

• Novotech nanopowder MgO • Refractory Material & Structural Ceramics

### Description

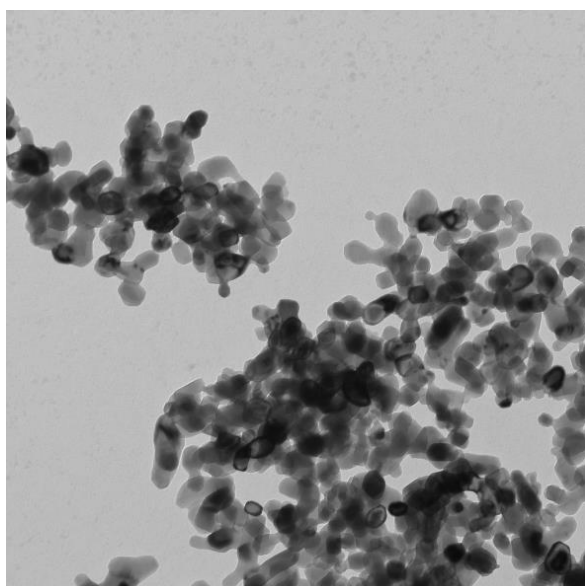
Novotech nano magnesium oxide is a fine white powder which consists primarily of particles ranging in diameter between 50 and 100 nm. This chemical is non-flammable, non-toxic and possess high hardness, high purity and a high melting point.

### Specification

TYPICAL PROPERTIES	VALUE
CAS	1309-48-4
EC Number	215-171-9
Appearance	White
Molecular Formula	MgO
Molecular Weight	40.30
pH	8.5-9.5
Average Particle Size	50-100 nm
Acid insoluble	0,3%
Density:	2.93 g/mL
Morphology	Cubic
BET Surface Area	40 (m <sup>2</sup> /g)

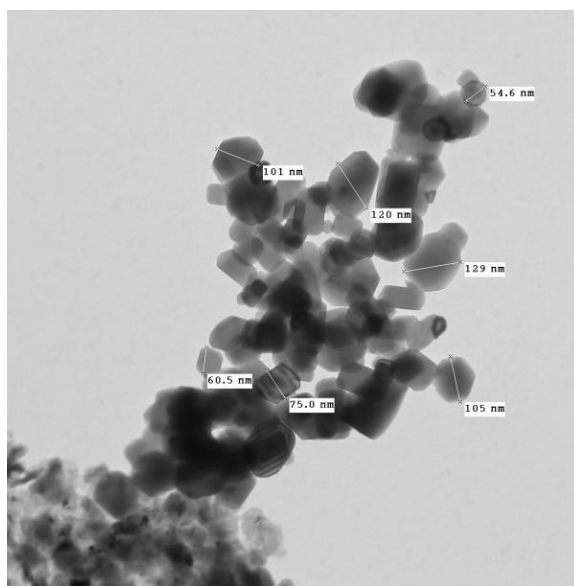
Typical Chemical Analysis	
MgO	>99.2%
Ca	<0.05 %
K	<0.05 %
Na	<0.03 %
SiO <sub>2</sub>	<0.05 %
Al <sub>2</sub> O <sub>3</sub>	20 ppm
Fe <sub>2</sub> O <sub>3</sub>	< 100 ppm

### SEM images of MgO



Rajiv0423-15.064  
Powder1, MgO  
Print Mag: 136000x @ 7.0 in

100 nm  
HV=80.0kV  
Direct Mag: 25000x



Rajiv0423-15.061a.tif  
Powder1, MgO  
Print Mag: 136000x @ 7.0 in

100 nm  
HV=80.0kV  
Direct Mag: 25000x

## Applications

Novotech magnesium oxide nanoparticles can be applied in ceramics, electronics, catalysis, petrochemical products, coatings and many other fields. The potential applications of magnesium oxide nanoparticles are as follows:

- Refractory materials: its refractory properties make it ideal for producing various refractory materials and for use as a coating filler.
- High-temperature dehydrating agent used for the production of silicon steel sheet, high-grade ceramic material, electronic industry material, adhesive and additive to chemical raw materials.
- Magnetic devices: Various magnetic devices utilize magnesium oxide in their production as a filler, insulator, or material component. This chemical is widely used within the radio industry.
- Electric insulation: The electric properties of magnesium oxide make it an ideal ingredient and additive material for producing electrodes, insulated conduits, and various other electronic devices and parts.
- Fuel additive that will work as a cleaner, antistatic agent and corrosion inhibitor.
- Fire retardant: A popular additive in any number of materials due to its unique fire retardant properties. Specific uses include chemical fiber production and various flame resistant plastics. This material would be ideal for aircraft fire blocked interior fabric and plastic parts