

# MULTI JET FUSION PA12 BLACK



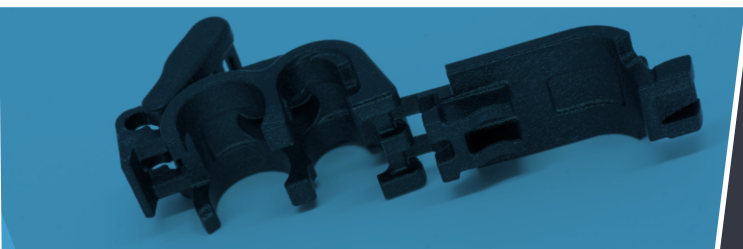
[Supplier Data Sheet: HP 3D High Reusability PA12](#)

## PRODUCT DESCRIPTION

PA12 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 PA12 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 (STANDARD)	VALUE (VAPOUR SMOOTH)
Colour	-	Black	Black
Sintered Density*	ASTM D792	1.01 g/cm <sup>3</sup>	1.01 g/cm <sup>3</sup>
Surface Roughness**	DIN EN ISO 4287	Ra = 10-25 µm; Rz = 60-100 µm	Ra = 5-10 µm; Rz = 20-60 µm
Water absorption, 20 °C, 50% Relative Humidity	DIN EN ISO 62	0.5 ± 0.2%	0.5 ± 0.2%
Water absorption, 24 hrs. in boiling water		2.0 ± 0.3%	2.0 ± 0.3%
E-Module (x-y plane)	EU: DIN EN ISO 527, test speed 10 mm/min	1900 MPa ± 200 MPa	1600 MPa ± 200 MPa
E-Module (z plane)		1900 MPa ± 200 MPa	1600 MPa ± 200 MPa
Tensile strength (x-y plane)		49 ± 4 MPa	47 ± 4 MPa
Tensile strength (z plane)		47 ± 4 MPa	47 ± 4 MPa
Elongation at break (x-y plane)		12% ± 4%	16% ± 4%
Elongation at break (z plane)		9% ± 4%	9% ± 4%
Heat deflection temperature @ 0.46 MPa*	DIN EN ISO 75	175 °C	175 °C
Heat deflection temperature @ 1.82 MPa*		95 °C	95 °C

\*From supplier data sheet

\*\* Surface roughness may vary depending on orientation

## TOLERANCES

For well-designed parts, tolerances of ± 0.25mm plus 0.002mm/mm can typically be achieved. Note that tolerances may change depending on part geometry