

HP 3D PA 12

No matter how complex your designs, polyamide is a great and versatile choice. The self-supporting powder needs no support structure, and works equally well for fully functional prototypes or end-use parts.

The PA 12 material used by HP Multi Jet Fusion technology has a very fine grain, resulting in parts with higher density and lower porosity than parts produced with Laser Sintering. That feature also makes PA 12 for MJF the ideal choice when you need more detailed surface resolution or thinner walls than are possible with Laser Sintering. Think crisp textures, embossing and engraving, or labels.

General Properties

	Test Method	Value
Powder melting point (DSC)	ASTM D3418	187° C
Particle size	ASTM 03451	60 µm
Bulk density of powder	ASTM D1895	0,425 g/ cm ³
Density of parts	ASTM D792	1,01 g/ cm ³

Mechanical Properties

Tensile Strength (Max Load XY)	ASTM D638	48 MPa
Tensile Strength (Max Load Z)	ASTM D638	48 MPa
Tensile Modulus (XY)	ASTM D638	1700 MPa
Tensile Modulus (Z)	ASTM D638	1800 MPa
Elongation at Break (XY)	ASTM D638	20%
Elongation at Break (Z)	ASTM D638	15%
Flexural strength (XY)	ASTM D790	65 MPa
Flexural strength (Z)	ASTM D790	70 MPa
Flexural modulus (XY)	ASTM D790	1730 MPa
Flexural modulus (Z)	ASTM D790	1730 MPa
Izod impact notched (XY)	ASTM D256	3.5 kJ/m ²
Izod impact notched (Z)	ASTM D256	3.5 kJ/m ²

Thermal Properties

Heat deflection temperature (@ 0.45 MPa)	ASTM D648	175° C
Heat deflection temperature (@ 1.82 MPa)	ASTM D648	95° C

Certifications

USP Class I-VI and US FDA guidance for Intact Skin Surface Devices, RoHS,11 REACH, PAHs, UL 94, UL 746A , Statement of Composition for Toy Applications