

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 prototypes 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	187 °C/369 °F
Particle Size	ASTM D3451	60 µm
Bulk Density of Powder	ASTM D1895	0.425 g/cm³ (0.015 lb/in³)
Part Density	ASTM D792	1.01 g/cm³ (0.037 lb/in³)

Mechanical Properties

Property Description	Test Method	Value
Tensile Strength, Maximum Load, XY	ASTM D638	48 MPa/6960 psi
Tensile Strength, Maximum Load, Z	ASTM D638	48 MPa/6960 psi
Tensile Modulus, XY	ASTM D638	1700 MPa/247 ksi
Tensile Modulus, Z	ASTM D638	1800 MPa/261 ksi
Izod Impact (Notched) (3.2mm, 23°C), XYZ	ASTM D256	3.5 KJ/m²
Elongation at Break, XY	ASTM D638	20%
Elongation at Break, Z	ASTM D638	15%

Thermal Properties

Heat Deflection Temp (HDT), ASTM D648 (@ 0.45 MPa, 66 psi), XY	175 °C/347 °F
Heat Deflection Temp (HDT), ASTM D648 (@ 1.82 MPa, 264 psi), XY	95 °C/203 °F
Heat Deflection Temp (HDT), ASTM D648 (@ 0.45 MPa, 66 psi), Z	175 °C/347 °F
Heat Deflection Temp (HDT), ASTM D648 (@ 1.82 MPa, 264 psi), Z	106 °C/223 °F