

# SUNCOLOR CORPORATION

## ADDITIVES FOR COATINGS, INKS, ADHESIVES & THERMOPLASTICS

### SUNSPHERES™ 15.0

#### DESCRIPTION

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

TYPICAL PARTICLE SIZE ANALYSIS:			PHYSICAL & CHEMICAL PROPERTIES:	
By MicroTrac/ Median Diameter Approx. 15.0Microns				
(Microns) 45	(% Passing)	90	Index of Refraction	1.458(n <sub>D</sub> )
22		66	Softening Temperature	>1000 <sup>0</sup> C
11		43	Strain Point	>600 <sup>0</sup> C
5.5		28	Coefficient of Thermal Expansion	55 x 10 <sup>-7</sup> / <sup>0</sup> C
2.75		13	DC Resistivity	1 x 10 <sup>8</sup>
1.375		3	Hardness (Mohs) Scale	7.0
10% Finer		2.5	BET Surface Area (sq.m/g)	1.2
50% Finer		15.0	Ph	4-5
90% Finer		45.0	Structure/Amorphous SiO <sub>2</sub>	>99%
Shape: Spherical/Solid Microspheres			Crushing Strength	>60,000 psi

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