

PA12 + Glass Spheres

SLS MATERIAL

Mechanical properties	Value	Unit	Test Standard
Izod notched impact strength (+23°C)	4.2	kJ/m ²	ISO 180/1A
Izod impact strength (+23°C)	21	kJ/m ²	ISO 180/1U
Shore D hardness	80	-	ISO 7619-1
Ball Indentation hardness	98	Mpa	ISO 2039-1

3D Data	Value	Unit	Test Standard
<p>The properties of parts manufactured using additive manufacturing technology (e.g. lasers sintering, stereolithography, Fused Deposition Modelling, 3D printing) are due to their layer-by-layer production, to some extent direction dependent. This has to be considered when designing the part and defining the build orientation.</p>			
Tensile Modulus x Direction y Direction z Direction	3200 3200 2500	MPa MPa MPa	ISO 527
Tensile Strength x Direction y Direction z Direction	51 51 47	MPa MPa MPa	ISO 527
Strain at break x Direction y Direction z Direction	9 9 5.5	% % %	ISO 527
Charpy impact strength (+23°C, x Direction)	35	kJ/m ²	ISO 179/1eU
Charpy notched impact strength (+23°C, x Direction)	5.4	kJ/m ²	ISO 179/1eA
Flexural Modulus (+23°C, x Direction)	2900	Mpa	ISO 178
Flexural Strength (x Direction)	73	Mpa	ISO 178
Temp. of deflection under load 1.80 Mpa, x Direction 0.45 Mpa, x Direction	96 157	°C °C	ISO 75-1/2

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Thermal properties	Value	Unit	Test Standard
Melting temperature (20°C/min)	176	°C	ISO 11357-1/-3
Temp. of deflection under load 1.80 Mpa 0.45 Mpa	96 157	°C °C	ISO 75-1/-2
Vicat softening temperature (50°C/H 50N) 50°C C/h 10N 50°C C/h 50N	179 166	°C °C	ISO 306

Other properties	Value	Unit	Test Standard
Density (lasersintered)	1220	Kg/m ³	Eos Method
Powder color (acc. to safety data sheet)	White	-	-

Characteristics

Processing	Delivery form
Laser sintering, Rapid Prototyping	Powder

Features

Tribologic Grade

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