

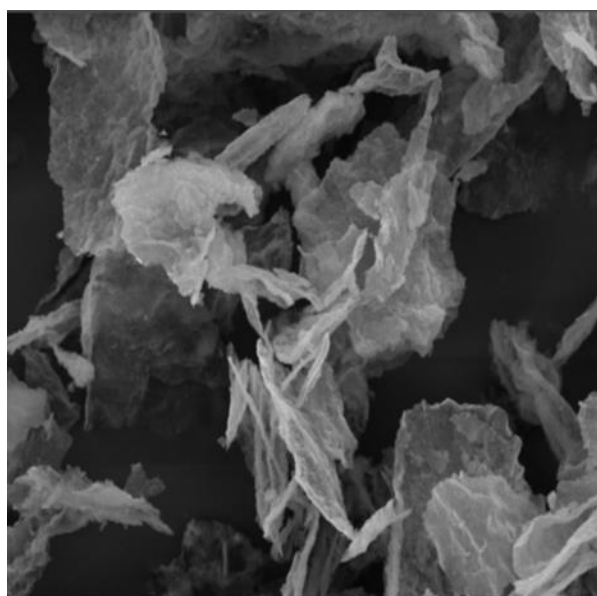
Magnesium Hydroxide (Mg(OH)₂) Nanoparticles

Description

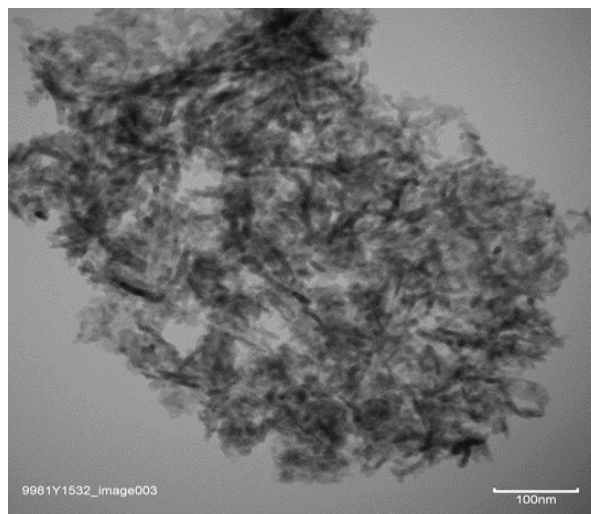
Novotech's magnesium hydroxide nanoparticles are environmentally friendly inorganic compounds with the formula Mg(OH)₂. The magnesium hydroxides (MDH) produced by our proprietary technology is highly pure white powder that has smoke suppressing and fire retarding properties.

Specification

Product Name	Magnesium Hydroxide Nanoparticles
CAS	1309-42-8
Molecular Formula	Mg(OH) ₂
APS	42,5 nm
BET specific surface area	60.5 m ² /g
Purity	99%
Molecular Weight	58.83 g/mol
Appearance	white powder
Density	2,33 g/cm ³
Morphology	flake



Typical Chemical Analysis	
Mg(OH) ₂	>99%
Ca	<0.01
K	<228ppm
Na	<1600ppm
Fe ₂ O ₃	<0.01
MnO	<0.01
SiO ₂	<0.01



Applications

Novotech magnesium hydroxide can be used:

- In products for acid wastewater neutralization, pH control, heavy metal removal, aerobic, anaerobic microbiological treatment and potable water treatment.
- As a neutraliser of water pollutants and liquid waste. Purification of wastewater and liquid waste is one of the most promising applications of magnesium hydroxide. Magnesium hydroxide may be used in comprehensive processes for the purification and protection of water, including treatment of industrial and municipal wastewater, deactivation of bacteria and viruses (such as the poliovirus), and removal of cloudiness and colorant compounds from water. Purification using magnesium hydroxide has been found to be more effective and efficient (0.72 t of magnesium hydroxide can produce the same results as one tonne of hydrate of sodium). An excess of Magnesium hydroxide will not cause an increase in pH above 9.5, as may occur in the case of burnt lime or caustic soda.
- As an antibacterial agent. Magnesium hydroxide is an inexpensive and nontoxic compound offering excellent antibacterial properties in a variety of applications. Our compound is an effective agent against the bacteria *Escherichia coli* and *Burkholderia phytofirmans*. While many organic antibacterial agents have limitations such as low heat resistance, high decomposability and short useful life, our magnesium hydroxide has none of these limitations. Industry-wide inorganic antibacterial agents are receiving more recognition as effective options and a greater market share.
- As a paper preservative. Magnesium hydroxide nanoparticles penetrate the cellulose fibres and neutralize acidic compounds, thus reducing the naturally occurring process of paper ageing.
- To mechanically reinforce starch-based bio-nanocomposite films. Starch is one of the most widely available and cheap agricultural bio-polymers being considered for the development of green technology. Starch and nano-Mg(OH)₂ are environmentally friendly and nontoxic. Our technology may potentially be used in the food industry for the production of packaging. At a concentration of up to 10% Mg (OH)₂ in the biopolymer, the tensile strength, thermal stability and elasticity of the packing materials increases.
- As a flame retardant coating for fabrics and other materials. Novotech magnesium hydroxide is a non-halogenated, high purity nanopowder for use as a flame retardant and smoke suppressant in plastic building materials, wire, cable, plastic fillers and coatings.
- As a clarifier to remove impurities in the refining of sugar.