

## 3M HGS4000 Glass Bubbles

Category : Ceramic , Glass

**Material Notes:**

3M™ Glass Bubbles HGS Series are engineered hollow glass spheres for use as a density reducing agent for oil and gas drilling fluids and drilling cements. The spherical shape of 3M glass bubbles offers a number of important benefits, including lower viscosity and improved flow. The chemically-stable soda-lime-borosilicate glass composition of 3M glass bubbles makes them virtually insoluble in water or oil. They are also non-compressible. Their low alkalinity gives 3M glass bubbles compatibility with most resins, stable viscosity and long shelf life. Information provided by 3M

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_3M-HGS4000-Glass-Bubbles.php](http://www.lookpolymers.com/polymer_3M-HGS4000-Glass-Bubbles.php)

Physical Properties	Metric	English	Comments
Density	0.350 - 0.410 g/cc	0.0126 - 0.0148 lb/in <sup>3</sup>	True, 3M QCM 14.24.6
	0.380 g/cc	0.0137 lb/in <sup>3</sup>	Typical, 3M QCM 14.24.6
Volatiles	<= 0.50 %	<= 0.50 %	
pH	9.1 - 9.9	9.1 - 9.9	

Mechanical Properties	Metric	English	Comments
Compressive Strength	27.6 MPa	4000 psi	

Descriptive Properties	Value	Comments
Alkalinity	<0.5 milliequivalents/gram	
Appearance	White	unaided eye

## Contact Songhan Plastic Technology Co.,Ltd.

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