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G-4000 Glass Bubble Microspheres

Typical Properties of G-4000 Microspheres

CenoStar **G-4000** grade microspheres are engineered hollow glass spheres used to reduce density for oil and gas drilling fluids and drilling cements. Ultra-light inorganic, non-metallic, extremely low-density functional filler that enhance final product properties. These hydrophobic spheres have a wide range of formulations.

CenoStar **G-4000** Microspheres present the following advantages: lower viscosity and improved flow, Reduce the possibility of formation break-down, Reduce the possibility of lost circulation, Increase efficiency of mud removal by allowing pipe rotation or reciprocation, Increase yield per sack of cement, Eliminate need for remedial squeeze

Applications include:

- Oil gas Industry
- Paints and Coatings,
- Syntactic Foam
- Cosmetics
- Resin Systems
- Buoyancy
- Explosives
- Automotive

Appearance, color	White
Particle Size Range, microns by volume	2 - 100 μm
d50	~ 45 μm
Floating ratio	~92%
True Density (g/cm ³)	~0.40
Bulk Density (g/cm ³)	0.26
Compressive Strength	90% survival @ 4000psi / 28 Mpa
Softening Point	625 $^{\circ}\text{c}$
Oil absorption (g/cm ³)	0.2-0.65
pH value	8-9.5
Silica Content Silica SiO ₂ (%)	68-75
Aluminum Oxide Al ₂ O ₃ (%)	2-3
Thermal Conductivity (W/m "k"@18 $^{\circ}\text{C}$)	

Packaging:

CenoStar **G-4000** Microspheres are supplied in plastic bags placed in cardboard boxes

Safety Information:

In dusty areas, the use of a NIOSH approved respirator is recommended. Material Safety Data Sheets (MSDS) are available upon request

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