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## EconoStar 500 Cenospheres

### Typical Properties of ES500 Cenospheres

CenoStar **ES500** Grade cenospheres are low density, fine particle size, hollow ceramic spheres. Typically they are used to reduce density, reduce VOC levels, increase filler loadings, and improve viscosity in a variety of formulations.

CenoStar ES500 cenospheres exhibit excellent processing durability and temperature stability.

Because of the low cost per unit volume, CenoStar ES500 cenospheres can be used effectively for replacing or blending with higher cost products.

Physical Form	Free Flowing Powder	
Color, Hunter Whiteness Index	Medium Gray, Hw 45 - 55	
Particle Distribution, microns	< 500,	99% (< 3% over)
	150 - 499,	10% - 25%
	105 - 149,	10% - 30%
	75 - 104,	18% - 30%
	45 - 74,	5% - 20%
	< 44	2% - 10%
Bulk Density	0.32 - 0.45 g/cc	
True Density	<0.85 - 0.95 g/cc +/- 2.5%	
Compressive Strength	90% survival @ 3200psi	
Sinkers	<6%	
Softening Point	1040° C +/- 5%	
Melting Point	1200 - 1400° C	
Hardness, Moh's Scale	5 - 6	
Dielectric Constant	1.8 - 1.9	
Composition, %wt	Silica	50.0 - 60.0
	Alumina	22.0- 30.0
	Iron	1.5 - 5.0
Thermal Conductivity	0.1 - 0.2 W/mK	
Oil Absorption	16-18 g oil / 100cc	

#### Packaging:

CenoStar ES500 Cenospheres are supplied in 20kg (44lb) multi-wall paper bags or 500kg big bags.

#### 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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