

MULTI JET FUSION

PA 12 BLACK

Current Supplier's Material: HP 3D High Reusability PA12

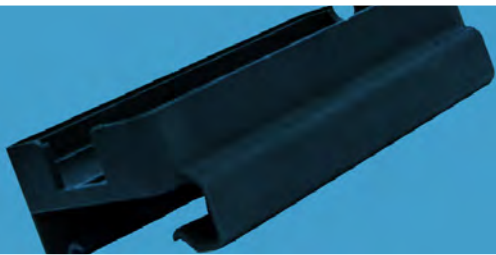


PRODUCT DESCRIPTION

PA 12 Black is a high tensile strength nylon suitable for prototypes and end-use production parts. Final parts exhibit quality surface finishes, fine feature resolution, and more consistent mechanical properties when compared to processes like selective laser sintering.

APPLICATIONS

Multi Jet Fusion's PA 12 black is often used to build housings, enclosures, and fixtures, and can work well for snap fits and hinges.



KEY PRODUCT BENEFITS

- Near isotropic mechanical properties
- Water- and airproof without further treatment

PROPERTIES

PROPERTY	TEST METHOD	VALUE
Color	-	Black
Sintered Density*	ASTM D792	1.01 g/cm ³
Water absorption, 20 °C, 50% Relative Humidity	ASTM D570	0.5 ± 0.2%
Water absorption, 24 hrs. in boiling water		2.0 ± 0.3%
E-Module (x-y plane)	ASTM D638, test speed 10mm/min	1900 MPa ± 200 MPa
E-Module (z plane)		1900 MPa ± 200 MPa
Tensile strength (x-y plane)		49 ± 4 MPa
Tensile strength (z plane)		47 ± 4 MPa
Elongation at break (x-y plane)		12% ± 4%
Elongation at break (z plane)		9% ± 4%
Heat deflection temperature @ 0.46 MPa*	ASTM D648	175 °C
Heat deflection temperature @ 1.82 MPa*		95 °C

*From supplier data sheet

TOLERANCES

For well-designed parts, tolerances of ±0.012 in. plus ±0.002 in./in. for each additional inch can typically be achieved. Note that tolerances may change depending on part geometry.

Version 1.0 | June, 2019