



PRODUCT DATA SHEET

P2011SL

SODA LIME GLASS MICROSPHERES

PHYSICAL DATA

Component Materials	SiO ² , CaO ¹ , MgO, Na ² O, K ² O, Al ² O ³
Specific Gravity	2.48
Index of Refraction	1.51
Diameter	Mean – 3 to 6 microns, maximum – 15 to 20 microns
Appearance	Individual spheres are clear and transparent; in bulk, look like white powder.
Hardness	Moh >6, 30,000 psi crush point
CAS Numbers	65997-17-3 [glass, oxide]; 308076-03-1 [glass, soda lime]
EINECS/REACH Registration Number	266-046-0
Softening Temperature	>700°C

PRODUCT DESCRIPTION

P2011SL is a clear, solid glass microsphere with an average mean diameter in the range of 3 to 6 microns, a tight distribution, and a top size of 20 microns. Produced under strict quality controls exclusively for Prizmalite, these spheres are made from recycled soda lime glass.

APPLICATION BENEFITS

P2011SL microspheres offer both aesthetic and physical benefits when incorporated into solvent or water-based formulations. As an aesthetic enhancement pigment, P2011SL microspheres function as magnifying lenses and make surrounding pigments or metallic flakes appear richer, wetter and deeper in color. Because Prizmalite spheres are more than 85% round, they provide unique angular color consistency: a color is perceived to be the same intensity from any angle of viewing.

Physically, P2011SL glass microspheres are roughly equivalent to steel on the Moh's hardness scale so their incorporation in a formulation results in greater scratch, mar and chip resistance to the coated surface. Geometrically, P2011SL spheres promote fluid circulation, can act as rheology modifiers, and improve process control when compared to the "flake" geometry of many additives they replace.

P2011SL microspheres are the only commercially available solid glass spheres small enough to be incorporated into thin film coatings such as OEM automotive paint without protruding.

FORMULATION GUIDANCE

P2011SL spheres can be dispersed into solvent or water-based media and many molten plastics. Typical loading levels [calculated on a dry weight basis] range from 5% to 7.5% depending on the desired functionality. When loading levels exceed 10%, P2011SL microspheres act as flattening agents and produce a matte finish.

For best results, P2011SL should be first incorporated into some of the liquid of the formulation to create a slurry, similar to the incorporation of aluminum flakes, and the slurry then mixed into the remaining formulation.

NOTE: All glass microspheres attract water. Please keep this product dry. If clumping is observed, simply dry in an oven at 100°C for a half hour to remove water.