



Suite #133, 25 Storey Avenue Newburyport, MA 01950
 Phone: 978-465-2705 Email: rfoster@cenostar.

EconoStar 500-I Cenospheres

Typical Properties of ES500-I Cenospheres

CenoStar **ES500-I** 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-I cenospheres exhibit excellent processing durability and temperature stability.

Because of the low cost per unit volume, CenoStar ES500-I 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 - 300
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 - .45 g/cc
True Density	0.75 g/cc +/- 2.5%
Compressive Strength	80% survival @ 4000psi
Sinker Rate	<6%
Softening Point	1040° C
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

Packaging:

CenoStar ES500-I 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

Notice to Purchaser: The information in this publication is based on tests that we believe are reliable. Your results may vary due to differences in test conditions. You must evaluate and determine whether the product is suitable for your intended application. Since conditions of product use are outside of our control and may vary widely, the information is made available with no expressed or implied warranties (including the warranties of merchantability or fitness for a particular purpose). CenoStar Corporation's only obligation, and your only remedy, is replacement of product if shown to be defective when received. In no case will CenoStar Corporation be liable for any special, incidental, or consequential damages based on breach of warranty or contract, negligence, strict tort, or any other theory.