



HOLLOW GLASS MICROSPHERES

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TECHNICAL DATA SHEET

1. Description

Hollow Glass Beads, also named Hollow glass microspheres (HGM, also known as glass bubbles) are hollow glass spheres made of chemically stable Soda-lime-borosilicate glass with thin walls(wall thickness 1~3.5 μ m). We have several grades available with true density ranging from 0.20g/cc~0.60g/cc, Sinosteel hollow glass microspheres can be used as lightweight functional additives for Composites,Thermal insulation paints/coatings, Sealant/adhesives, Low density cementing slurries and many more applications with very competitive quality and price.

2.True Density

Product	Requirement (g/cc)	True Density (g/cc)	
		Minimum	Maximum
OLH20	0.20	0.18	0.22
OLH25	0.25	0.23	0.27
OLH32	0.32	0.30	0.34
OLH38HS	0.38	0.36	0.40
OLH40	0.40	0.38	0.42
OLH46	0.46	0.44	0.48
OLH60	0.60	0.57	0.63
OLH60S	0.60	0.57	0.63

3.Nitrogen Isostatic Crush Strength

Product	Test Pressure (MPa/Psi)	Target Fractional Survival	Minimum Fractional Survival
OLH20	3.5/500	90%	80%
OLH25	5/750	90%	80%
OLH32	14/2000	90%	80%
OLH38HS	38/5500	90%	80%
OLH40	28/4000	90%	80%
OLH46	41/6000	90%	80%
OLH60	55/8000	90%	80%
OLH60S	82/12000	90%	80%

4. Thermal Stability

Appreciable changes in glass microspheres properties may occur above 625°C depending on temperature and duration of exposure.

5. Chemical Resistance

In general, the chemical properties of hollow glass microspheres resemble those of a soda-lime borosilicate glass.

6. Thermal Conductivity

Product	Thermal Conductivity (W·m ⁻¹ ·K ⁻¹) at 20°C
OLH20	0.0353
OLH25	0.0416
OLH32	0.0466
OLH38HS	0.0541
OLH40	0.0521
OLH46	0.0603
OLH60	0.0643
OLH60S	0.0643

7. Flotation

Product	Floaters (% by bulk volume)	
	Typical	Minimum
OLH20	96%	93%
OLH25	96%	93%
OLH32	96%	92%
OLH38HS	96%	92%
OLH40	95%	92%
OLH46	95%	92%
OLH60	95%	92%
OLH60S	95%	92%

8. Oil Absorption

The oil absorption of soda lime-borosilicate hollow glass microspheres is 0.25-0.65 g oil / cm³.

9. Particle Size

Product	Particle Size(μm , by volume)				
	10%	50%	90%	d ₅₀	Size
OLH20	35	65	120	68	2-150
OLH25	30	60	115	60	2-150
OLH32	25	55	105	55	2-130
OLH38HS	22	40	70	40	2-100
OLH40	25	50	90	48	2-100
OLH46	25	50	90	50	2-100
OLH60	25	50	85	46	2-95
OLH60S	25	50	85	43	2-95

10. pH

Glass bubbles are dry powder, when mixed with deionized water at 5% volume loading, the resulting pH of the slurry is 7~9

11. Appearance

Free flowing white powder.

12. Free flowing properties

Hollow glass microspheres remain free flowing for at least half a year from the date of shipment if stored properly.

13. Labeling

Each carton box will be labeled with:

Name of manufacturer, Lot number, Grade, and Net Weight.

14. Storage and Handling

Storage:

Store in the driest, coolest space available.

Handling:

For eye protection wear chemical safety goggles. For respiratory system protection wear an appropriate respirator.

For additional information about personal protective equipment, refer to Material Safety Data Sheet.

15. Health and Safety Information

For product Health and Safety Information, refer to product label and Material Safety Data Sheet (MSDS) before using product.

16. Packing Information

For packaging details, Please send a mail to info@olanbeads.com