

American Elements Z-MITE™ Zinc Oxide Nanopowder

Category: Ceramic, Oxide

Material Notes:

General DescriptionZ-MITE powders are inorganic zinc-oxide nanoparticles with antibacterial, antifungal, anti-corrosion, catalytic, and UV filtering properties. Z-MITE-A products are uncoated and hydrophilic. Z-MITE-O products are coated with an organic silane (1-4%) and are hydrophobic. Particles are available in the size range of 10-200 nm.ApplicationsZ-MITE nanoparticles are useful as antibacterial and antifungal agents when incorporated into materials, such as surface coatings (paints), textiles, and plastics. The bacteriostatic and fungistatic behavior of Zinc Oxide is well studied and utilized in personal care products. The enhanced surface area of Z-MITE nanoparticles allows for increased interaction with bacteria. This permits using a smaller amount of Zinc Oxide for the same or improved biostatic behavior. Zinc oxide is non-toxic, and compatible with skin, making it a suitable additive for textiles and surfaces that come in contact with humans. Zinc Oxide's UV attenuation properties also make Z-MITE an effective additive to packaging plastics to prevent UV damage. Zinc Oxide is also used as a catalyst for methanol synthesis. The increase in surface area of nanoscale Zinc Oxide compared to larger powders has the potential to improve the efficiency of these processes. Z-MITE nanoparticles are available with specific compatibility towards both aqueous and organic solvents, allowing for incorporation into most material processes.

Order this product through the following link:

http://www.lookpolymers.com/polymer_American-Elements-Z-MITE-Zinc-Oxide-Nanopowder.php

Physical Properties	Metric	English	Comments
Bulk Density	0.150 g/cc	0.00542 lb/in ³	
Density	5.60 g/cc	0.202 lb/in ³	
Loss On Ignition	<= 1.0 %	<= 1.0 %	
Particle Size	0.024 - 0.071 μm	0.024 - 0.071 μm	
Specific Surface Area	15 - 45 m²/g	15 - 45 m²/g	
Molecular Weight	81.39 g/mol	81.39 g/mol	

Thermal Properties	Metric	English	Comments	
Melting Point	2248 °C	4078 °F		
Sublimation Temperature	1800 °C	3270 °F		

Descriptive Properties	Value	Comments
Appearance	White Powder	
Assay (USP)	99.0-100.5%	
Crystal Phase	Hexagonal	
Morphology	Elongated	



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