

SELECTIVE LASER SINTERING

PA 12 VALUE

Product Description

PA 12 Value is a high tensile strength nylon suitable for prototypes and end-use production parts. PA 12 Value is a recycled material making it a great economic alternative to PA 12 White while maintaining high dimensional accuracy without sacrificing mechanical consistency.

Applications

SLS's PA 12 Value 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	-	Off white
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