

Solid Glass Beads

Technical Data Sheet

Product Description

Purpose and Principles of Operation

In chemical and analytical labs glass beads are mostly used to reduce bumping during boiling, refluxing, and other distilling processes. The beads are used where a large surface of glass is desirable – absorption columns, distillers.

Product range

Reorder No.	Size	Size Range (mm)	Quantity per Lb
03000200	1mm Beads	1.0–1.3	228,000
03000400	2mm Beads	1.8–2.2	43,350
03000600	3mm Beads	2.7–3.3	13,300
03000800	4mm Beads	3.7–4.3	5,420
03000900	5mm Beads	4.7–5.3	2,770
03001000	6mm Beads	5.7–6.3	1,600

Recommended Use

Reorder#: 03000400, 03000600, 03000800, 03000900, 03001000 can be used for stirring and mixing media in aerosol sprays, as valves for bottle closures and for the mechanical coating of small metallic pieces, through mechanical plating process. The high degree of purity allows glass beads to provide excellent results in the grinding and dispersing of pigments, dyestuff, agrochemicals, pharmaceutical and cosmetic preparations. Glass beads are further used as stilts and filter material for the construction of bubblers.

Reorder#: 03000200 can be used for grinding and dispersing media in horizontal and vertical pearl mills for the following applications:

- Wet grinding of paints, pigments, dyestuff, ink, agrochemicals, and minerals.
- Filling material in the chemical-, paper- and synthetic materials industry.
- Filling material for the modification of the physical properties of thermoplastic and duopolistic.
- Reflection beads for road marking, specially to improve the visibility at night in case of rain.
- Shot peening of the surface of metal, plastics, ceramics, and wood.

Chemical Composition

Typical chemical composition of Solid Glass Beads:

Description	Reorder#: 03000200	Reorder#: 03000400, 03000600, 03000800, 03000900, 03001000
	Polished soda-lime glass	Polished high purity soda-lime glass with high roundness
Silicon dioxide SiO ₂	72.30 %	68.10 %
Sodium oxide Na ₂ O	13.30 %	15.00 %
Calcium oxide CaO	8.90 %	8.30 %
Magnesium oxide MgO	4.00 %	2.50 %
Aluminum oxide	Not specified	3.30 %
Other	1.50 %	2.8 %

The Solid Glass Beads do not contain human or animal blood, fibrinogen or added microbial agents.

Physical Properties

	Reorder#: 03000200	Reorder#: 03000400, 03000600, 03000800, 03000900, 03001000
	Roundness: (ratio width/length (x_{min}/x_{max}))	≥ 0.95
Compressive strength belonging to diameter	up to 2100 N	up to 2000 N
Refractive index	1.52	1.5
Specific weight	2.5 kg/L	2.5 kg/L
Transformation temperature	549 °C	542 °C
Softening point (Littleton point)	734 °C	719 °C
Melting point	1446 °C	1441 °C
Specific thermal Conductivity	1.129 W/(m.K)	1.129 W/(m.K)
Thermal expansion	9.05 10 ⁻⁶ K ⁻¹ [20 °C]	9.73 10 ⁻⁶ K ⁻¹ [20 °C]
Specific thermal capacity	1.329 kJ/kg K [>600 °C]	1.312 kJ/kg K [>600 °C]
Youngs-Module	63 GPa	65 GPa
Hardness according to Mohs	≥ 6	≥ 6
Surface	polished (uncoated);	polished (uncoated);

Packaging

The product packaging has two levels:

- Internal packaging – glass beads, approximately 1 Lbs, are placed inside 4"x9" zip-lock bag.
- The bag is placed in white box.



Storage Conditions

There are no specified storage conditions for the finished product.

Shelf Life

The product has no specified shelf-life.