

Glass Beads for 3D Printer

We developed minute glass beads with a refractive index that can be matched with a resin for 3D printing. In addition to their heat resistance and strength, these beads allowed a translucent 3D model to be realized for the first time in the world.*

*According to an internal investigation as of February 2020

Features

● Translucency

Translucent printed models are obtained with the use of refractive-index-matched glass beads.

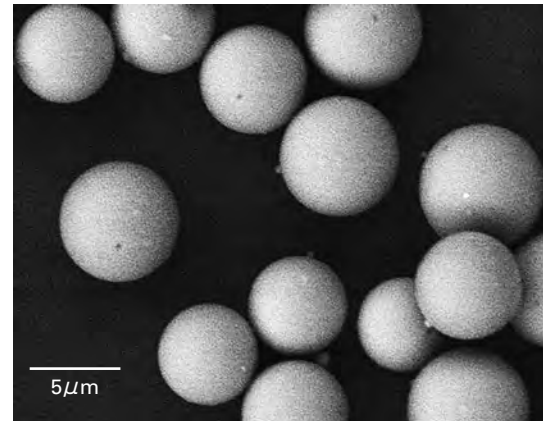
The degree of translucency can also be adjusted by changing the proportion of this product with other additives.

● Heat resistance and strength

The heat resistance and strength of printed models increase with the use of this product.

● Uniform dispersion

Uniform dispersion in resins is achieved by optimizing the particle size of beads.



SEM image

Applications

- Temporary teeth
- Connectors
- Jewelry
- Simulation models for automobiles and aircraft, etc.

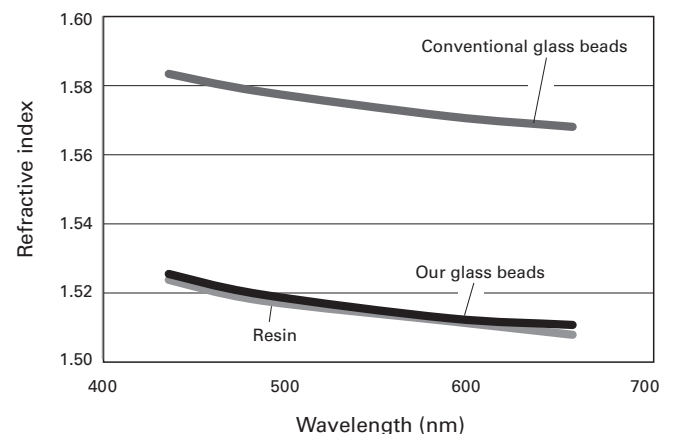
Properties

Properties/Glass Code		AM-51/015	
Refractive index (n _d)		1.51	
Density		× 10 ³ kg/m ³	2.38
Particle size	D50	μm	5.5
	D99	μm	Up to 13.0

Comparison with Conventional Products



Appearance of 0.5mm-thick resin plates containing 30vol% glass beads



Refractive indices of materials used for resin plates shown on the left