

PA 12 is a strong thermoplastic for functional prototyping and final parts. HP's Multi Jet Fusion 3D Printing material, PA 12 produces high-density parts, with fine detail and high dimensional accuracy. Ideal for complex assemblies, housings, enclosures and connectors, and optimal for post finishing processes. PA 12 also has excellent chemical resistance to oils, greases, aliphatic hydrocarbons and alkalies.

MECHANICAL PROPERTIES	TEST METHOD	ENGLISH	METRIC
Tensile Strength, Max Load <sup>4</sup> - XY	ASTM D638	6960 psi	48 MPa
Tensile Strength, Max Load <sup>4</sup> - Z	ASTM D638	6960 psi	48 MPa
Tensile Modulus <sup>4</sup> - XY	ASTM D638	245 ksi	1700 MPa
Tensile Modulus <sup>4</sup> - Z	ASTM D638	260 ksi	1800 MPa
Elongation at Break <sup>4</sup> - XY	ASTM D638	20%	20%
Elongation at Break <sup>4</sup> - Z	ASTM D638	15%	15%

THERMAL PROPERTIES	TEST METHOD	ENGLISH	METRIC
Heat Deflection Temperature (@ 0.45 MPa) - Z	ASTM D648	350°F	175°C
Heat Deflection Temperature (@ 1.82 MPa) - Z	ASTM D648	205°F	95°C

GENERAL PROPERTIES	TEST METHOD	ENGLISH	METRIC
Powder melting point (DSC)	ASTM D3418	369°F	187°C
Particle size	STM 03451	60 µm	
Bulk density of powder	ASTM D1895	0.425 g/cm <sup>3</sup>	
Density of parts	ASTM D792	1.01 g/cm <sup>3</sup>	

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.

GoProto is a world class 3D printing and Rapid Manufacturing facility located in Carlsbad, CA specializing in high-quality rapid prototyping, 3D printing (SLA, SLS, FDM, Polyjet, and DMLS), short-run manufacturing and CNC machining.