

SELECTIVE LASER SINTERING

PA 12 MINERAL-FILLED

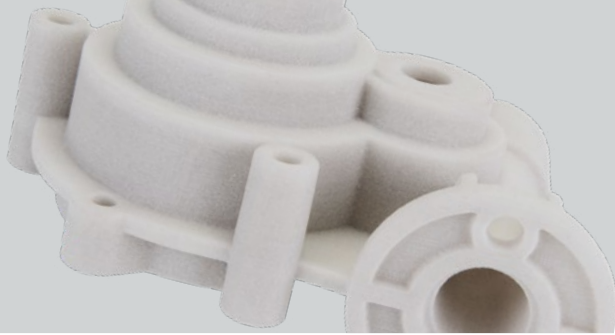


Product Description

This 25% mineral-filled nylon offers the highest stiffness among Protolabs' selective laser sintering materials. It's an excellent choice when stiffness and high temperature resistance are the most important requirements.

Applications

The material's stiffness and temperature resistance makes it suited for components like armatures and mounting plates.



Key Product Benefits

- ▶ Excellent strength to weight performance
- ▶ High temperature resistance
- ▶ Parts can be oriented to achieve maximum strength in X-build direction

Tolerances

For well-designed parts, tolerances of ± 0.010 in. plus ± 0.0015 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	-	Light Gray
Sintered Density	ASTM D792	1.20 g/cm ³
E-Module (x-y plane)	ASTM D638, test speed 10mm/min	3,100 \pm 400 MPa
E-Module (z plane)	ASTM D638, test speed 10mm/min	2,500 \pm 200 MPa
Tensile strength (x-y plane)	ASTM D638, test speed 10mm/min	38 \pm 5 MPa
Tensile strength (z plane)	ASTM D638, test speed 10mm/min	32 \pm 7 MPa
Elongation at break (x-y plane)	ASTM D638, test speed 10mm/min	3 \pm 1%
Elongation at break (z plane)	ASTM D638, test speed 10mm/min	2 \pm 1.5%
Heat deflection temperature @ 0.46 MPa*	ASTM D648	184 °C (363 °F)
Heat deflection temperature @ 1.82 MPa*	ASTM D648	179 °C (354 °F)

* From supplier data sheet