



Magnesium Oxide Nanoparticles (MgO)

Product Catalogue

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Working

Magnesium oxide nanoparticles (MgO nanoparticles), often called Magnesium Oxide nanopowders, are fine powders comprising 5-100 nanometers (nm) size particles. It has a high surface area. It is a solid-form mineral with antimicrobial properties. The Magnesium Oxide nanopowder has gram-positive, gram-negative, and endospore-forming bacteria. It is one of the rare metals that exhibit the minimum or no harm-causing agents to the human body. Due to this, it is famous for biomedical use. MgO nanoparticles are synthesized by magnesium oxide or magnesite. It is a white hygroscopic mineral that exists naturally as periclase. The source of MgO is magnesium. It is odorless and non-toxic. It is manufactured by Sol-gel Method in bulk quantity with multiple quality checkpoints to get accurate Magnesium Oxide Nanoparticles.

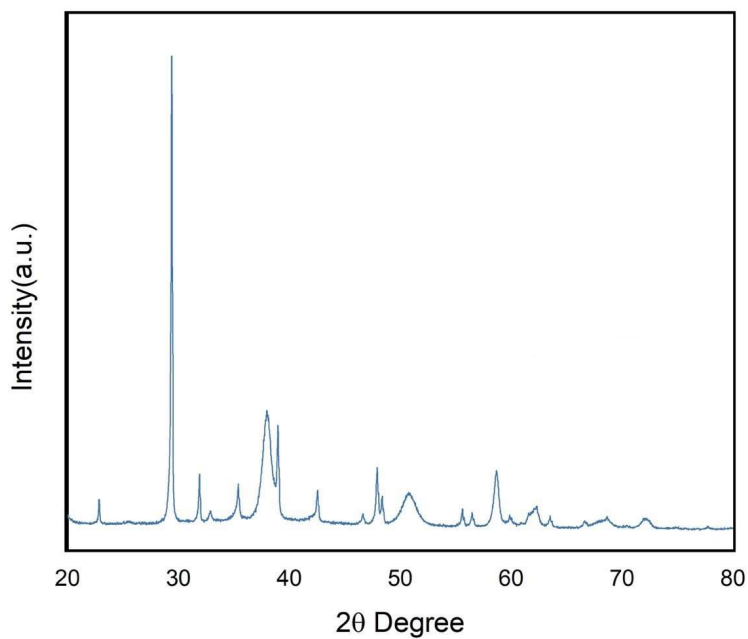
Product Code: MgO-Nano

Technical Properties

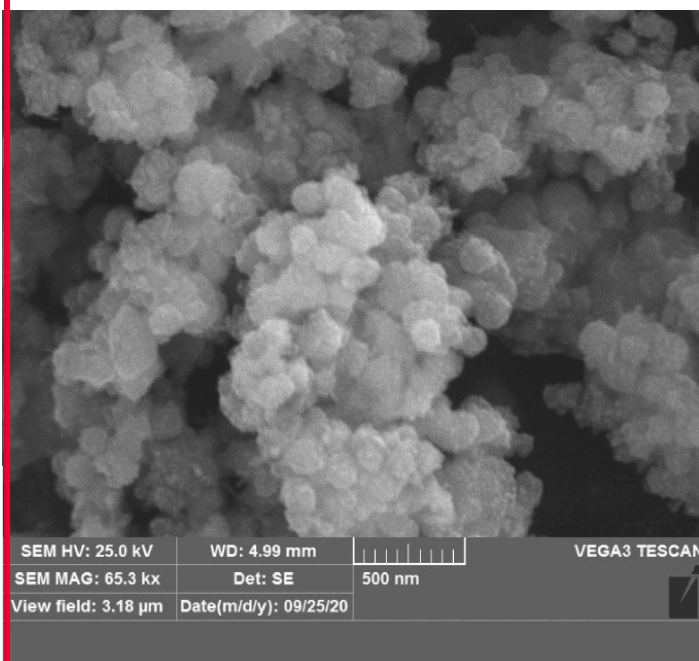
<i>SPECIFICATIONS</i>	<i>VALUES</i>
Molecular Formula	MgO
CAS Number	1309-48-4
Bulk Density	0.6 g/cm ³
Average Particle Size	20 - 50 nm
Molecular Weight	40.3 g/mol
Melting Point	2852 °C
Purity	>99.9%
Form Factor	Powder
Morphology	Spherical
Surface Area	110 – 130 m ² /g
Colour	White

Characterization Analysis

XRD



SEM



Particles Size Distribution

Size Distribution Report by Intensity v2.2



Sample Details

Sample Name: M1
SOP Name: mansettings.nano
General Notes:

File Name: Metal.dts	Dispersant Name: Water
Record Number: 87	Dispersant RI: 1.330
Material RI: 0.35	Viscosity (cP): 16.1118
Material Absorbton: 0.100	Measurement Date and Time: 17 April 2021 15:16:52

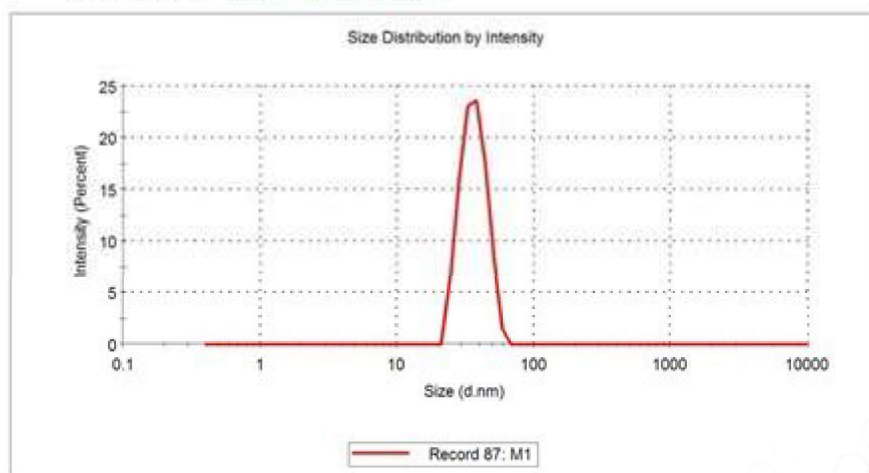
System

Temperature (°C): 25.0	Duration Used (s): 80
Count Rate (kcps): 149.4	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): 36.83	Peak 1: 36.66	100.0	7.741
Pdi: 0.271	Peak 2: 0.000	0.0	0.000
Intercept: 0.945	Peak 3: 0.000	0.0	0.000

Result quality **Refer to quality report**



Applications

- High-temperature dehydrating agent used to make silicon steel sheet
- High-grade ceramic material and electronics industry material
- Adhesives and additives in the chemical raw material
- Electric insulating material
- For making crucibles, smelters, insulated conduit, electrode bars, and electrode sheet
- High-frequency magnetic rod antenna and magnetic device filter
- Insulating material filler and various carriers used in radio industries
- As a fire retardant used for chemical fiber as a plastic trades
- Fuel additives cleaner, antistatic agent, and corrosion inhibitor
- Used in fertilizer
- Paint and coating

Features

- It is odorless and non-toxic
- It possesses excellent hardness
- It has high purity with a high melting point
- It has good antibacterial properties
- Produced reactive oxygen species, which could damage cellular components, such as protein, lipids, and Nucleic Acid

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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