

# Technical Data Sheet

## Prusament PC Blend by Prusa Polymers

### Identification:

<b>Trade name</b>	Prusament PC Blend
<b>Chemical name</b>	Polycarbonate blend
<b>Usage</b>	FDM/FFF 3D printing
<b>Diameter</b>	1.75 ± 0.03 mm
<b>Manufacturer</b>	Prusa Polymers a.s., Prague, Czech Republic

### Recommended print settings:

<b>Nozzle Temperature [°C]</b>	275 ± 10
<b>Heatbed Temperature [°C]</b>	110 ± 10
<b>Print Speed [mm/s]</b>	up to 200
<b>Cooling Fan Speed [%]</b>	20 % (0 – 30 %*)
<b>Brim</b>	for parts bigger than 5 cm use 6 mm brim

\*Depends on geometry of printed object, to improve overhangs and bridges set 20% or higher cooling in PrusaSlicer, for larger prints without bridges cooling off can work better. Brim 3mm and more can improve adhesion of edges and corners to build-sheet in case of larger objects.

### Typical material properties

Physical properties	Typical Value	Method
<b>MFR [g/10min](1)</b>	22	ISO 1133
<b>MVR [cm<sup>3</sup>/10min](1)</b>	20	ISO 1133
<b>Density [g/cm<sup>3</sup>]</b>	1.22	Prusa Polymers
<b>Moisture Absorption 24 hours [%](2)</b>	0.5	Prusa Polymers
<b>Moisture Absorption 7 days [%](2)</b>	1.0	Prusa Polymers
<b>Heat Deflection Temperature (0,45 MPa) [°C]</b>	113	ISO 75
<b>Heat Deflection Temperature (1,80 MPa) [°C]</b>	93	ISO 75
<b>Tensile Yield Strength Filament [MPa]</b>	58 ± 1	ISO 527
<b>Hardness - Shore D</b>	79	Prusa Polymers
<b>Interlayer adhesion [MPa]</b>	21 ± 2	Prusa Polymers

(1) 265°C; 5kg

(2) 23 °C; humidity 40 %

## Mechanical properties of printed testing specimens(3)

Property \ Print Direction	Horizontal	Vertical xz	Method
Tensile Yield Strength [MPa]	63 ± 1	63 ± 1	ISO 527-1
Tensile Modulus [GPa]	1,9 ± 0,1	1,8 ± 0,1	ISO 527-1
Elongation at Yield Point [%]	5,8 ± 0,3	5,8 ± 0,2	ISO 527-1
Flexural strength [MPa]	88 ± 1	94 ± 2	ISO 178
Flexural modulus [GPa]	2,1 ± 0,1	2,2 ± 0,1	ISO 178
Deflection at flexural str. [mm]	11 ± 0,2	10,7 ± 0,2	ISO 178
Impact Strength Charpy(4) [kJ/m <sup>2</sup> ]	NB	NB	ISO 179-1
Impact S.Charpy notch.(5) [kJ/m <sup>2</sup> ]	12 ± 1	12 ± 1	ISO 179-1

(3) Original Prusa i3 MK3S 3D printer was used to make testing specimens. PrusaSlicer-2.1.1 was used to create G-codes with following settings: Prusament PC Blend; Print settings 0,20mm FAST (layers 0,2mm); solid layers Top:0 Bottom:0; Infill 100% Rectilinear, infill print speed 200mm/s; extruder temperature 275°C all layers; bed temperature 120°C all layers; extrusion multiplier 1.034; print cooling off; other parameters set default

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

(5) 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, operators experiences and surrounding conditions. Everyone have to consider suitability and possible consequences of printed parts usage. Prusa Polymers can not carry any responsibility for injures or any loss caused by using of Prusament PC Blend material. Before use PC Blend material read properly all the details in available safety data sheet (SDS).

