



Silicon Dioxide Nanoparticles (SiO_2)

Product Catalogue

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Working

Silicon Dioxide (SiO_2) is a molecule made from Silicon and Oxygen, sometimes known as Silica, and the components are held together by a covalent connection. It is one of the sand's constituents and is present naturally in Quartz. It is typically white or colourless, insoluble in water or ethanol. It produces the silicate family by combining with minerals. Silicon Dioxide nanoparticles or Silica nanoparticles as a substrate are most common for proteins and enzymes and as a modified surface to immobilize cells and tissue. It is manufactured by Sol-Gel method in bulk quantity with multi point of quality check to get excellent purity.

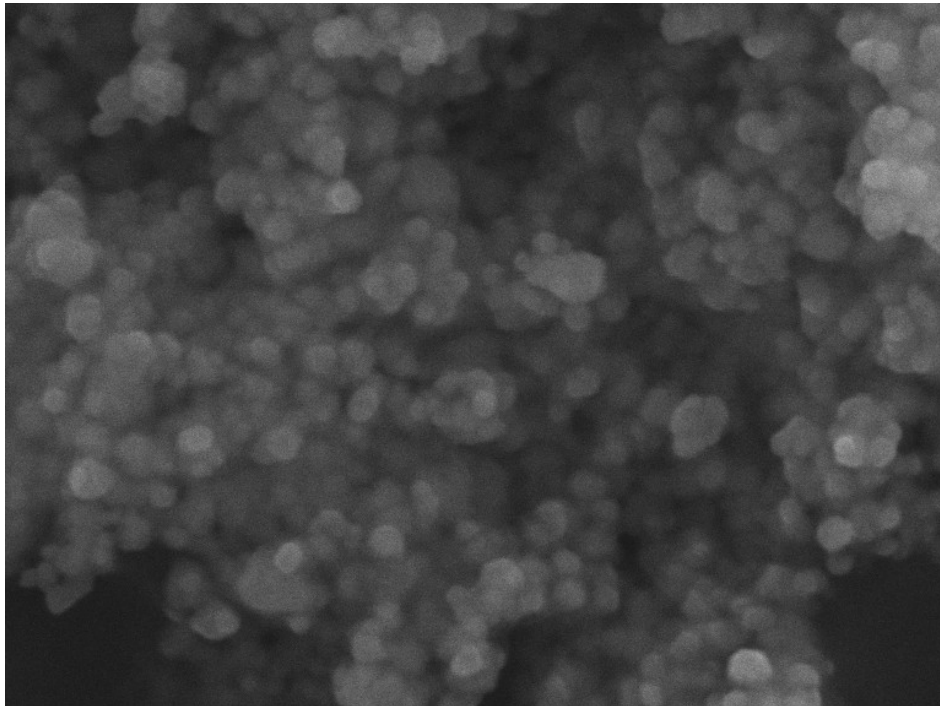
Product Code: SiO2-Nano

Technical Properties

<i>SPECIFICATIONS</i>	<i>VALUES</i>
Molecular Formula	SiO_2
CAS Number	7631 86 9
Bulk Density	0.25 g/cm ³
Average Particle Size	20 - 50 nm
Molecular Weight	231.533 g/mol
Purity	>99.9%
Form Factor	Powder
Morphology	Spherical
Surface Area	220 m ² /g
Colour	White

Characterization Analysis

SEM



SEM HV: 25.0 kV	WD: 5.10 mm		VEGA3 TESCAN
SEM MAG: 70.0 kx	Det: SE	500 nm	
View field: 2.97 μ m	Date(m/d/y): 09/25/20		

Particles Size Distribution

Size Distribution Report by Intensity v2.2



Sample Details

Sample Name: S1
SOP Name: mansettings.nano
General Notes:

File Name: Metal.dts	Dispersant Name: ethanol
Record Number: 89	Dispersant RI: 1.360
Material RI: 1.46	Viscosity (cP): 16.1118
Material Absorbance: 0.100	Measurement Date and Time: 17 April 2021 15:22:38

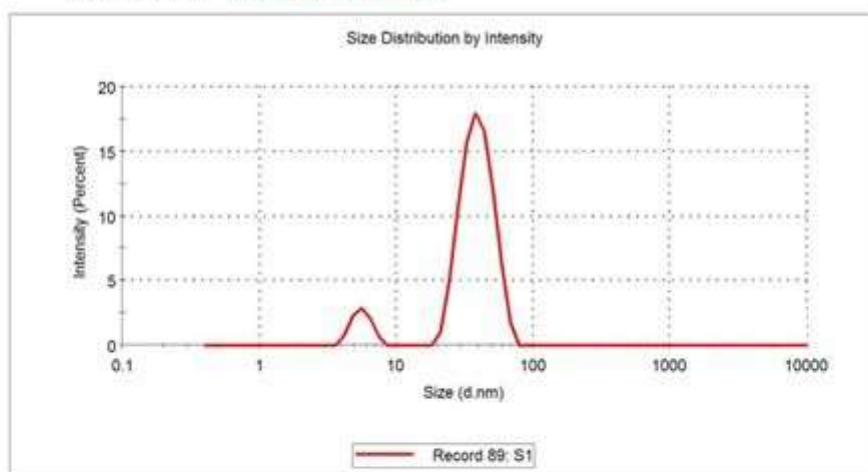
System

Temperature (°C): 25.0	Duration Used (s): 80
Count Rate (kcps): 147.5	Measurement Position (mm): 4.65
Cell Description: Disposable sizing cuvette	Attenuator: 7

Results

	Size (d.n...	% Intensity:	St Dev (d.n...
Z-Average (d.nm): 33.49	Peak 1: 39.80	89.9	10.30
Pdi: 0.377	Peak 2: 5.634	10.0	0.8973
Intercept: 0.934	Peak 3: 0.000	0.0	0.000

Result quality **Refer to quality report**



Applications

- Glass Products, Molten Sand, Cement, Fiber Glass, Ceramic Enamel, Sand Blasting for Antioxidant, Filter Sand, and Flux
- Parts of Electronics, Optical Instruments, and Crafts Industry
- Raw Material for the Manufacture of Optical Fibers
- Adhesive and Sealant Field
- Material Packing
- Textile Industry
- Biomedical Applications
- Paints and Inks
- Agriculture and Food Industry

Features

- It has high purity with a high melting point
- It has a High thermal conductivity. Exceptionally low moisture absorption
- Extremely low permeability to gases and to ionic contaminants
- It Supports built-in thin film terminating resistors
- No leakage between conductors

Safety Instructions

- Protective gloves should be worn at the time of operation.
- Safety goggle is a must during handling.
- Do not touch any part of the skin or eyes while using.
- Store in a moisture-proof dry place.

Packaging

It is supplied in a highly-protective moisture-proof bottle with a seal. It is finally packed in a shockproof sheet with a corrugated box.

Handling

When handling, the researcher should use powder-free non-latex gloves, which should be held carefully. While experimenting, if the operator uses a nanopowder with bare hands, the chances of contamination due to finger oil are very high. Therefore, it is advised to use nylon or polyester gloves.



Feel Free to Reach Us

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