Glassfilled Polyamide PA 3200GF

Application:

PA 3200 GF is suitable for use in most commercial available laser sinter systems. Typical applications of the material are fully functional prototypes with high end finish right from the process. They easily withstand high mechanical and thermal load.

Material Properties:

Average particle size	Laser	60	µm
Bulk density	ASTM D4164	0.60	g/cm³
Density of lasersintered part	ASTM D792	1.25	g/cm³
Moisture Absorption 23°C	ASTM D570	0.35	%

Mechanical Properties:*

Tensile Modulus	ASTM D638	3300	MPa
Tensile strength	ASTM D638	45	MPa
Elongation at break	ASTM D638	6	%
Flexural Modulus	ASTM D790	2200	MPa
Izod – Impact Strength	ASTM 256	200	J/m
Izod – Notched Impact	ASTM 256	150	J/m

Thermal Properties:

Melting point	DSC	184	°C
DTUL, 0.45 MPa	ASTM D648	175	°C
DTUL, 1.82 MPa	ASTM D648	110	°C

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Chemical Resistance:

Alkalines, hydrocarbonates, fuels and solvents

Electrical Properties:

Volume Resistively 22°C, 50%RH, 500V	ASTM D257-93	$2.3*10^{14}$	Ohm*cm
Surface Resistively 22°C, 50%RH, 500V	ASTM D257-93	$2.5*10^{14}$	Ohm*cm
Dielectric Constant 22°C, 50%RV, 5V 1000Hz	D150-95	3.3	
Dielectric Strength 22°C, 50%RV, in air, 5V V/sec	D149-95a	$1.5 *10^{4}$	v/mm

Surface Finish:

Upper facing (after process)	Ra	6.2	µm
Upper facing (after finish)	Ra	1.0	µm

* The mechanical properties were measured with lasersintered parts from recycled powder mixed with 60% of new powder. Parts were build in 0.15mm layerthickness with a laserpower of 21 Watt, a scan spacing of 0.15mm and a fill speed of 5080mm/s.

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.

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