Nylon PA 12 Glass-filled White Datasheet

Overview

Nylon PA 12 Glass-Filled White is designed for selective laser sintering (SLS) and is reinforced with glass beads to boost its performance. This enhancement results in greater strength and rigidity while also improving wear resistance and minimizing the risk of warping.

As-printed Part's Tolerance: ±300μm or 0.3%

Maximum Printing Size: 350*350*400mm

Properties

Thermal Properties	Metric	Method
Heat Deformation (0.46 MPa)	153.1℃	GB/T 1634.2-2004
Heat Deformation (1.82 MPa)	69℃	GB/T 1634.2-2004
Melting Point	184.5℃	GB/T 19466.1-2004
Mechanical Properties	**Metric**	**Method**
Tensile Strength	45MPa	GB/T 1040.2-2006
Tensile Modulus	2600MPa	GB/T 1040.2-2006
Elongation at Break	6.7%	GB/T 1040.2-2006
Flexural Properties	**Metric**	**Method**
Flexural Modulus	2100MPa	GB/T 9341-2008
Flexural Strength	60MPa	GB/T 9341-2008
Impact Properties	**Metric**	**Method**
Notched Impact Strength	6.1 J/m	GB/T 1843-2008
Unnotched impact strength	31.2 J/m	GB/T 1843-2008

Pros

With superior stiffness, mechanical strength, and heat resistance, this material is well-suited for applications involving high loads and elevated temperatures. It's an excellent choice for producing durable parts like housings, fixtures, mounting plates, and armatures.

Cons

This material typically results in a rough, grainy surface and may contain residual powder in internal cavities. Compared to other nylon variants, it offers slightly lower tensile strength.

Applications

Engine Components Structural and High-stress Parts Gears

Electrical Connectors Protective Casings Jigs and Fixtures

Sensor Components Grippers Brackets and Gaskets