

Technical Data Sheet

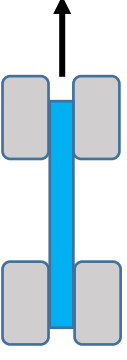

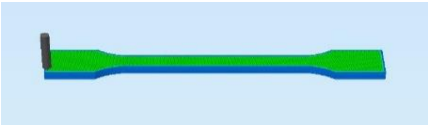
PETG by Procatec GmbH

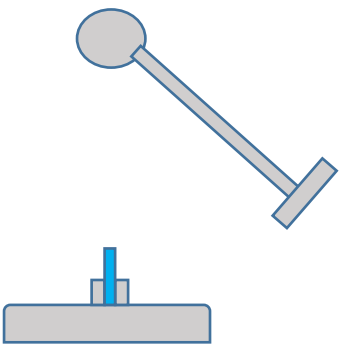
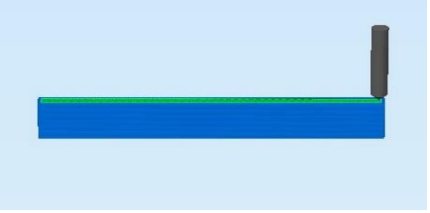
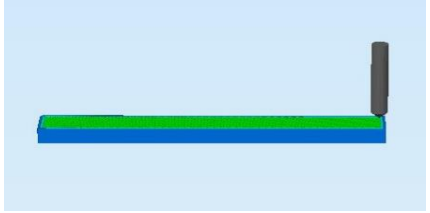
IDENTIFICATION OF THE MATERIAL	
Trade Name	PETG
Chemical name	Polyethylenterephthalat
Chemical family	Thermoplastic Polyester
Use	3D-Printing

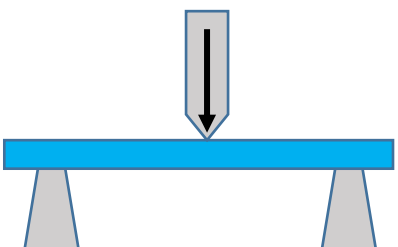

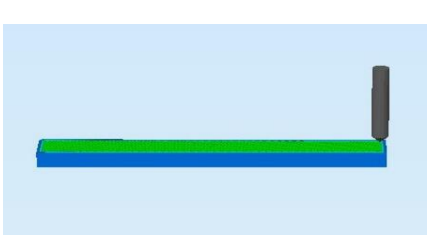
Print parameters of the test procedure	
Nozzle temperature	240 °C
Bed temperature	80 °C
Layer height	0,2mm
Nozzle size	0,6mm
Print speed	60mm/s
Printer	Original Prusa i3 MK2

MATERIAL PROPERTIES *		Test method
Melt temperature		ASTM D3418
Glass transition temperature	≈ 80°C	ASTM D3418
Melt flow rate		ISO 1133
Density	1,29 g/cm ³	ASTM D-792

* These data were taken from the raw material manufacturer

MECHANICAL PROPERTIES TENSILE TEST		Test method		ISO 527
				
Infill	50%	100%	50%	100%
Tensile strength (N/mm ²)	23,3 ± 2,1	26,0 ± 2,6	24,1 ± 0,7	40,2 ± 1,4
Force break (N)	930,7 ± 87,8	1038,3 ± 104,1	965,2 ± 29,9	1441,1 ± 149,9
Elongation at max force (%)	2,56 ± 0,3	2,9 ± 0,5	6,2 ± 0,6	5,9 ± 0,4
Elongation at brake (%)	2,56 ± 0,3	2,9 ± 0,5	6,2 ± 0,6	5,9 ± 0,4

MECHANICAL PROPERTIES CHARPY Impact Test		Test method		ISO 179-1 / eU
				
Infill	100%	100%		
Impact strength (kJ/m ²)	25,3 ± 3,3	25,2 ± 2,5		
Impact energy (mJ)	1017,5 ± 127	1064,6 ± 104		

MECHANICAL PROPERTIES FLEXURAL TEST		Test method	ISO 178
			
Infill	100%	100%	
Maximum force (N)	126,9 ± 1,3	99,3 ± 2,3	

FILAMENT SPECIFICATION		Test method
Diameter 1,75	1,75 ± 0,03 mm	PROCATEC
Diameter 2,85	2,85 ± 0,03 mm	PROCATEC
max. roundness deviation 1,75	0,05 mm	PROCATEC
max. roundness deviation 2,85	0,05 mm	PROCATEC