

Technical Data Sheet

PETG Filament

PETG is a FFF 3D printing filament, which is produced using a food-grade PETG material. PETG has good dimensional stability, temperature resistance and rigidity, no warping, no cracking and easy-to-print property, which is suitable for FFF 3D printer with direct-drive extruder.

Features:

Easy-to-print property/Dimensional stability/Temperature resistance.

Properties:

Physical Properties	Test Method	Units	Typical Value
Density	ISO 1183	g/cm ³	1.27~1.28
Melt Index MFR (220°C/2.16Kg)	ISO 1133	g/10min	4~6
Water Absorption (23°C/24h)	ISO 62	%	< 0.2
Mechanical Properties			
Tensile Strength (X-Y)	ISO 527	Mpa	40~45
Elongation at Break (X-Y)	ISO 527	%	6~8
Modulus of Elasticity (X-Y)	ISO 527	Mpa	1000~1100
Bending Strength (X-Y)	ISO 178	Mpa	50~55
Izod Impact Strength (X-Y)	ISO 180	KJ/m ²	4.5~5
Thermal Properties			
HDT@ 0.455 MPa (66 psi)	ISO 75	°C	74
Continuous Service Temperature	IEC 60216	°C	70

Testing Specimen Printing Conditions:

Test Equipment	Guider IIs (Flashforge)
Nozzle Diameter	0.4mm
Nozzle Temperature	240 °C
Printing Speed	50mm/s
Wall Thickness	1.2mm
Infill	100%
Standard Testing Specimen	Specific dimensions are shown in Attachment 1

Note: The above test parameter data are obtained from actual printing, and the printed model has not been annealed.

Recommended Printing Conditions:

Parameter	
Nozzle Temperature	220~240°C (230°C recommended)
Build Platform Temperature	Room temperature~80°C (70°C recommended)
Build Surface Material	Tempered glass, BuildTak, Carbon fiber board
Nozzle Diameter	φ0.4mm
Cooling Fan	0~50%
Layer Thickness	0.12~0.3mm
Printing Speed	40~60mm/s (50mm/s recommended)
Travel Speed	60~120mm/s
Ambient Temperature for Printing	Room temperature~50°C
Retraction Length	1~2mm
Retraction Speed	30~50mm/s
Recommended Support Material	Self-supporting

Cautions:

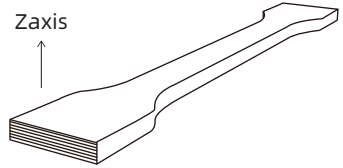
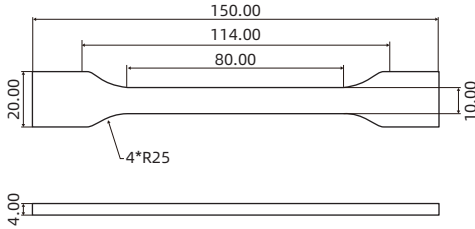
In order to prevent moisture absorption and contamination, supplied packaging should be kept closed and undamaged. For the same reason, partially used filaments should be re-sealed before storage.

As the PETG filament absorbs moisture easily, it should be dried before being used. Using a hot dry air oven at 70°C for at least 5 hours is recommended in order to ensure the success rate and quality of the printed model.

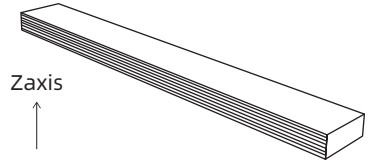
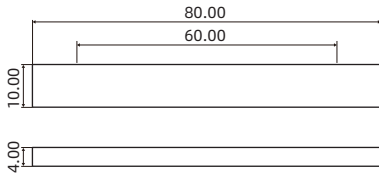
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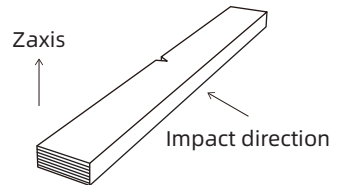
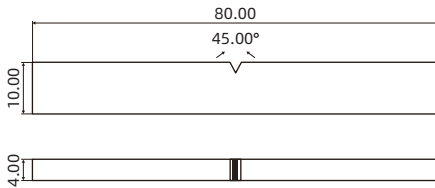
Attachment 1: Testing Specimen Size and Printing Direction



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)