Material Information

Nylon PA 12 Gray

Introduction

Nylon PA12 Gray is a powered polyamide 12 material with a gray color, high-temperature resistance, good toughness, and high strength, developed exclusively for HP's MJF technology. It is suitable for creating works like prototypes and functional parts.

Advantages

The printing technology of MJF allows this exclusive material to have the perfect combination of exquisite details and ultra-high dimensional accuracy. It can produce extremely fine small holes, thin walls, shanks, solid structural parts, complex parts, and lattice structural parts, thus producing high-quality parts.

Disadvantages

Grainy surface, may have powder residue inside hollow structure.

Tolerance

±300μm or 0.3%

Recommendation

The outstanding material performance of nylon PA12 gray makes it suitable for engineering validation and design validation of products with extremely complicated structures.

Material Specifications		
Density	ASTM D792	1.01 g/cm^3
Heat Deformation (0.45 MPa)	ASTM D648	175℃
Heat Deformation (1.8 MPa)	ASTM D648	95℃
Melting Point	ASTM D3418	187℃
Tensile Strength	ASTM D638	52MPa
Tensile Modulus	ASTM D638	1700MPa
Elongation at Break	ASTM D638	17.5%
Flexural Strength	ASTM D638	48MPa

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 MJF nylon PA 12 gray to make functional parts and prototypes in the following industries and 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, and mobile power banks.

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

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