SELECTIVE LASER SINTERING

PA12-GLASS FILLED SMOOTH WHITE

Supplier Data Sheet: EOS PA 3200 GF

PRODUCT DESCRIPTION

PA12-Glass Filled Smooth White is a polyamide powder loaded with 40% 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 in high-heat environments such as automotive engine components or tooling applications

KEY PRODUCT BENEFITS

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

PROPERTIES

PROPERTY	TEST METHOD	VALUE
Colour	-	White
Sintered Density*	ASTM D792	1.22 g/cm³
Surface Roughness**	DIN EN ISO 4287	Ra = 10-25 µm; Rz = 60-120 µm
Water absorption, 20 °C, 50% Relative Humidity	DIN EN ISO 62	0.5 ± 0.2%
Water absorption, 24 hrs. in boiling water		2.0 ± 0.3%
E-Module (x-y plane)	DIN EN ISO 527, test speed 10mm/min	3600 ± 400 MPa
E-Module (z plane)		3600 ± 400 MPa
Tensile strength (x-y plane)		42 ± 4 MPa
Tensile strength (z plane)		42 ± 4 MPa
Elongation at break (x-y plane)		5% ± 2%
Elongation at break (z plane)		3% ± 2%
Heat deflection temperature @ 0.46 MPa *	DIN EN ISO 75	157 °C
Heat deflection temperature @ 1.82 MPa*		96 °C

*From supplier data sheet

** Surface roughness may vary depending on orientation

TOLERANCES

For well-designed parts, tolerances of ± 0.20mm plus 0.002mm/mm can typically be achieved. Note that tolerances may change depending on part geometry

PROTOLABS