## **MULTI JET FUSION**

# PA 12 BLACK



### **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

#### **Tolerances**

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

#### **Properties**

Property	Test Method	Value
Color	-	Black
Sintered Density	ASTM D792	1.01 g/cm³
Water absorption (20 °C, 50% relative humidity)	ASTM D570	0.5 ± 0.2%
Water absorption, 24 hrs. in boiling water	ASTM D570	2.0 ± 0.3%
E-Module (x-y plane)	ASTM D638, test speed 10mm/min	1,900 ± 200 MPa
E-Module (z plane)	ASTM D638, test speed 10mm/min	1,900 ± 200 MPa
Tensile strength (x-y plane)	ASTM D638, test speed 10mm/min	49 ± 4 MPa
Tensile strength (z plane)	ASTM D638, test speed 10mm/min	47 ± 4 MPa
Elongation at break (x-y plane)	ASTM D638, test speed 10mm/min	12 ± 4%
Elongation at break (z plane)	ASTM D638, test speed 10mm/min	9 ± 4%
Heat deflection temperature @ 0.46 MPa*	ASTM D648	175 °C (374 °F)
Heat deflection temperature @ 1.82 MPa*	ASTM D648	95 °C (203 °F)

<sup>\*</sup> From supplier data sheet

