

PA 3200 GF

The parts fabricated from PA 3200 GF have excellent mechanical properties, very smooth surfaces and high accuracy. The recommended layer thickness is 0.15 mm. Unexposed powder can be reused. Depending on building time it has to be mixed with fresh powder by a ratio of 1:1 or 1:2 (old : new) with new powder to maintain constant process parameters and persisting part quality. Typical applications of the material are housings and thermally stressed parts.

General material properties	Test Method	Value	
Average grain size	Laser diffraction	60	µm
Bulk density	DIN 53466	0.59 – 0.62	g/cm ³
Density of laser-sintered	-----	1.23 – 1.28	g/cm ³

Mechanical properties	Test Method	Value	
Tensile modulus	EN ISO 527	3200 ± 200	N/mm ²
Tensile strength	EN ISO 527	48 ± 3	N/mm ²
Elongation at break	EN ISO 527	6 ± 3	%
Flexural modulus	EN ISO 178	2100 ± 150	N/mm ²
Charpy - Impact strength	EN ISO 179	35 ± 6	kJ/m ²
Charpy - Notched impact strenght	EN ISO 179	5,4 ± 0,6	kJ/m ²
Izod – Impact strength	EN ISO 180	21,3 ± 1,7	kJ/m ²
Izod – Notched impact strength	EN ISO 180	4.2 ± 0,3	kJ/m ²
Ball indentation hardness	EN ISO 2039	98	
Shore D - hardness	DIN 53505	80 ± 2	

The mechanical properties depend on the x-, y-, z-position and on the exposure parameters used.

Thermal properties	Test Method	Value	
Melting point	DIN 53736	172 - 180	°C
Vicat softening temperature B/50	EN ISO 306	166	°C
Vicat softening temperature A/50	EN ISO 306	179	°C

The data are based on our latest knowledge and are subject to changes without notice. They do not guarantee properties for a particular part and in a particular application.