



PA 11

High-density thermoplastic 3D printing powdered material.

PA 11 is a strong and flexible nylon thermoplastic powder used in HP's Multi Jet Fusion 3D printing process. PA 11 produces high-density parts with fine detail and high dimensional accuracy. PA 11 is strong yet highly flexible. It is ideal for complex assemblies, housings, enclosures and connectors and is also optimal for post finishing processes. PA 11 also has excellent chemical resistance to oils, greases, aliphatic hydrocarbons and alkalis.

Mechanical Properties	Test Method	English	Metric
Tensile Strength, Max Load ⁴ - XY	ASTM D638	7542 psi	52 MPa
Tensile Strength, Max Load ⁴ - Z	ASTM D638	7542 psi	52 MPa
Tensile Modulus ⁴ - XY	ASTM D638	261 ksi	1800 MPa
Tensile Modulus ⁴ - Z	ASTM D638	261 ksi	1800 MPa
Elongation at Break ⁴ - XY	ASTM D638	55%	55%
Elongation at Break ⁴ - Z	ASTM D638	40%	40%
Izod Impact Notched - XY	ASTM D256	6 kJ/m ²	6 kJ/m ²
Izod Impact Notched - Z	ASTM D256	5 kJ/m ²	5 kJ/m ²

Thermal Properties	Test Method	English	Metric
Heat Deflection Temperature (@ 0.45 MPa) - Z	ASTM D648	365°F	185°C
Heat Deflection Temperature (@ 1.82 MPa) - Z	ASTM D648	129°F	54°C

General Properties	Test Method	English	Metric
Powder melting point (DSC)	ASTM D3418	396°F	202°C
Particle size	ASTM D3451	54 µm	
Bulk density of powder	ASTM D1895	0.48 g/cm ³	
Density of parts	ASTM D792	1.05 g/cm ³	

Actual part properties may vary slightly from those listed above based on processing parameters, operating conditions, and material usage. GoProto makes no warranties of materials for any particular application, nor does it make a warranty of any type, expressed or implied, including, but not limited to, the warranties of merchantability for a particular purpose.

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