

MATERIAL SAFETY DATA SHEET

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Revision no. 4

Date: November, 2021

MICRO SILICA

Supplier

CHRYSO Gulf LLC
PO BOX 22849
Doha
Qatar
Tel: +974 44500 840
Fax: +974 44500 830

1. Identification of the product and the company

Identification of the product: Powder.
Company identification: See supplier.
Trade name: **MICRO SILICA**
Type of product: Supplementary Cementitious Material.
Use: Industrial.

2. Information on ingredients

Components	Mass, %
Amorphous Silica (SiO ₂)	> 85
Crystalline Silica	< 1
Various Metal Oxide	< 10

C A S No.: 69012-64-2

3. Hazards identification**Health:**

- No health, safety and environment risk if handled and stored correctly (see section 7).
- Hi dust concentrations may cause eye, skin, nasal and lung mucous membranes irritation.
- Pulmonary fibrosis (silicosis) is low. However, chronic exposure (over many years) to concentrations higher than specified limits may cause a chronic obstructive pulmonary disease.

Fire: Not Flammable.

4. First aid measures

Inhalation: In case of dust inhalation, go out from dusty atmosphere and breathe fresh air. If the troubles persist, consult a doctor.
Skin Contact: Wash with water and soap.
Eye Contact: Flush cautiously with water and/or eyewash solution. Seek medical attention if irritation persists.
Ingestion: In case of accidental ingestion, consult a doctor.

5. Fire - fighting measures

Suitable extinguishing media: Not applicable (if involved in fire, cool with water). Micro Silica is not combustible, and the dusts do not present danger of explosion.

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6. Accidental release measures

Personal precautions: Equip cleanup crew with proper protection.

Environmental precautions: Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

In case of spillage: Contain spillage or leaks and place the material into an appropriate container. Avoid actions that cause the dust to be airborne by using appropriate vacuum system or thoroughly wet with water.

7. Handling and storage

Handling: Avoid action that generates airborne dust.

Storage: Store in dry, well-ventilated area. Store in closed container/packaging. Keep away from hydrofluoric acids and fluorides.

8. Exposure controls / personal protection
Exposure Limits: Professional Exposure Limits

	VME		VLE	
	ppm	mg/m ³	ppm	mg/m ³
Total Dust (*)	-	10	-	-
Airborne Dust (*)	-	5	-	-
Crystalline Silica quartz (**)	-	0.1	-	-
Crystalline Silica (Cristobalite) (**)	-	0.05	-	-
Crystalline Silica (Tridymite) (**)	-	0.05	-	-

(*) No silicogene dust – Decree of 7 December 1984 (art. R 232-5-5 of code du travail) ?? international equivalent?

(**) Airborne dust – Decree of 10 April 1997.

NB: The following conditions must be satisfied: $Cns/5 + Cq/0.1 + Cc/0.05 + Ct/0.05 \leq 1$ if airborne dusts contain one or several crystalline silicas and other non-silicogenes dusts.

Cns, Cq, Cc and Ct represent respective concentrations of non-silicogene, quartz, cristobalite and tridymite airborne dusts.

Professional Exposure Control:

Personal protection



Respiratory protection: Avoid dust inhalation. Use general ventilation while handling and using this product. Use respirators and filters which can prevent dusts.

Hand protection: Wear work gloves.

Skin protection: Wear proper work clothes.

Eye protection: Wear safety glasses. Eye-wash stations should be available next to the working place.

In all cases, particularly in case of caption system use, avoid the disposal of dusts to the environment and do respect the threshold limit regulations.

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9. Physical and chemical properties

Physical state: Ultrafine powder which may form agglomerates.
Color: Grey / dark grey.
Odor: No distinct odor.
Melting Point: 1550 – 1700 °C
Flash Point: N/A
Specific Gravity: 2.10 – 2.40
Bulk Density (kg/m³): 500 – 750
Particle Size (µm): 0.50
Solubility in water: Insoluble.

10. Stability and reactivity

Stability: Considered to be stable and does not react with water.
Conditions to avoid: Avoid dust releases.
Materials to avoid: Avoid contact with hydrofluoric acid and fluorides.
Hazardous reactions: Micro silica reacts with hydrofluoric acid (HF) forming the toxic gas silicon tetrafluoride (SiF₄).
Hazardous decomposition: Increase in temperature above 1000 °C may cause crystalline silica transformation (cristobalite / tridymite) which shows risk of silicosis. The transformation rate rises with the temperature and the exposure time of the product.

11. Toxicological information

Inhalation: Inhalation of fine dusts may cause irritation and dry mucous membranes.
Lung fibrosis is low.
Chronic exposure (over many years) to concentrations higher than recommended limits may cause chronic obstructive pulmonary disease (BPCO).
Skin Contact: May cause irritation.
Eye Contact: May cause irritation and drying.
Ingestion: May cause gastric and/or intestinal irritation.

12. Ecological information

Micro silica is not known as hazardous to the environment.
Eco toxicity: Hardly soluble. CL₅₀ and DL₅₀ not established.
Harmful Effects: Harmful effects on the environment not known.

13. Disposal considerations

Re-use all products when possible. Avoid release to the environment. Comply with local regulations for disposal.

14. Transport information

General: Micro Silica is exempt from transport classification and labelling. Transportation of Micro Silica must be in compliance with the provisions of ADR for road, RID for rail, IDMG for sea and the ICAO/IATA for air transport.
Suitable for air, sea and land transport.

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15. Regulatory information

Symbol(s) R: None.

Phrase(s) S: None.

Phrase(s): None.

16. Other information

Further information: Recommended uses and restrictions: See technical Data Sheet for detailed information.

The contents and format of this MSDS are in accordance with EEC Commission Directive 2001/58/EC.

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