

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 ³ |
| 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.

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