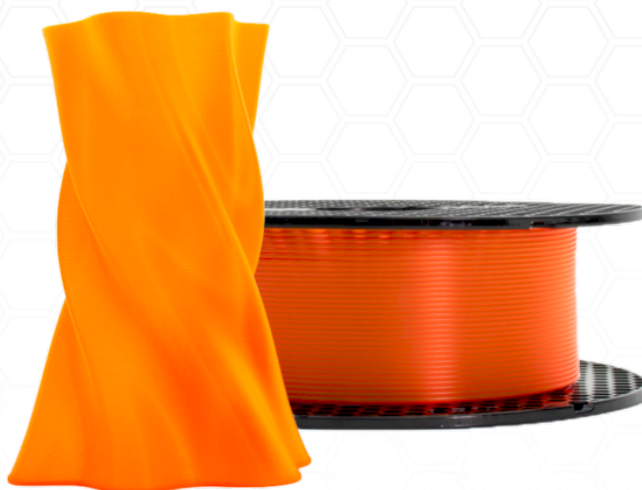


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## Technical datasheet

### Prusament PVB by Prusa Polymers



## Identification

Trade Name	Prusament PVB
Chemical Name	Polyvinyl Butyral
Usage	FDM/FFF 3D printing
Diameter	1.75 ± 0.03 mm
Manufacturer	Prusa Polymers a.s., Prague, Czech Republic

## Recommended print settings

Nozzle Temperature [°C]	215 ± 10
Heatbed Temperature [°C]	75 ± 5
Print Speed [mm/s]	up to 200
Cooling Fan Speed [%]	100
Bed Type	smooth PEI sheet; satin sheet
Additional Info	The brim is not necessary in general.

## Typical material properties

	Typical Value	Method
MFR [g/10 min](1)	6-7	ISO 1133
MVR [cm <sup>3</sup> /10 min](1)	5-6	ISO 1133
Density [g/cm <sup>3</sup> ]	1.10	Prusa Polymers
Moisture Absorption in 24 hours [%](2, 3)	0.18	Prusa Polymers
Moisture Absorption in 7 days [%](2, 3)	0.35	Prusa Polymers
Heat Deflection Temperature (0.45 MPa) [°C]	63	ISO 75
Heat Deflection Temperature (1.80 MPa) [°C]	58	ISO 75
Tensile Yield Strength for Filament [MPa]	57 ± 1	ISO 527
Hardness - Shore D	77	Prusa Polymers
Interlayer Adhesion [MPa]	9 ± 1	Prusa Polymers

(1) 2.16 kg; 230 °C

(2) 24 °C, humidity 22 %

(3) max drying temperature is 60 °C, the duration depends on how wet the material is (4-8 hours)

## Mechanical properties of 3D printed testing specimens(4)

Property\Print Direction	Horizontal	Vertical xz	Method
Tensile Yield Strength [MPa]	50 ± 5	49 ± 5	ISO 527-1
Tensile Modulus [GPa]	1.7 ± 0.1	1.7 ± 0.1	ISO 527-1
Elongation at Yield Point [%]	4.6 ± 0.7	4.4 ± 0.7	ISO 527-1
Flexural Strength [MPa]	72 ± 1	73 ± 3	ISO 178
Flexural Modulus [GPa]	2.2 ± 0.1	2.3 ± 0.1	ISO 178
Deflection at Flexural Strength [mm]	8.4 ± 0.4	8.5 ± 0.3	ISO 178
Impact Strength Charpy [kJ/m <sup>2</sup> ](5)	55 ± 7	59 ± 12	ISO 179-1
Impact Strength Charpy Notched [kJ/m <sup>2</sup> ](6)	7 ± 1	10 ± 1	ISO 179-1

(4) Original Prusa i3 MK3S 3D printer was used to make testing specimens. PrusaSlicer-2.2.0 was used to create G-code following settings:

Prusament PVB;

Print Settings 0.20 mm FAST (layers 0.20 mm);

Solid Layers Top: 0, Bottom: 0;

Perimeters: 2;

Infill 100% rectilinear;

Print Speed 200 mm/s;

NozzleTemperature 215 °C all layers;

Bed Temperature 75 °C all layers;

Extrusion Multiplier 1.05;

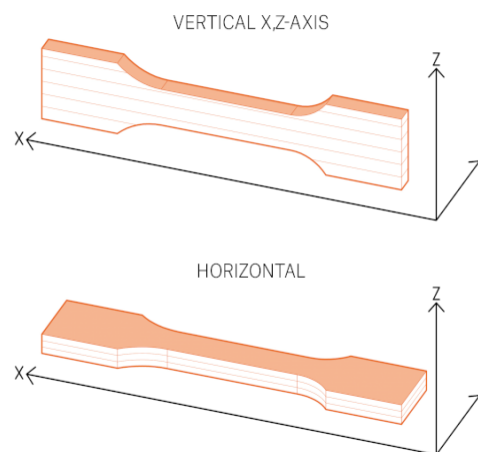
Print Cooling off;

Other parameters are set as default.

The filament was dried before printing at 60 °C (8 hours).

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

(6) Charpy Notched – 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 experiences, 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).