Material Information

Polypropylene Glass-filled

Introduction

Polypropylene (PP) is a thermoplastic polymer used in a wide variety of applications. SLS 3D printed PP glass-filled parts have excellent mechanical properties, making PP the right material if you plan to make waterproof parts.

Advantages

Offer excellent mechanical properties, high chemical resistance, and design flexibility without the need for support structures.

Disadvantages

Have a rough surface finish and may have slight porosity.

Tolerance

±300µm or 0.3%

Recommendation

Recommended for applications requiring lightweight, chemical-resistant and durable parts, such as automotive components, medical devices and consumer goods.

Material Specifications		
Density	DIN 53466	1.26 g/cm³
Heat Deformation (0.45 MPa)	ASTM D648	179℃
Heat Deformation (1.8 MPa)	ASTM D648	129℃
Tensile Strength	ASTM D638	41MPa
Tensile Modulus	ASTM D638	2000MPa
Elongation at Break	ASTM D638	9%
Flexural Strength	ASTM D790	70MPa
Flexural Modulus	ASTM D790	2100MPa
Notched Impact Strength	ASTM D256	48 J/m
Unnotched Impact Strength	ASTM D256	240 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 SLS 3D printed polypropylene glass-filled to make functional parts and prototypes in the following industries and applications.

Automotive:
Lightweight and durable components such as air ducts, fluid reservoirs, and interior parts.

Medical:
Custom prosthetics, surgical tools, and medical device housings.

Consumer Goods:
Robust and flexible products like sports equipment, toys, and household items.

Aerospace:
Complex, high-performance parts, including brackets, housings, and ducting systems.