

SLS - PA+GF

Material data sheet for Polyamide (PA+GF) parts produced by Selective Laser Melting. Accuracy varies according to geometry, part orientation and print size $\pm 0.2\%$ (with lower limit of $\pm 0.1\text{mm}$). Distortion may cause greater deviation.

With SLS and PA+GF you can make fully functional assemblies with connecting parts, moving parts, or hinges in one piece. The material has also High mechanical strength and temperature resistance. There is no mechanical ageing of the components and the material is suitable for contact with foodstuff. When PA is filled with glass fiber it reach high density, excellent stiffness and is ideal for parts with demanding requirements.

Material Properties	Value	Standard
Tensile Strength, x/y/z	51/51/47 MPa	ISO 527-1/-2
Tensile Modulus, x/y/z	3200/3200/2500 MPa	ISO 527-1/-2
Flexural Modulus, x/y/z	2900 MPa	ISO 178
Flexural Strength	73 MPa	ISO 178
Elongation at break, x/y/z	9/9/5.5	ISO 527-1/-2
Charpy-notched impact strength x/y/z (23°C)	7.8/7.8/6.5 kJ/m ²	ISO 179/1eA
Charpy impact strength	35 kJ/m ²	ISO 179/eU
Shore hardness (15s)	80D	ISO 868

Thermal Properties	Value	Standard
Vicat-softening temperature (50°C/h 50N)	166°C	ISO 306
Heat deflection temperature (1.80 MPa)	96°C	ISO 75-1/-2
Heat deflection temperature (0.45 MPa)	157°C	ISO 75-1/-2

Other Properties	Value	Standard
Density	990kg/m ³	-
Achievable part accuracy	$\pm 0.2\%$, or $+0.25\%$ dimension	-