

HP 3D High Reusability PA 12

Strong, low cost, quality parts

Produce strong, functional, detailed complex parts

- Robust thermoplastic produces high-density parts with balanced property profiles and strong structures.
- Provides excellent chemical resistance to oils, greases, aliphatic hydrocarbons, and alkalis.
- Ideal for complex assemblies, housings, enclosures, and watertight applications.
- Biocompatibility certifications—meets USP² Class I-VI and US FDA guidance for Intact Skin Surface Devices.³

Engineered for HP Multi Jet Fusion technology

- Designed for production of functional parts across a variety of industries.
- Provides the best balance between performance and reusability.⁷
- Achieves watertight properties without any additional post-processing.
- Engineered to produce final parts and functional prototypes with fine detail and dimensional accuracy.



Picture taken after graphite post-processing

Technical specifications⁸

Category	Measurement	Value	Method
General properties	Powder melting point (DSC)	187 °C/369 °F	ASTM D3418
	Particle size	60 µm	ASTM D3451
	Bulk density of powder	0.425 g/cm ³	ASTM D1895
	Density of parts	1.01 g/cm ³	ASTM D792
Mechanical properties	Tensile strength, max load ⁹ , XY	48 MPa/6960 psi	ASTM D638
	Tensile strength, max load ⁹ , Z	48 MPa/6960 psi	ASTM D638
	Tensile modulus ⁹ , XY	1700 MPa/247 ksi	ASTM D638
	Tensile modulus ⁹ , Z	1800 MPa/261 ksi	ASTM D638
	Elongation at break ⁹ , XY	20%	ASTM D638
	Elongation at break ⁹ , Z	15%	ASTM D638
	Flexural strength (@ 5%) ¹⁰ , XY	65 MPa/9425 psi	ASTM D790
	Flexural strength (@ 5%) ¹⁰ , Z	70 MPa/10150 psi	ASTM D790
	Flexural modulus ¹⁰ , XY	1730 MPa/251 ksi	ASTM D790
	Flexural modulus ¹⁰ , Z	1730 MPa/251 ksi	ASTM D790
	Izod impact notched (@ 3.2 mm, 23°C), XYZ	3.5 kJ/m ²	ASTM D256 Test Method A
Thermal properties	Heat deflection temperature (@ 0.45 MPa, 66 psi), XY	175 °C/347 °F	ASTM D648 Test Method A
	Heat deflection temperature (@ 0.45 MPa, 66 psi), Z	175 °C/347 °F	ASTM D648 Test Method A
	Heat deflection temperature (@ 1.82 MPa, 264 psi), XY	95 °C/203 °F	ASTM D648 Test Method A
	Heat deflection temperature (@ 1.82 MPa, 264 psi), Z	106 °C/223 °F	ASTM D648 Test Method A
Recyclability	Refresh ratio for stable performance	20%	
Certifications	USP Class I-VI and US FDA guidance for Intact Skin Surface Devices, RoHS ¹¹ , EU REACH, PAHs		

