



SUNSPHERES™ 15.0

DESCRIPTION

SUNSPHERES™ 15.0 are optically clear, solid fused amorphous silica microspheres specially engineered for paints, coatings, inks, adhesives, thermoplastics and composites. These microspheres increase corrosion resistance, reduce shrinkage, improve adhesion and impact resistance, and enhance surface qualities including mar and scratch resistance.

The dielectric properties and very high electrical receptivity of these materials over a wide range of temperatures, together with their low thermal conductivity, allow their use as an electrical and thermal insulating material in a range of environments. SUNSPHERES 15.0™ are inert to most substances, virtually all acids, allowing their use in arduous and hostile environments.

LIGHT TRANSMISSION

SUNSPHERES™ 15.0 transmit more than 85% of UV light having a wavelength of 200 nanometers and transmit more than 95% of UV light having a wavelength of greater than 300 nanometers. When dispersed in radiation curable coating formulations, these spheres allow pigmented and/or thick, clear coatings to be cured readily with ultraviolet radiation.

SIZING & USE:

SUNSPHERES™ 15.0 have a median particle size of approximately 15.0 microns, with 90% of particles passing 45 microns. Recommended dosages are 10 to 25% by weight of total coating formulation. SUNSPHERES™ are designed for use in thick coatings appropriate to their size. In thinner coatings, the SUNSPHERES™ 15.0 provide texture. Given the low surface area of the spheres, the viscosity of the coating resins can be decreased and the use of solvents can be reduced.

TYPICAL PARTICLE SIZE ANALYSIS*:		PHYSICAL & CHEMICAL PROPERTIES*:	
Median Diameter Approx. 15.0 Microns			
Microns	% Passing	Index of Refraction	1.458(n_D)
45	90	Softening Temperature	>1000°C
22	66	Strain Point	>600°C
11	43	Coefficient of Thermal Expansion	0.48 x 10⁻⁶/K
5.5	28	DC Resistivity	1 x 10⁸
2.75	13	Hardness (Mohs) Scale	7.0
1.375	1	BET Surface Area (sq.m/g)	1.2
0.50	0	pH	4-5
Shape: Solid, Spherical to Well Rounded Microspheres		Structure/Amorphous SiO₂	>99%
		Crushing Strength	>60,000 psi
*Copies of actual COA's listing actual measured values of data shown above are available upon request.			

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See reverse side for additional information



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