Material Information

Nylon PA12 Glass-filled Light Gray

Introduction

Nylon PA12 Glass-filled Light Gray is a powered polyamide 12 material with a light greyish color. Compared with regular PA12 materials, Nylon PA12 Glass-filled Light Gray achieves higher tensile modulus and flexural strength because of the glass beads added into it. It is suitable for creating works-like prototypes and functional parts.

Advantages

High temperature resistance and high flexural strength. No support needed when printing.

Disadvantages

Grainy surface, relatively lower tensile strength compared with other Nylon materials, may have powder residue inside hollow structure.

Tolerance

±300μm or 0.3%

Recommendation

The outstanding material performance of Nylon PA12 Glass-filled Light Gray makes it suitable for engineering validation and design validation of products with extremely complicated structures.

Material Specifications		
Heat deformation (0.45 MPa)	GB/T 1634.2-2004	153.1 ℃
Heat deformation (1.8 MPa)	GB/T 1634.2-2004	69 ℃
Melting point	GB/T 19466.1-2004	184.5 ℃
Tensile strength	GB/T 1040.2-2006	45 MPa
Tensile modulus	GB/T 1040.2-2006	2600 MPa
Elongation at Break	GB/T 1040.2-2006	6.7%
Flexural strength	GB/T 9341-2008	60 MPa
Flexural modulus	GB/T 9341-2008	2100 MPa
Notched impact strength	GB/T 1843-2008	6.1 kJ/m²
Unnotched impact strength	GB/T 1843-2008	31.2 kJ/m²

Attention

Products printed with powdered material come with grainy surface. If you have a specific requirement on surface finishing, you may need to add 3D Plus services such as grinding and vapor smoothing to reach a smooth surface.

Applications

3DSPRO find people using Nylon PA12 Glass-filled Light Gray to make functional parts and prototypes in the following industries & applications.

Automotive parts and supplies:
Car bezels, rearview mirrors, dashboards, steering wheels, lights, seats, handles, etc.

Household appliances:
Air conditioner, air purifier, vacuum cleaner, electric fan, ironing machine, water dispenser, juicer, hair dryer, etc.

Electromechanical equipment:
Industrial display panels, switches, sockets, power tools, electrical instruments, experimental instruments, measuring tools, etc.

Artwork and toys:
Sculptures, props, jewelries, lighting, interior decorations, toys, dolls, etc.