

### Key Features

- High rigidity and toughness
- Surface modification
- Increased stiffness
- Improved dimensional stability
- Enhanced surface finish

### Common Applications

- Rapid prototyping
- Complex assemblies
- Enclosures and housings
- Fixtures and tooling
- Water- and air-tight applications
- Bio-compatible parts

### Material Description

Nylon PA12 with 40% glass beads (40%GB) is a reinforced thermoplastic composite material used in additive manufacturing processes. The incorporation of glass beads enhances the material's mechanical properties, including increased tensile strength, stiffness, and dimensional stability, while maintaining the inherent toughness and chemical resistance of Nylon PA12. This makes Nylon PA12+40%GB ideal for applications requiring high-performance parts with improved strength-to-weight ratio, such as functional prototypes, automotive components, and structural parts. Additionally, the material's ability to withstand elevated temperatures and harsh environments makes it suitable for a wide range of industrial applications.

### Mechanical Properties

<b>Flexural Strength</b>	57.5 MPa
<b>Tensile Strength</b>	30 MPa
<b>Hardness</b>	Short D82
<b>Elongation at Break</b>	10%

### Physical Properties

<b>Density</b>	0.047 lb/in <sup>3</sup> (1.30 g/cm <sup>3</sup> )
<b>Modulus of Elasticity</b>	2,500 MPa
<b>Heat Deflection Temp.</b>	345.2°F (174 °C)

### Technical Assistance

Our knowledgeable staff, supported by our in-house team of expert metallurgists and engineers, is ready to assist you with any technical inquiries.

### InstaVoxel™ - On-Demand Manufacturing Expert

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