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Technical datasheet

Prusament PLA Recycled by Prusa Polymers



Identification

Trade Name	Prusament PLA Recycled
Chemical Name	Polylactic Acid
Usage	FDM/FFF 3D printing
Diameter	1.75 ± 0.05 mm
Manufacturer	Prusa Polymers a.s., Prague, Czech Republic

Recommended print settings

Nozzle Temperature [°C]	210 ± 10
Heatbed Temperature [°C]	40-60
Print Speed [mm/s]	up to 200
Cooling Fan Speed [%]	100
Brim	not necessary in general

Typical material properties

	Typical Value	Method
MFR [g/10 min](1)	9-11	ISO 1133
MVR [cm ³ /10 min](1)	8-10	ISO 1133
Density [g/cm ³]	1.24	ISO 1183
Moisture Absorption 24 hours [%](2)	0.3	Prusa Polymers
Moisture Absorption 7 days [%](2)	0.3	Prusa Polymers
Heat Deflection Temperature (0,45 MPa) [°C]	55	ISO 75
Heat Deflection Temperature (1,80 MPa) [°C]	53	ISO 75
Tensile Yield Strength Filament [MPa]	54 ± 1	ISO 527
Hardness - Shore D	80	Prusa Polymers
Interlayer Adhesion [MPa]	21 ± 2	Prusa Polymers

(1) 2,16 kg; 210 °C

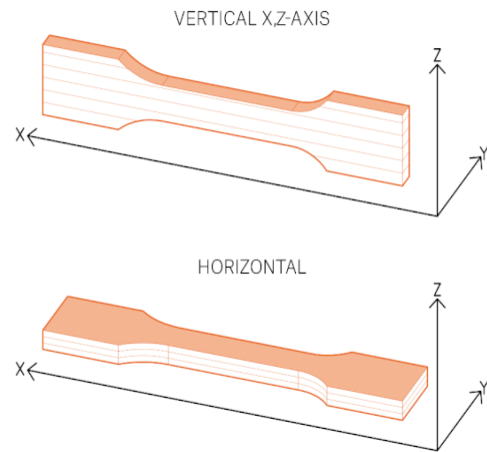
(2) 28 °C; humidity 37 %

Mechanical properties of 3D printed testing specimens(3)

Property\Print Direction	Horizontal	Vertical xz	Method
Tensile Yield Strength [MPa]	49.0 ± 4.0	55.0 ± 2.0	ISO 527-1
Tensile Modulus [GPa]	2.1 ± 0.1	2.3 ± 0.1	ISO 527-1
Elongation at Yield Point [%]	3.1 ± 0.1	2.9 ± 0.1	ISO 527-1
Flexural Strength [MPa]	82.0 ± 2.0	87.0 ± 2.0	ISO 178
Flexural Modulus [GPa]	3.1 ± 0.1	3.0 ± 0.1	ISO 178
Deflection at Flexural Str. [mm]	7.2 ± 0.1	7.6 ± 0.1	ISO 178
Impact Strength Charpy [kJ/m ²](4)	14.0 ± 2.0	13.0 ± 1.0	ISO 179-1
Impact S. Charpy Notch. [kJ/m ²]	not applicable	not applicable	ISO 179-1

(3) Original Prusa i3 MK3 3D printer was used to print testing specimens. PrusaSlicer-2.3.3 was used to create G-codes with following settings: Prusa PLA Recycled Filament; Print Settings 0,20 mm FAST (layers 0,2 mm); Solid Layers Top: 0; Bottom: 0; Infill 100% Rectilinear, Infill Print Speed 200 mm/s; Extruder Temperature: 215 °C all layers; Bed Temperature 60 °C all layers; other parameters set to default.

(4) Charpy Unnotched - Edgewise direction of blow according to ISO 179-1



Disclaimer:

The results presented in this data sheet are just for your information and comparison. Values are significantly dependent on print settings, operator experience and surrounding conditions. Everyone has to consider suitability and possible consequences of printed parts usage. Prusa Polymers can not carry any responsibility for injuries or any loss caused by using Prusa Polymers material. Before using Prusa Polymers material read properly all the details in the available safety data sheet (SDS).