

SELECTIVE LASER SINTERING

PA 12 BLACK

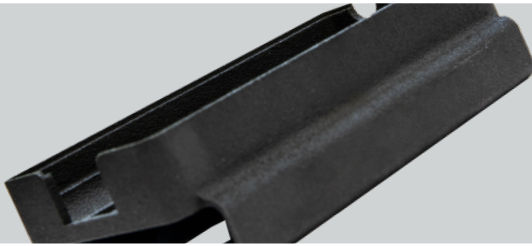


Product Description

PA 12 Black is a high tensile strength nylon suitable for prototypes and end-use production parts. PA 12 Black uses recycled powder. The resulting parts are highly isotropic with SLS's high dimensional accuracy without sacrificing mechanical consistency. SLS PA 12 Black is dyed black as part of standard finishing and then surface polished for high cosmetic consistency.

Applications

SLS'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
- ▶ Has great chemical resistance and ideal for functional parts and prototypes.

Tolerances

For well-designed parts, tolerances of ± 0.010 in. plus ± 0.0015 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/cm ³
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	46
Tensile strength (z plane)	ASTM D638, test speed 10mm/min	46 ± 4 MPa
Elongation at break (x-y plane)	ASTM D638, test speed 10mm/min	13 ± 4%
Elongation at break (z plane)	ASTM D638, test speed 10mm/min	7 ± 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)

* From supplier data sheet