MJF Materials

HP 3D High Reusability PA 12

Product Description

HP MJF PA12 (Nylon 12) is a robust, versatile thermoplastic engineered for HP's Multi Jet Fusion 3D printing technology. It delivers an excellent balance of strength, chemical resistance, and fine detail. It can also withstand drastic temperature drops, making it the industry standard for functional prottoypes and end-use production.

Typical Features

- Quality prints at low cost per part
- Produces strong, functional, detailed, complex parts
- Provides excellent balance between performance and reusability

General Properties

Measurement	Test Method	Value
Powder Melting Point (DSC)	ASTM D3418	186°C/367°F
Particle Size	ASTM D3451	58 µm
Bulk Density of Powder	ASTM D1895	0.48 g/cm³ (0.017 lb/in³)
Part Density	ASTM D792	1.3 g/cm³ (0.047 lb/in³)

Mechanical Properties

Property Description	Test Method	Value
Tensile Strength, Maximum Load 17, XY	ASTM D638	30 MPa/4350 psi
Tensile Strength, Maximum Load 11, Z	ASTM D638	30 MPa/4350 psi
Tensile Modulus, 7 XY	ASTM D638	2800 MPa/406 ksi
Tensile Modulus, 7 Z	ASTM D638	2900 MPa/421 ksi
Izod Impact (Notched) (3.2mm, 23°C), XYZ	ASTM D256	2.7 KJ/m²
Elongation at Break, 7 XY	ASTM D638	6.5%
Elongation at Break, 7 Z	ASTM D638	6.5%

Thermal Properties

Heat Deflection Temp (HDT), ASTM D648 (@ 0.45 MPa, 66 psi), Z	173°C/344°F A
Heat Deflection Temp (HDT), ASTM D648 (@ 1.82 MPa, 264 psi), Z	121°C/250°F