

TPU 1301

Technical specifications

<u>Mechanical properties*</u> :	Value	Unit	Test Standard
Abrasion resistance	86	mm ³	ISO 4649
Shore A hardness	86	-	ISO 7619-1
 <u>3D Data**:</u>	 Value	 Unit	 Test Standard
Tensile Modulus			
Direction X	60		
Direction Y	60	MPa	ISO 527
Direction Z	60		
Tensile Strength			
Direction X	7		
Direction Y	7	MPa	ISO 527
Direction Z	5		
Strain at break			
Direction X	250	%	ISO 527
Direction Y	250		
Charpy impact strength			
+23°C, Direction X			
+23°C, Direction Y	N	kJ/m ²	ISO 179/1eU
+23°C, Direction Z			
Charpy notched impact strength			
+23°C, Direction X			
+23°C, Direction Y	N	kJ/m ²	ISO 179/1eA
+23°C, Direction Z			
Flexural Modulus			
23°C, Direction X	64		
23°C, Direction Y	64	MPa	ISO 178
23°C, Direction Z	69		
Temperature of deflection under load			
0.45 MPa, Direction X	50	°C	ISO 75-1/-2
0.45 MPa, Direction Y	52		
 <u>Thermal properties:</u>	 Value	 Unit	 Test Standard
Melting temperature (20°C/min)	138	°C	ISO 11357-1/-3
Temp. of deflection under load (0.45 MPa)	50	°C	ISO 75-1/-2
 <u>Other properties:</u>	 Value	 Unit	 Test Standard
Water absorption	0.85	%	Sim. to ISO 62
Density (laser sintered)	1110	kg/m ³	EOS Method
Powder colour (ac. to safety data sheet)	White	-	-
Colour of the components	White	-	-
 <u>Characteristics:</u>			
Processing	Additive Manufacturing, Laser Sintering		
Chemical Resistance	Hydrolytically Stable		
Delivery form	Powder		
Applications	Automotive, Sports Equipment		
Features	Fatigue Resistance		

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

**The properties of parts manufactured using additive manufacturing technology are, due to their layer-by-layer production, to some extent direction dependent. This must be considered when designing the part and defining the build orientation.