Technical Data Sheet

Solid Glass Spheres 180-300 Microns

Solid Glass Spheres are produced from a standard grade of soda-lime 'A' glass.

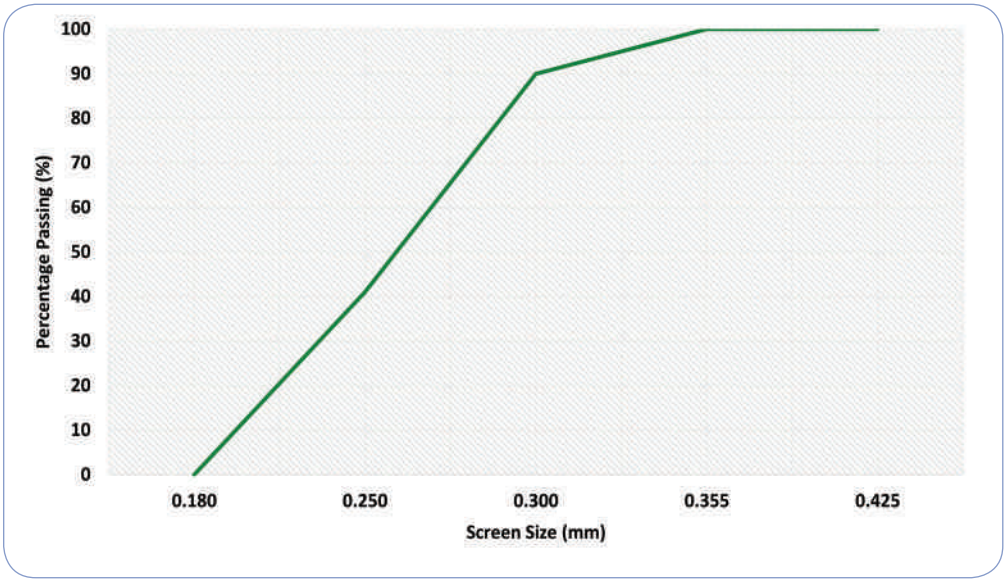
Chemical Analysis

	%
SiO_2	73.2
Na_2O	13.2
CaO	9.3
MgO	1.9
Al_2O_3	1.4
Fe_2O_3	0.1
K_2O	0.6
TiO_2	0.3

Commodity Code

7018 200000

Particle Size Distribution



Physical Data

Refractive Index	-1.50
Specific Gravity	2.5g/cm^3
pH @ 25°C	11-12
% wt. loss [1hr boil in water]	11

Mechanical Data

Youngs Modulus	6.89*10^{4}N/mm^2
Rigidity Modulus	2.96*10^{4}N/mm^2
Poissons Ratio	0.21

Electrical Data

Dielectric Constant [22°C, 106Hz]	6.9
Loss Tangent [22°C, 106Hz]	0.0085

Thermal Data

Softening Point	-730°C
Expansion Coeff.	90*10 $^{-7}$

Packing

25 kilo bags on pallets of 1000 kilos

Not all grades may be available from stock.

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Boud Minerals Limited
West Bank, Sutton Bridge
Lincolnshire PE12 9UR, UK
Tel: +44 (0)1406 351988
Fax: +44 (0)1406 350897
Email: sales@boud.com
Web: www.boud.com

Boud Minerals AB
Håkantorpsvägen 109
SE-26391 Höganäs, Sweden
Tel: +46 42 333741
Fax: +46 42 333829
Email: sweden@boud.com
Web: www.boud.com

Solid Glass Spheres

Bonding, at the glass bead and polymer interface, can be improved by the use of chemical coupling agents. Coupling agents, polymer specific, can be applied to the glass beads at the time of manufacture for optimum performance.

Recommended coupling agents – Thermoplastic polymers

Polymer	Coating Designation	Polymer	Coating Designation
Acrylics	AGC1	Polyethylene	AGC1
Acetal	AGC2	Polyimide	AGC3
ABS	AGC3	Polymethylmethacrylate	AGC1
Cellulosic	AGC2	Polyphenylene Oxide	AGC3
Fluroplastic	None recommended	Polypropylene	AGC3/AGC1
Ionomer	AGC2	Polystyrene	AGC1
PBT	AGC2	Polysulphone	AGC3
Nylon	AGC3	Polyvinyl Chloride [PVC]	AGC3
Polycarbonate	AGC3	Styrene Acrylonitrile	AGC2

Recommended coupling agents – Thermoset polymers

Polymer	Coating Designation	Polymer	Coating Designation
Alkyd	AGC1	Polyester	AGC1
Epoxy	AGC3	Silicones	AGC1
Melamine	AGC3	Urea Formaldehyde	AGC3
Phenol Formaldehyde	AGC3	Urethanes	AGC3
Phenolic	AGC3		