

Technical Data Sheet

PC Filament

PC 3D printing filament, which is produced with BPA-free PC modified material. PC has the characteristics of high toughness, high strength, and high heat resistance, and can be used on FFF 3D printers in non-heated chambers.

Main features:

High toughness/high strength/high temperature resistance

Main Specifications:

Physical Properties	Test Means		
Density	ISO 1183	g/cm ³	1.2~1.21
MFR(250°C/2.16Kg)	ISO 1133	g/10min	3~5
Moisture Absorption(23°C/24h)	ISO 62	%	<0.8
Mechanical Properties			
Tensile strength	ISO 527	Mpa	40~45
Elongation at break	ISO 527	%	7~9
Flexural Modulus	ISO 527	Mpa	1800~1950
Flexural Strength	ISO178	Mpa	83~87
Impact Strength	ISO180	KJ/m ²	4~5.5
Thermodynamic Properties			
HDT@ 0.455 MPa(66 psi)	ISO75	°C	123
Continuous Use Temperature	IEC 60216	°C	130

Test Sample Printing Conditions:

3D Printer	G3U (Flashforge)
Nozzle Diameter	0.4mm
Nozzle Temperature	250 °C
Printing Speed	50mm/s
Layer	1.2mm
Infill	100%
Standard Printed Sample	See blew attachment

Recommended Printing Parameters:

Parameters	
Nozzle Temperature	240~260℃ (250℃ recommended)
Bed Temperature	100~120℃ (110℃ recommended)
Bed Materials	Prusa textured powder coated print sheet
Nozzle Diameter	φ 0.4/0.6mm(φ 0.4mm recommended)
Model Cooling Fan	0~50%
Layer	0.12~0.3mm
Printing Speed	40~60mm/s(50mm/s recommended)
Idle Speed	60~120mm/s
Printing Environmental Temperature	40 ~70℃
Retraction Distance	0.3~2mm
Retraction Speed	30~50mm/s
Supporting Materials	Itself

Note:

To prevent moisture absorption and contamination, the packaging of filament should be kept airtight and undamaged until they are opened for use. For the same reason, some used filament should be resealed before storage.

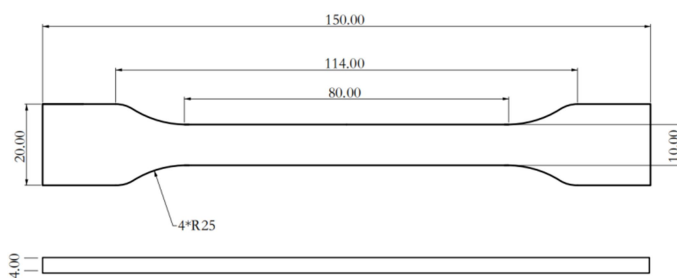
Filament should be dried before use. It is recommended to dry the filament in a hot air oven at 80°C for at least 12 hours to ensure the success rate and quality of the printed model.

After the model is printed, it is recommended to dry it in an oven at 100 °C for 1~3 hours to increase the strength of the model.

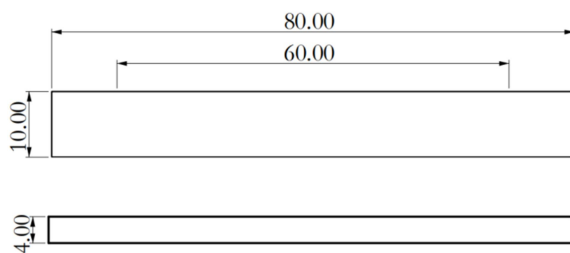
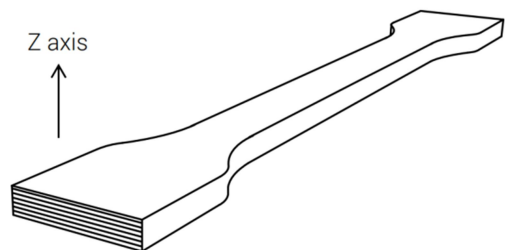
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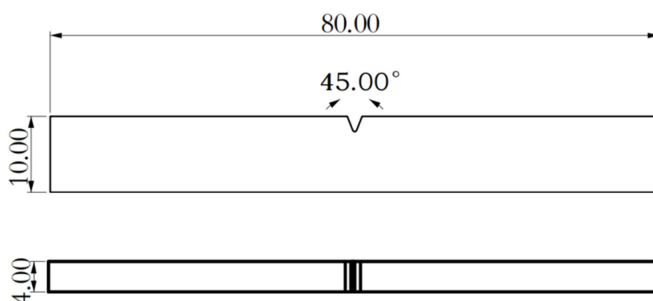
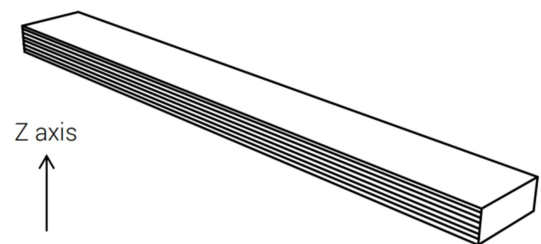
Attachment: Test sample dimensions and printing direction



Tensile testing specimen; ASTM D638 (ISO 527, GB/T 1040)



Flexural testing specimen; ASTM D790 (ISO 178, GB/T 9341)



Impact testing specimen; ASTM D256 (ISO 179, GB/T 1043)

