



G Series

Zeeospheres Ceramic Microsphere are unique gray-colored, fine particle size, high-strength microspheres. They are opaque to visible light, but transparent to UV light. These products are typically used to reduce VOC levels, increase filler loadings, improve hardness, and add burnish, scrub and abrasion resistance to a variety of coating formulations. Due to their low resin demand, high hardness and inert chemistry, these products have found utility in high solids, water reducible radiation - curable and high durability coatings, powder coatings, and a wide range of premium performance coatings.

The key raw material from which Zeeospheres Ceramic Microspheres are produced have become darker over the years. Since many users have products or applications where color is important, Zeeospheres Ceramics, LLC adds lighter-colored ingredients, to ensure that the final color of the product is within the historical range of 64 to 69*. This color control adds cost and complexity to the production of Zeeospheres Ceramic Microspheres, but helps ensure color consistency.

Typical Physical Properties (Not for specification purposes)

PRODUCT	Zeeospheres Ceramic Microspheres, "G" Grades
Grayness ("L" Value)	64 - 69
Crush Strength	> 4,200 kg/cm2(>60,000 psi)
pH	3.0 - 9.0 ASTM E 70
Hardness	7 Mohs Scale
Softening Point	1,020 * C (1,870* F)
Dielectric Constant	3.7 - 4.6
Thermal Conductivity	2W/mK
*G-850=50+	

Properties		Grade					
		G -200	G -200PC	G-400	G - 600	G - 800	G - 850
True Density		2.5	2.5	2.4	2.3	2.2	2.1
Particle Size (Microns)	95th%	14	12	23	35	95	160
	90th%	12	10	18	25	60	125
	50th%	5	4	8	10	14	50

Surface Area (m ² /cc)	6	6	5	4	3	2
Oil Absorption *	26	26	26	23	18	18

* gm of oil per 100 gm of microspheres

MATERIAL DESCRIPTION

Shape: Hollow spheres with thick walls
Composition: Silica - Alumina Ceramic

FORMULATING INFORMATION

Zeeospheres Ceramic Microspheres are best dispersed by using sand, ball and roller mills. For optimal dispersion, the Zeeospheres should be added to the grind stage, along with pigments and other filler materials. Use of a dispersant can aid in the wet-out and dispersion.