

Material Information



Nylon PA12 Grey Black

Introduction

Nylon PA12 Grey Black is a powdered polyamide 12 material with a Gray Blackish color, high-temperature resistance, good toughness, and high strength. It is suitable for creating works-like prototypes and functional parts.

Advantages

High temperature resistance, good toughness, and high strength. No support needed when printing.

Disadvantages

Grainy surface, may have powder residue inside hollow structure.

Tolerance

±300µm or 0.3%

Recommendation

The outstanding material performance of Nylon PA12 Gray Black 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	146.1 °C
Heat deformation (1.8 MPa)	GB/T 1634.2-2004	73.1 °C
Melting point	GB/T 19466.1-2004	184.5 °C
Tensile strength	GB/T 1040.2-2006	47 MPa
Tensile modulus	GB/T 1040.2-2006	1951 MPa
Elongation at Break	GB/T 1040.2-2006	19%
Flexural strength	GB/T 9341-2008	40.1 MPa
Flexural modulus	GB/T 9341-2008	1053.7 MPa
Notched impact strength	GB/T 1843-2008	8.6 kJ/m ²
Unnotched impact strength	GB/T 1843-2008	23.1 kJ/m ²

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 Gray Black 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.

Consumer electronic products:

Laptops, tablets, mobile phones, digital cameras, game consoles, MP3, mobile power bank.

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.