

Geospheres GP-200

Spherical Ceramic Microsphere- Grey Series

Product Overview

Geospheres GP-200 are Ceramic microspheres, tiny spherical particles with a ceramic composition of Alumino Silicate, and are revolutionizing engineered extenders to various industries with their unique properties. The Geospheres microspheres, typically ranging from a few micrometers to a few millimeters in size, are known for their uniform shape and high strength. They are primarily used in coatings, composites, and fillers in plastics because they enhance mechanical properties, corrosion resistance, and improve performance properties.

Ceramic microspheres are valued for their thermal and acoustic insulation properties in the coatings industry. They are incorporated into paints and coatings to improve thermal insulation in buildings, thereby reducing energy costs. Their smooth surface also contributes to a more uniform and aesthetically pleasing finish. The Geosphere are inert nature and chemical resistance make them ideal for corrosive environments. This has led to their application in oil and gas drilling, where they are used to withstand extreme pressures and temperatures.

Benefits using Geospheres GP 200

Enhanced Strength and Durability: Ceramic microspheres can significantly increase the strength and durability of materials. When used as fillers in composites or plastics, they distribute stress more evenly, leading to improved resilience and longevity of the final product.

Thermal Insulation: Ceramic microspheres are excellent thermal insulators. In coatings and paints, they can enhance thermal insulation properties, contributing to energy efficiency in buildings and structures.

Improved Corrosion Resistance in Coatings: Due to their ceramic chemistry and spherical shape when added to paints and coatings, they contribute to a improved corrosion resistance compared conventional fillers like Talc and Calcium Carbonates

Chemical Resistance: The inert nature of ceramic microspheres makes them resistant to chemicals, making them suitable for use in harsh chemical environments such as in certain industrial processes or oil and gas drilling.

Acoustic Insulation: They also provide sound insulation, which is beneficial in building materials and automotive components.

Temperature Resistance: Ceramic microspheres can withstand high temperatures, making them suitable for applications in high-temperature environments.

Specifications

Composition.....	Alumino Silicate
Appearance.....	Grey Spherical
Particle Size D95.....	14 microns
Particle Size D90.....	12 microns
Particle Size D50	5 microns
Color (L*) L*	64 – 69
Moisture	0.5% max
Chemical pH.....	3 – 9
Retain in 325 Mesh.....	0.05%

Packaging

25 Kg Bag

1000 kg Super Sacks



Industrial Applications of Ceramic Microspheres

Various industries use ceramic microspheres due to their unique properties, such as lightweight, strength, thermal insulation, and chemical resistance. Here are some key sectors where they find significant applications:

Aerospace Industry: Ceramic microspheres are used in aerospace composites to reduce weight while maintaining strength and durability, improving fuel efficiency and aircraft performance.

Automotive Industry: Similar to aerospace, in the automotive sector, they are used to create lightweight, strong materials for various car components, contributing to better fuel efficiency and overall performance.

Coatings and Paints Industry: They are added to paints and coatings for improved thermal insulation acoustic properties and to achieve a smoother, more uniform finish on surfaces.

Construction and Building Materials: Ceramic microspheres are incorporated into construction materials for thermal insulation, reducing building energy costs. They also add strength and durability to materials like concrete.

Oil and Gas Industry: Their high strength and thermal stability make them suitable for drilling applications, where they can withstand extreme pressures and temperatures.

Electronics Industry: Due to their insulating properties, they are used in specific electronic components where heat resistance and insulation are crucial.

Marine Industry: Used in marine coatings to improve durability and resistance to harsh marine environments.

Energy Sector: They are applied in various energy-related applications, especially where high temperature and pressure resistance are required.

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