

HP 3D PA12 Glass Beads

Product Description

HP MJF Nylon 12 Glass Beads (PA12 GB), with 40% glass beads added, is a rigid, engineering-grade thermoplastic. It offers high stiffness, superior dimensional stability and enhanced heat resistance. The material is well suited to demanding applications, and is built for functional prototypes and end-use production parts.

Typical Features

- High stiffness, excellent dimensional stability
- Provides excellent thermal resistance
- Offers a good balance of performance and material reusability

General Properties

Measurement	Test Method	Value
Powder Melting Point (DSC)	ASTM D3418	186 °C/367 °F
Particle Size	ASTM D3451	58 µm
Bulk Density of Powder	ASTM D1895	0.48 g/cm ³ (0.017 lb/in ³)
Part Density	ASTM D792	1.3 g/cm ³ (0.047 lb/in ³)

Mechanical Properties

Property Description	Test Method	Value
Tensile Strength, Maximum Load, XY	ASTM D638	30 MPa/4350 psi
Tensile Strength, Maximum Load, Z	ASTM D638	30 MPa/4350 psi
Tensile Modulus, XY	ASTM D638	2800 MPa/406 ksi
Tensile Modulus, Z	ASTM D638	2900 MPa/421 ksi
Izod Impact (Notched) (3.2mm, 23°C), XYZ	ASTM D256	2.7 KJ/m ²
Elongation at Break, XY	ASTM D638	6.5%
Elongation at Break, Z	ASTM D638	6.5%

Thermal Properties

Heat Deflection Temp (HDT), ASTM D648 (@ 0.45 MPa, 66 psi), Z	173°C/344°F
Heat Deflection Temp (HDT), ASTM D648 (@ 1.82 MPa, 264 psi), Z	121°C/250°F