

Prosilas

PA12 ALU

SLS MATERIAL

Mechanical properties	Value	Unit	Test Standard
Shore D hardness	76	-	ISO 7619-1

3D Data	Value	Unit	Test Standard
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.			
Tensile Modulus x Direction y Direction	3800 3800	MPa MPa	ISO 527
Tensile Strength x Direction y Direction	48 48	MPa MPa	ISO 527
Strain at break (x Direction)	4	%	ISO 527
Charpy impact strength (+23°C, x Direction)	29	kJ/m ²	ISO 179/1eU
Charpy notched impact strength (+23°C, x Direction)	4.6	kJ/m ²	ISO 179/1eU
Flexural Modulus (+23°C, x Direction)	3600	Mpa	ISO 178
Flexural Strength (+23°C, x Direction)	72	Mpa	ISO 178
Temp. of deflection under load 1.80 Mpa, x Direction 0.45 Mpa, x Direction	144 175	°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	144 175	°C	ISO 75-1/-2
Vicat softening temperature (50°C/H 50N)	169	°C	ISO 306

	Value	Unit	Test Standard
Density (laser sintered)	1360	Kg/m ³	ISO 7619-1

Characteristics

Processing	Delivery form
Laser sintering, Rapid prototyping	Powder

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