Nylon PA 6 Glass-filled Black Datasheet

Overview

Nylon PA 6 glass-filled black is designed for selective laser sintering (SLS) and provides outstanding rigidity, heat resistance, and corrosion resistance. These properties make it an ideal choice for testing functional parts and small-batch production.

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

Maximum Printing Size: 645*325*520mm

Properties

Thermal Properties	Metric	Method
Heat Deformation (0.46 MPa)	214℃	ASTM D648M
Heat Deformation (1.82 MPa)	210℃	ASTM D648M
Mechanical Properties	**Metric**	**Method**
Tensile Strength	110MPa	ASTM D638M
Tensile Modulus	10000MPa	ASTM D638M
Elongation at Break	2.6%	ASTM D638M
Flexural Properties	**Metric**	**Method**
Flexural Modulus	6000MPa	ASTM D790
Flexural Strength	135MPa	ASTM D790
Impact Properties	**Metric**	**Method**
Notched Impact Strength	7.8 J/m	ASTM D256
Unnotched impact strength	18.3 J/m	ASTM D256
Density Properties	**Metric**	**Method**
Density	1.04 g/cm³	DIN 53466

Pros

SLS 3D printed Nylon PA 6 glass-filled offers improved strength, stiffness, and thermal stability, making it well-suited for manufacturing robust, high-performance components that require superior mechanical properties and thermal resistance, particularly in industries like automotive and aerospace.

Cons

Powdered material prints tend to be more brittle and can incur higher costs, as well as cause increased tool wear. These parts often have a grainy surface texture.

Applications

Automotive Components Structural and High-stress Parts Gears

Electrical Connectors Enclosures and Housings Jigs and Fixtures

Sensor Components Surgical Tools Brackets and Gaskets