

# SELECTIVE LASER SINTERING

# PA 12 WHITE



## Product Description

PA 12 White is an economical material choice for functional prototypes and end-use parts. It offers high impact and temperature resistance, is very durable, and remains stable under a range of environmental conditions. The nylon material exhibits a white finish with a slightly rougher surface texture compared to other nylons.

## Applications

The material's high strength is ideal for jigs and fixtures, housings, and other functional parts. It also has a low coefficient of friction, making it suitable for many types of gears and bearings.



## Key Product Benefits

- ▶ Strength and stiffness
- ▶ Well-balanced material properties

## 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	-	White
Sintered Density	ASTM D792	1.02 g/cm <sup>3</sup>
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	2,000 ± 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	50 ± 4 MPa
Tensile strength (z plane)	ASTM D638, test speed 10mm/min	42 ± 5 MPa
Elongation at break (x-y plane)	ASTM D638, test speed 10mm/min	11 ± 4%
Elongation at break (z plane)	ASTM D638, test speed 10mm/min	4 ± 2%
Heat deflection temperature @ 0.46 MPa*	ASTM D648	177 °C (350 °F)
Heat deflection temperature @ 1.82 MPa*	ASTM D648	86 °C (186 °F)

\* From supplier data sheet