

# SELECTIVE LASER SINTERING

## PA 12 40% GLASS-FILLED

Current Supplier's Material: PA 614-GS



### PRODUCT DESCRIPTION

PA 12 40% Glass-Filled is a polyamide powder loaded with glass spheres that add stiffness and dimensional stability. The material possesses higher thermal resistance than unfilled polyamides and exhibits excellent long-term wear resistance. Due to the glass additive, it has decreased impact and tensile strengths compared to other nylons.

### APPLICATIONS

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



### KEY PRODUCT BENEFITS

- Stiffness and dimensional stability
- Long-term wear resistance
- High temperature resistance

### PROPERTIES

PROPERTY	TEST METHOD	VALUE
Color	-	White
Sintered Density*	ASTM D792	1.22 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		2.0 ± 0.3%
E-Module (x-y plane)	ASTM D638, test speed 10mm/min	3600 ± 400 MPa
E-Module (z plane)		3600 ± 400 MPa
Tensile strength (x-y plane)		50 ± 4 MPa
Tensile strength (z plane)		46 ± 4 MPa
Elongation at break (x-y plane)		5% ± 2%
Elongation at break (z plane)		3% ± 2%
Heat deflection temperature @ 0.46 MPa *	ASTM D648	157 °C
Heat deflection temperature @ 1.82 MPa*		96 °C

\*From supplier data sheet

### 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.