Nylon PA 12 Gray Datasheet

Overview

It is a gray-colored, powder-based polyamide 12 material specifically designed for HP's MJF technology. Known for its high-temperature resistance, impressive toughness, and strength, Nylon PA 12 Gray is an excellent choice for producing functional parts and works-like prototypes.

As-printed Part's Tolerance: ±300μm or 0.3%

Maximum Printing Size: 380*284*380mm

Properties

Thermal Properties	Metric	Method
Heat Deformation (0.46 MPa)	175℃	ASTM D648M
Heat Deformation (1.82 MPa)	95℃	ASTM D648M
Melting Point	187℃	ASTM D3418
Mechanical Properties	**Metric**	**Method**
Tensile Strength	52MPa	ASTM D638M
Tensile Modulus	1700MPa	ASTM D638M
Elongation at Break	17.5%	ASTM D638M
Flexural Properties	**Metric**	**Method**
Flexural Strength	48MPa	ASTM D638

Pros

The MJF printing technology enables this unique material to achieve an exceptional balance of fine detail and precise dimensional accuracy. It is capable of producing intricate features such as small holes, thin walls, shanks, solid structural components, complex parts, and lattice structures, resulting in high-quality outputs.

Cons

Parts made from powdered materials typically feature a rough, grainy texture and may retain powder residue within hollow areas.

Applications

Automotive Components Structural and High-stress Parts Gears

Electrical Connectors Enclosures and Housings Jigs and Fixtures

Sensor Components Surgical Tools Brackets and Gaskets