

HP 3D PA 11

HP 3D PA 11 is a thermoplastic material which offers optimal mechanical properties and provides excellent corrosion resistance. Its ductility makes it suitable for the production of components with snap insertions. HP 3D PA 11 is the perfect solution to produce strong, ductile and functional parts.

It delivers optimal mechanical properties and provides excellent chemical resistance and enhanced elongation-at-break. HP 3D PA 11 is impact resistant and can be used for prostheses, insoles, sports goods, snap fits, living hinges, and more.

General Properties

	Test Method	Value
Powder melting point (DSC)	ASTM D3418	202° C
Particle size	ASTM 03451	54 µm
Bulk density of powder	ASTM D1895	0,48 g/ cm ³
Density of parts	ASTM D792	1,05 g/ cm ³

Mechanical Properties

Tensile Strength (Max Load XY)	ASTM D638	52 MPa
Tensile Strength (Max Load Z)	ASTM D638	52 MPa
Tensile Modulus (XY)	ASTM D638	1800 MPa
Tensile Modulus (Z)	ASTM D638	1800 MPa
Elongation at Break (XY)	ASTM D638	50%
Elongation at Break (Z)	ASTM D638	35%
Flexural strength	ASTM D790	70 MPa
Flexural modulus	ASTM D790	1800 MPa
Izod impact notched (XY)	ASTM D256	5 kJ/m ²
Izod impact notched (Z)	ASTM D256	4,5 kJ/m ²
Shore Hardness	ASTM D2240	80

Thermal Properties

Heat deflection temperature (@ 0.45 MPa)	ASTM D648	185° C
Heat deflection temperature (@ 1.82 MPa)	ASTM D648	54° C

Certifications

USP Class I-VI and US FDA guidance for Intact Skin Surface Devices,¹¹ RoHS,¹² REACH, PAHs, Statement of Composition for Toy Applications