



Potters Industries Inc.
an affiliate of PQ Corporation

ENGINEERED GLASS MATERIALS DIVISION

Hollow Microspheres

**Q-Cel[®] Hollow Spheres:
High-Strength Products**

Potters offers a line of Q-Cel[®] hollow spheres for applications with moderate pressure and shear. Formulators may choose Q-Cel[®] hollow spheres according to working pressure and desired density. These single-cell spheres are white, free-flowing and have a hydrophobic coating.

As the density in the Q-Cel[®] product series increases, sphere size decreases and maximum working pressures increase, allowing the formulator to choose the minimum density product that will survive mixing, pumping and use. Actual hollow sphere attrition in working conditions can only be determined by customer testing. The maximum working pressures are guidelines to assist in the choice of products.

SPRAY APPLICATIONS

The maximum working pressure is a good selection criterion for spray-up applications. Compare the expected maximum spraying pressure to the maximum working pressure to make product selection. In the thermoset and PVC plastisol formulations, Q-Cel[®] hollow spheres allow high volume loadings and produce low density thixotropic mixes with excellent spray and anti-sag characteristics.

SMC APPLICATIONS

High-strength Q-Cel[®] hollow spheres have ideal properties for applications in low-density SMC formulations. The hydrophobic coating enables them to blend readily into the SMC paste without attrition from the high-shear mixing of a Cowles blade.

Surface properties of Class A formulations have been enhanced by including Q-Cel[®] 6042S into the formulation. Also, an improvement in the flexural modulus is often seen in parts containing Q-Cel[®] hollow spheres.

Each of the Q-Cel[®] high-strength products, used alone or in combination with other Q-Cel[®] hollow spheres or

Typical Properties			
Grade	6036	6042S	6048
Physical Form	Free-Flowing Powder	Free-Flowing Powder	Free-Flowing Powder
Color	White	White	White
Bulk Density, Untamped	0.21 g/cm ³	0.26 g/cm ³	0.27g/cm ³
Effective Density, Liquid Displacement	0.36 g/cm ³	0.42 g/cm ³	0.48 gcm ³
Mean Particle Size (microns)	60	50	50
Particle Size Range (microns)	5 - 125	5 - 90	5 - 100
Maximum Working Pressure	1000 psi	2000 psi	3000 psi

conventional fillers, will provide maximum filler loadings and low compound densities at the desired viscosity.

Samples in sufficient quantity for testing are available upon request.

Packaging

All Q-Cel[®] lightweight products are available in cartons, boxes and bulk bags.

Safety

Q-Cel[®] hollow spheres are moderately alkaline and prolonged inhalation may irritate the respiratory tract. In dusty environments, the use of a NIOSH-approved mask or respirator is recommended. Material Safety Data Sheets (MSDS) will be supplied upon request.

CONTACT CUSTOMER SERVICE FOR SALES, SAMPLES OR TECHNICAL SERVICE

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