

Magnesium Oxide Nanoparticles  
MOP11

Description:

MgO has unique solid of high ionic character, simple stoichiometry and crystal structure (Rock-Salt structure), and surface structural defects. MgO can be used in high voltage insulation due to wide band gap (7.8 eV) and high volume resistivity (10<sup>17</sup> W·m). This material is stable under harsh process conditions and generally regarded as safe materials to human beings and animals. It can kill microbes by binding to intracellular proteins and inactivating them. It's refractory properties make it ideal for producing various high-temperature devices.

Characterization	
CAS	1309-48-4
Stock No.	MOP1101
Molecular formula	MgO
Molecular weight (g/mol)	40.3
Form	Powder
Color	White
Morphology	Hexagonal plate
Crystal structure	FCC
Plate size range (nm)	100-200
Total impurity (%)	N/A
Density (g/cm3)	3.58
Solubility	Insoluble



Image of magnesium oxide nanopowder (MOP11)

**Note:** product specifications are subject to amendment and may change over time.

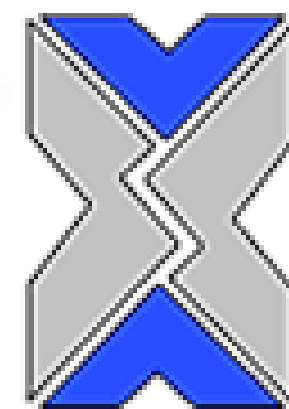
Applications (but not limited to the following):

Catalysis, Ceramics, Petrochemical products, Reflecting and anti-reflecting coatings, Detection and remediation of chemical waste and warfare agents, High-temperature dehydrating agent, Electric insulating material, magnetic devices, fire retardant and refractory material, in medical applications for relief of heartburn and sour stomach, as an antiacid, supplement, and as a short-term laxative

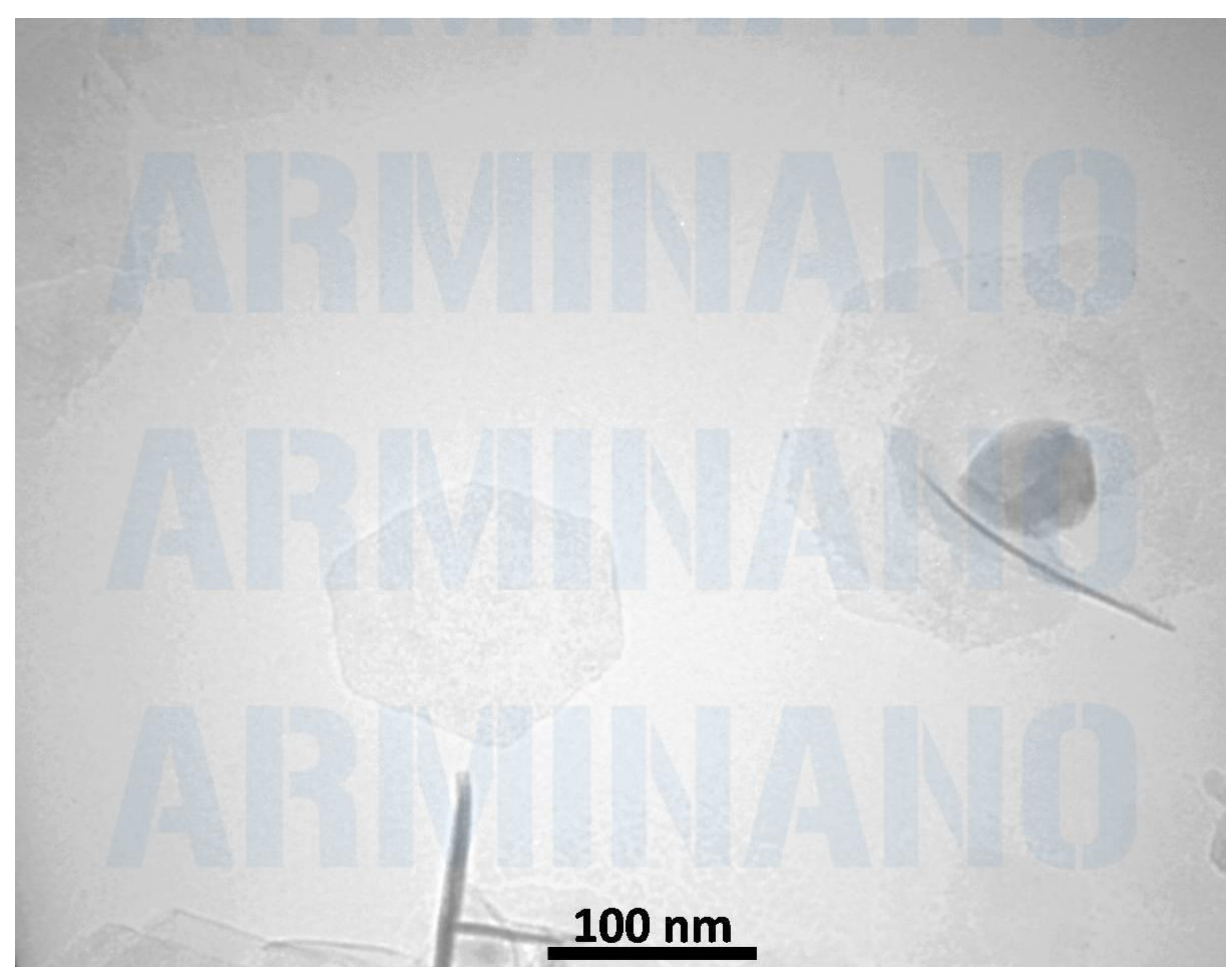
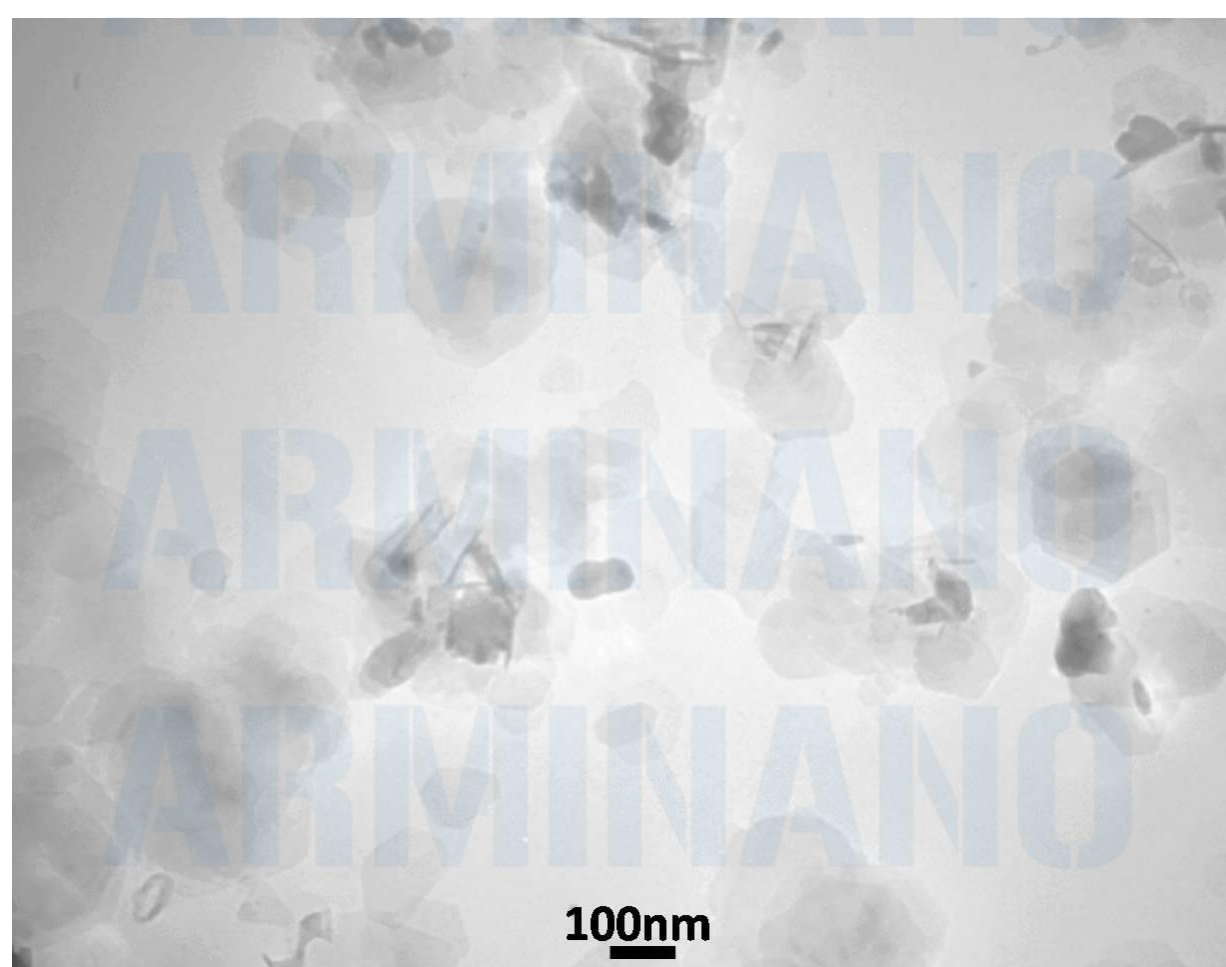
Safety:

- Avoid breathing dust.
- Always use protective gloves and safety glasses.
- Wash with soap and water after exposure.
- Refer to MSDS prior to handling this material.

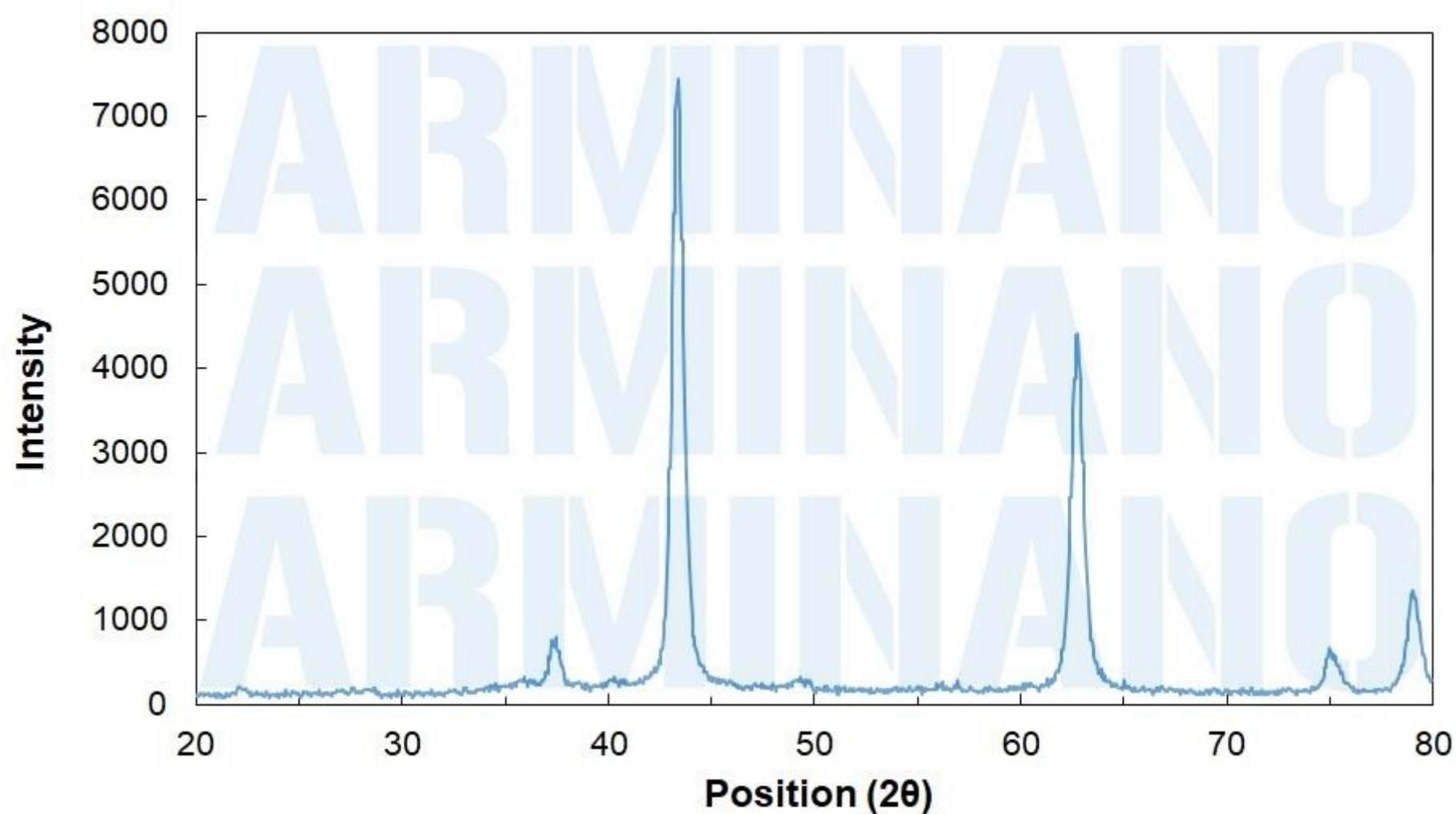




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TEM images of MOP1101



XRD pattern of MOP1101

### Storage:

Keep it in cool dry place.  
Avoid direct sunlight.  
Do not freeze.  
To disperse nanoparticles sonication could be used.

### Shelf life:

When stored as specified the product is stable for at least 6 months.