

BABHANIYA OVERSEAS OPC PVT LTD

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GLOBAL TECHNICAL DATA SHEET (TDS)

Product Name: High-Purity Industrial Silica Sand & Quartz Powder

Product Grades Offered: Ultra-Premium Glass Grade & Super-White Ceramics Grade

Overview: Processed from elite structural quartz veins in Western India (Gujarat), our premium range undergoes high-intensity magnetic separation, multi-deck hydro-washing, and strict thermal drying to completely eliminate metallic traces and ambient moisture. This ensures highly stable chemical matrices matching international European and American manufacturing specifications.

1. CHEMICAL COMPOSITION (GRADE-WISE SPECIFICATION)

Chemical Element / Oxide	Premium Glass Grade (%)	Super-White Ceramics Grade (%)
Silicon Dioxide (SiO ₂)	99.20% Min	99.00% Min
Iron Oxide (Fe ₂ O ₃)	0.035% Max (Ultra-Low)	0.045% Max
Aluminum Oxide (Al ₂ O ₃)	0.15% Max	0.25% Max
Calcium Oxide (CaO)	0.10% Max	0.15% Max
Magnesium Oxide (MgO)	0.04% Max	0.05% Max
Loss on Ignition (LOI)	0.25% Max	0.35% Max
Whiteness Index	N/A (Clear Grain)	90% - 94%

2. PHYSICAL SPECIFICATIONS & SIEVE MESH PROFILES

Physical Property	Glass Grade (Granular)	Ceramic Grade (Milled Powder)
Standard Mesh Profile	30 – 100 Mesh (Tailored Options Available)	200 – 325 Mesh (Fine Industrial Flour)
Grain Morphology	Sub-Angular to Spherical / Rounded	Fully Micronized Powder Matrix

Physical Property	Glass Grade (Granular)	Ceramic Grade (Milled Powder)
Free Ambient Moisture	< 0.1% (Completely Oven-Dried)	< 0.1% (Oven-Dried)
Clay & Silt Content	< 0.1% Max	< 0.05% Max
Sintering / Melting Point	> 1700°C	> 1650°C

3. KEY APPLICATIONS

- **Glass & Solar Industry:** Flat glass, container packaging, and high-transmission photovoltaic solar panels.
- **Ceramic Manufacturing:** Acts as a premium, high-whiteness functional filler and structural matrix for vitrified tiles, sanitaryware, and tableware. Enhances thermal shock resistance, firing strength, and structural durability.
- **Foundry & Casting:** Superior molding matrix for precision metal casting with excellent refractoriness.

4. INTERNATIONAL EXPORT PACKING & SAFE CONTAINER LOGISTICS

- **Standard Bulk Packing:** 1.0 MT / 1.4 MT Heavy-Duty UV Stabilized Circular FIBC Jumbo Bags.
- **Moisture & Humidity Defense:** Structurally integrated internal LDPE high-barrier liners.
- **Fumigation Standards:** 100% ISPM-15 Heat-Treated Heat Resistant Wooden Pallets wrapped securely with high-tension stretch film for automatic forklift discharge compatibility.
- **Payload Optimization:** Engineered to maximize heavy-duty 20ft ocean freight containers up to 26.6 MT - 27.5 MT depending on absolute loading country limitations.

***International Trade Notice:** This Technical Data Sheet meets European and Asian regulatory standards for commercial transaction presentation. Compliance reports from SGS, Intertek, or NABL-accredited laboratories are consistently furnished alongside the standard Bill of Lading (B/L) and AIFTA Form AI Certificates of Origin.*