

Potters Industries Spheriglass® 5000 Solid Glass Spheres

Category : Ceramic , Glass , Oxide , Silicon Oxide , Other Engineering Material , Additive/Filler for Polymer

Material Notes:

Description: Spheriglass® fine solid glass spheres are used as an additive for thermoplastic and thermosetting resin systems. Glass spheres give products many benefits such as:Low Uniform ShrinkageLow WarpageHigh Flexural ModulusHigh Abrasion ResistanceHigh Compressive StrengthIncreased Surface HardnessBetter Stress DistributionThese and other characteristics enable the spheres to be used in a wide range of applications in the automotive, chemical, electronic, industrial, engineering, and photographic industries.Information provided by Potters Industries.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Potters-Industries-Spheriglass-5000-Solid-Glass-Spheres.php

Physical Properties	Metric	English	Comments
Specific Gravity	2.50 g/cc	2.50 g/cc	
Bulk Density	1.28 g/cc	0.0463 lb/in ³	Untapped; ASTM D 3101-78
	1.62 g/cc	0.0584 lb/in ³	Tapped; ASTM D 3101-78
Oil Absorption	20 %	20 %	ASTM D1483
Particle Size	7.0 - 10 µm	7.0 - 10 µm	mean value

Mechanical Properties	Metric	English	Comments
Hardness, Mohs	6.0	6.0	
Modulus of Elasticity	68.9 GPa	10000 ksi	
Poissons Ratio	0.16	0.16	Calculated
Shear Modulus	29.6 GPa	4300 ksi	
Coefficient of Friction	0.90 - 1.0	0.90 - 1.0	

Thermal Properties	Metric	English	Comments
CTE, linear	9.00 µm/m-°C	5.00 µin/in-°F	
	@Temperature 20.0 °C	@Temperature 68.0 °F	
Thermal Conductivity	1.51 W/m-K	10.4 BTU-in/hr-ft ² -°F	
	@Temperature 500 °C	@Temperature 932 °F	
Softening Point	704 °C	1300 °F	

Optical Properties	Metric	English	Comments
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Refractive Index Optical Properties	1.51 Metric	1.51 English	Comments
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Component Elements Properties	Metric	English	Comments
Al2O3	0.40 %	0.40 %	
CaO	9.8 %	9.8 %	
Fe2O3	0.20 %	0.20 %	
Free Iron	<= 0.10 %	<= 0.10 %	
K2O	0.10 %	0.10 %	
MgO	3.3 %	3.3 %	
Na2O	13.7 %	13.7 %	
SiO2	72.5 %	72.5 %	

Electrical Properties	Metric	English	Comments
Volume Resistivity	6.50e+12 ohm-cm	6.50e+12 ohm-cm	
Dielectric Constant	6.9 @Frequency 1e+6 Hz	6.9 @Frequency 1e+6 Hz	
Dissipation Factor	0.0085 @Frequency 1e+6 Hz	0.0085 @Frequency 1e+6 Hz	

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