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## EconoStar 160 Cenospheres

### Typical Properties of ES160 Cenospheres

CenoStar **ES160** 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 ES160 cenospheres exhibit excellent processing durability and temperature stability.

Because of the low cost per unit volume, CenoStar ES160 cenospheres can be used effectively for replacing or blending with higher cost products.

Physical Form	Free Flowing Powder
Color, Hunter Whiteness Index	Light Gray, Hw 45 - 55
Particle Size Range, microns	10 - 160
Particle Distribution, microns	<160, 97% (< 3% over)
	105 - 159, 25% - 39% 75 - 104, 12% - 26%
	45 - 74, 12% - 28% < 44, 2% - 10%
Bulk Density	0.32 - 0.45 g/cc
True Density	0.85 - 0.95g/cc
Compressive Strength	90% survival @ 3200psi
Melting Point	1200 - 1400° C
Sinkers	<6%
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

#### Packaging:

CenoStar ES160 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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