

MULTI JET FUSION

# PA12 VAPOUR SMOOTH BLACK



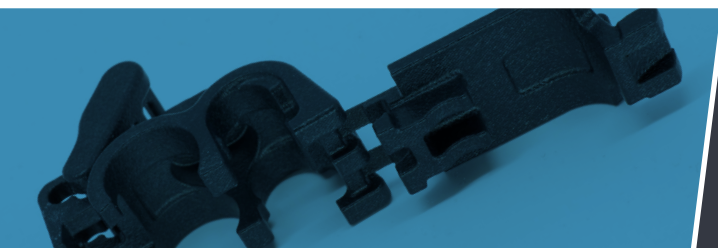
[Supplier Data Sheet: HP 3D High Reusability PA12](#)

## PRODUCT DESCRIPTION

PA12 Vapour Smooth 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. Vapour Smoothing makes the outer surface smooth and of marbled black / anthracite colour.

## APPLICATIONS

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