

Silica Specification

Description:

Natural silica (SiO_2) is a high-purity mineral obtained from selected deposits. It is characterized by excellent chemical stability, high melting point, and hardness, making it suitable for use in glassmaking, foundry, ceramics, and industrial applications.

Applications:

- Glass & Foundry Industry: Used in glass production, molds, and casting.
- Ceramics & Refractories: Improves strength and heat resistance.
- Construction: Component in dry mixes, sealants, and mortars.
- Paints & Coatings: Serves as a filler and extender for durability.
- Chemical Industry: Source of silicon compounds and silica gel.

Packing:

- Palletized bag in container
- 1 m³ jumbo bags in container

Health and Safety:

- Silica dust may cause irritation if inhaled; use protective mask and goggles.
- Ensure proper ventilation during handling
- Store in a dry, covered area away from moisture.
- Dispose of waste material in accordance with local regulations.

Chemical Composition (XRF Analysis)

Component	wt%
SiO_2	98.65
Al_2O_3	0.29
CaO	0.3
Fe_2O_3	0.03
K_2O	0.07
MgO	0.05
Na_2O	<0.05
L.O.I	0.5

Physical Properties

Property	Unit	Typical Value / Range	Test Method / Standard
Appearance	—	White to off-white granular or powder	Visual
Whiteness (Dry)	%	≥ 90	ISO 2469
Specific Gravity	g/cm^3	2.60 – 2.65	ASTM D854

Property	Unit	Typical Value / Range	Test Method / Standard
Bulk Density	g/cm ³	1.4 – 1.6	ASTM D7481
Hardness (Mohs)	—	7	—
Melting Point	°C	~1710	ASTM E794
pH (10% Slurry)	—	6.5 – 7.5	ASTM D1293
Moisture Content	%	≤ 0.3	ASTM D2216
Refractive Index	—	1.54	ISO 489
Thermal Expansion	10 ⁻⁶ /°C	0.55	ASTM E831
Oil Absorption	g/100g	22 – 28	ASTM D281
Silica Raw & Powder		Applications	
			