EOS TPU 1301

TPU

EOS GmbH - Electro Optical Systems

Product Texts

under construction

Mechanical properties	Value	Unit	Test Standard
Abrasion resistance	**86**	mmj	ISO 4649
Shore A hardness	**86**	-	ISO 7619-1

3D Data	Value	Unit	Test Standard
The properties of parts manufactured using additive manufacturing technology (e.g. laser sintering, stereolithography, Fused Deposition Modelling, 3D printing) are, due to their layer-by-layer production, to some extent direction dependent. Additionally, the achievable mechanical properties depend amongst others on the system used (FORMIGA P 1XX, EOS P 39X, EOS P 7XX), the used layer thickness and correct powder handling and preparation. This has to be considered when designing the part and defining the build orientation.			
Tensile Modulus			ISO 527
X Direction	**60**	MPa	
Y Direction	**60**	MPa	
Z Direction	**60**	MPa	
Tensile Strength			ISO 527
X Direction	**7**	MPa	
Y Direction	**7**	MPa	
Z Direction	**5**	MPa	
Strain at break			ISO 527
X Direction	**250**	%	
Y Direction	**250**	%	
Charpy impact strength			ISO 179/1eU
+23ÁC, X Direction	**N**	kJ/mĮ	
+23ÁC, Y Direction	**N**	kJ/mĮ	
+23ÁC, Z Direction	**N**	kJ/mĮ	
Charpy notched impact strength			ISO 179/1eA
+23ÁC, X Direction	**N**	kJ/mĮ	
+23ÁC, Y Direction	**N**	kJ/mĮ	
+23ÁC, Z Direction	**N**	kJ/mĮ	
Flexural Modulus			ISO 178
23ÁC, X Direction	**64**	MPa	
23ÁC, Y Direction	**64**	MPa	
23ÁC, Z Direction	**69**	MPa	
Temp. of deflection under load			ISO 75-1/-2
0.45 MPa, X Direction	**50**	ÁC	
0.45 MPa, Y Direction	**52**	ÁC	

Thermal properties	Value	Unit	Test Standard
Melting temperature (20ÁC/min)	**138**	ÁC	ISO 11357-1/-3
Temp. of deflection under load (0.45 MPa)	**50**	ÁC	ISO 75-1/-2

Other properties	Value	Unit	Test Standard
Water absorption	**0.85**	%	Sim. to ISO 62
Density (lasersintered)	**1110**	kg/mj	EOS Method
Powder colour (ac. to safety data sheet)	**White**	-	-
Colour of the components	**White**	-	-

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