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## High Aluminum 106 Cenospheres

### Typical Properties of HAL106 Cenospheres

CenoStar **HAL106** 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 HAL106 cenospheres exhibit excellent processing durability and temperature stability.

Because of the low cost per unit volume, CenoStar HAL106 cenospheres can be used effectively for replacing or blending with higher cost products.

Physical Form	Free Flowing Powder
Color, Hunter Whiteness Index	Medium Gray,
Particle Size Range, microns	10 - 106
Particle Distribution, microns	< 106, 97% (<3% over) -106, +74 35-50% -75, +45 20-40% < 74, 5-11%
Bulk Density	0.32 – 0.45 g/cc
True Density	<0.85 – 0.95 g/cc +/- 2.5%
Compressive Strength	70% survival @ 3000psi
Sinkers	<6%
Softening Point	1040° C +/- 5%
Melting Point	1400 - 1650° C
Hardness, Moh's Scale	5 – 6
Dielectric Constant	1.8 - 1.9
Composition, %wt	Silica 50.0 - 60.0 <b>Alumina 32.0- 40.0</b> Iron 1.5 - 5.0
Thermal Conductivity	0.1 - 0.2 W/mK
Oil Absorption	16-18 g oil / 100cc

#### Packaging:

CenoStar HAL106 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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