Material Information

Nylon PA 6 Glass-filled Black

Introduction

Nylon PA 6 glass-filled black is compatible with selective laser sintering. It offers excellent rigidity, heat resistance, and corrosion resistance, making it suitable for functional parts verification and small-scale production.

Advantages

SLS 3D printed nylon PA 6 glass-filled features enhanced strength, stiffness, and thermal stability, making it ideal for demanding industrial applications.

Disadvantages

Can be more brittle and cost more, and can increase wear on tools.

Tolerance

±300μm or 0.3%

Recommendation

SLS 3D printed nylon PA 6 glass-filled is recommended for producing durable, high-performance parts that require excellent mechanical properties and thermal resistance, such as in the automotive and aerospace industries.

Material Specifications		
Density	DIN 53466	1.41 g/cm³
Heat Deformation (0.45 MPa)	ASTM D648	219℃
Heat Deformation (1.8 MPa)	ASTM D648	203℃
Tensile Strength	ASTM D638	77MPa
Tensile Modulus	ASTM D638	6585MPa
Elongation at Break	ASTM D638	1.8%
Flexural Strength	ASTM D790	130MPa
Flexural Modulus	ASTM D790	6266MPa
Notched Impact Strength	ASTM D256	4.2 J/m
Unnotched impact strength	ASTM D256	13.6 J/m

Attention

Products printed with powdered material come with grainy surfaces. If you have a specific requirement for surface finishing, we offer 3D Plus™ service, which includes a variety of post-processing services, including vibratory smoothing and vapor smoothing, to achieve a smooth surface finish.

Applications

3DSPRO finds people using nylon PA 6 glass-filled to make functional parts and prototypes in the following industries and applications:

Automotive parts and supplies:
Car engine components, intake manifolds, brackets, housings, gears, and structural parts.

Household appliances:
Components for washing machines, dishwashers, vacuum cleaners, and other high-stress parts.

Consumer electronic products:
Housings for laptops, tablets, mobile phones, and other electronic devices require high durability.

Electromechanical equipment:
Parts for industrial machinery, electrical connectors, power tool housings, and mechanical components.

Artwork and toys:
Durable sculptures, intricate props, jewelry, and robust toy parts.