, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional and local authority requirements. Efforts should be made to minimize generation of airborne dust. Limit exposure so that it does not exceed OSHA standard PEL.

SECTION 14. TRANSPORT INFORMATION**DOT Road Shipment Information (49 CFR 172.101)**

Not subject to DOT

Ocean Shipment (IMDG)

Not subject to IMDG code

Air Shipment (IATA)

Not subject to IATA regulations.

SECTION 15. REGULATORY INFORMATION

Contents of this MSDS comply with the OSHA Hazard Communication Standard 29 CFR 1910.1200.

TSCA Status: This product contains the following toxic chemicals, subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (40 CFR 372):

Separate Components:

CAS #	Chemical Name	% by wt.
7440-66-6	Zinc fume or Dust	96
N/A	Zinc Compounds	4
N/A	Lead Compounds	0.1

All other chemical substances in this material are included on or are exempted from listing on the TSCA Inventory of Chemical Substances.

EPA SARA Title III Chemical Listings

Section 302 Extremely Hazardous Substances:

None

Section 304 CERCLA Hazardous Substances:

None

Section 311/312 Hazard Class:

- Acute: No
- Chronic: No, premixed; crystalline silica, yes; chronic health
- Fire: No, premixed; zinc powder, flammability increases when exposed to moisture
- Pressure: No
- Reactive: No, premixed; zinc powder, water reactive

Section 313 Toxic Chemicals

See above.

OSHA Carcinogen:

Crystalline silica (quartz), metallic zinc and zinc oxide are **NOT** listed. For lead compounds, see above.

Reference Part 1910 Occupational Safety and Health Standards Subpart Z Toxic and Hazardous Substances 1910.1000 Tables Z-1, Z-2 and Z-3

NTP:

Respirable crystalline silica, primarily quartz dusts occurring in industrial and occupational settings, is classified as Known to be a Human Carcinogen. Metallic zinc and zinc oxide are **NOT** listed under “Known to be a Human Carcinogen”.

Reference National Toxicology Program (NTP), “Annual Report on Carcinogens” 11th RoC

Canada

Domestic Substances List: Sub-supplier’s products, as naturally occurring substances, are on the Canadian DSL (Dry Powders)
 WHMIS Classification D2A (crystalline silica (quartz); B-6 (Zinc Metal Powder or Dust)

Supplemental State Compliance Information

California

Warning: This product contains the following chemical(s) listed by the state of California under the safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65) as being known to cause cancer, birth defects or other reproductive harm.

Crystalline silica (quartz)

California Inhalation Reference Exposure Level (REL)

California established a chronic REL of 3 ug for silica (crystalline, respirable). A chronic REL is an airborne level of a substance at or below which no adverse health effects are anticipated in individuals indefinitely exposed to the substance at that level.

Massachusetts

No ingredient regulated by MA Right-to-Know Law Present (liquid component), Metallic aggregate: Zinc, Metal Powder or Dust. No information available for the other dry powders.

Massachusetts Toxic Use Reduction Act:

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

New Jersey

<u>CAS number</u>	<u>Wt %*</u>	<u>Wt %**</u>	<u>Component Name</u>
14808-60-7	>99%	<5%	Crystalline Silica (Quartz)
7440-66-6	90% - 98%	50% -60%	Zinc Metallic
1314-13-2	2% - 10%	<7%	Zinc Oxide
68083-19-2	40.0 – 70.0	<28%	Dimethyl siloxane, dimethylvinyl-terminated
14808-60-7	40.0 – 70.0	<28%	Quartz
68037-59-2	5.0 – 10.0	<4%	Dimethyl, methylhydrogen siloxane

* When supplied as separate components; this is the normal packaging. See sections 3 and 11 of this MSDS.

** When supplied premixed.

Pennsylvania

<u>CAS number</u>	<u>Wt %*</u>	<u>Wt %**</u>	<u>Component Name</u>
14808-60-7	>99%	<5%	Crystalline Silica (Quartz)
7440-66-6	90% - 98%	50% -60%	Zinc Metallic
1314-13-2	2% - 10%	<7%	Zinc Oxide
68083-19-2	40.0 – 70.0	<28%	Dimethyl siloxane, dimethylvinyl-terminated
68037-59-2	5.0 – 10.0	<4%	Dimethyl, methylhydrogen siloxane
14808-60-7	40.0 – 70.0	<28%	Quartz

* When supplied as separate components; this is the normal packaging. See sections 3 and 11 of this MSDS.

** When supplied premixed.

Pennsylvania Worker and Community Right-to Know Act:

Quartz is a hazardous substance under the Act, but it is **NOT** a special hazardous substance or an environmental hazardous substance. Zinc Metal Powder or Dust.

Other

EINECS No. 238-878-4, Crystalline Silica (Quartz); Zinc Metal Powder or Dust is on the EINECS.

EEC Label (Risk/Safety Phrases): R 48/20, R40/20, S22, S38 Crystalline Silica (Quartz); R15, R17, S7/8, S43 Zinc Metal Powder or Dust

IARC Crystalline Silica (Quartz) is classified in IARC Group 1.

SECTION 16. OTHER INFORMATION

Prepared by: PCI-Promatec

These data are based on information supplied by the manufacturers of the base components. These data are offered in good faith. The manufacturer of the base components considers values shown herein to be typical values and not as product specifications. No warranty, either expressed or implied, is hereby made. The recommended industrial hygiene and safe handling procedures are believed to be generally applicable. However, each user should review these recommendations in the specific context of the intended use and determine whether they are appropriate.