Bambu Filament

Technical Data Sheet V3.0

PETG Basic

• Basic Info

The all-new Bambu Lab PETG Basic has been upgraded to deliver PLA-level strength while maintaining its signature toughness. This makes it ideal for structural and functional parts that need to handle more stress without losing flexibility.
With enhanced resistance to water, UV, and temperature, it's still the perfect choice for outdoor accessories, functional tools, and everyday-use models. The refined formula improves printability—reducing stringing and ensuring smoother surface finishes—so you can enjoy the full advantages of PETG with fewer compromises.

• Specifications

Subjects	Data
Diameter	1.75 mm
Net Filament Weight	1 kg
Spool Material	ABS (Temperature resistance 70 °C)
Spool Size	Diameter: 200 mm; Height: 67 mm

• Recommended Printing Settings

Subjects	Data
Drying Settings before Printing	Blast Drying Oven: 65 °C，8 h X1 Series & P Series & H2 Series Printer Heatbed: 80 °C, 12 h AMS 2 Pro & AMS HT : 65 ℃，8h
Printers Compatibility	All Bambu 3D printers
AMS Compatibility	AMS, AMS 2 PRO, AMS HT, AMS Lite
Printing and Storage Humidity	< 20% RH (Sealed, with desiccant)
Nozzle Size	0.2, 0.4, 0.6, 0.8 mm
Nozzle Temperature	230 - 260 °C
Build Plate Type	Cool Plate Supertack / Textured PEI Plate / Smooth PEI Plate
Bed Temperature	65 - 75 °C
Cooling Fan	0 - 60%
Printing Speed	＜ 200 mm/s

Retraction Length	0.4 – 0.8 mm
Retraction Speed	30 - 60 mm/s
Chamber Temperature	35 – 50 °C
Max Overhang Angle	~ 70 °
Max Bridging Length	~ 30 mm
Support Material	Support for PLA/PETG
Glue	Recommended(Glue Stick/Liquid Glue)

• Properties

Bambu Lab has tested the differing aspects in the performance of PETG Basic material, including physical, mechanical, and chemical properties. Typical values are listed as followed:

Physical Properties		
Subjects	**Testing Methods**	**Data**
Density	ISO 1183	1.25 g/cm³
Melt Index	245 °C, 2.16 kg	22.9 ± 2.4 g/10 min
Melting Temperature	DSC, 10 °C/min	N / A
Glass Transition Temperature	DSC, 10 °C/min	69 °C
Crystallization Temperature	DSC, 10 °C/min	N / A
Vicat Softening Temperature	ISO 306, GB/T 1633	69 °C
Heat Deflection Temperature	ISO 75 1.8 MPa	68 °C
Heat Deflection Temperature	ISO 75 0.45 MPa	71 °C
Saturated Water Absorption Rate	25 °C, 55% RH	0.45%

Mechanical Properties		
Subjects	**Testing Methods**	**Data**
Young's Modulus (X-Y)	ISO 527, GB/T 1040	2780 ± 65 MPa
Young's Modulus (Z)	ISO 527, GB/T 1040	2550 ± 100 MPa
Tensile Strength (X-Y)	ISO 527, GB/T 1040	51 ± 1 MPa
Tensile Strength (Z)	ISO 527, GB/T 1040	35 ± 6 MPa
Breaking Elongation Rate (X-Y)	ISO 527, GB/T 1040	9.5 ± 0.7 %
Breaking Elongation Rate (Z)	ISO 527, GB/T 1040	5.2 ± 1.4 %
Bending Modulus (X-Y)	ISO 178, GB/T 9341	1950 ± 50 MPa
Bending Modulus (Z)	ISO 178, GB/T 9341	1740 ± 40 MPa
Bending Strength (X-Y)	ISO 178, GB/T 9341	75 ± 3 MPa
Bending Strength (Z)	ISO 178, GB/T 9341	56 ± 4 MPa
Impact Strength (X-Y)	ISO 179, GB/T 1043	34.2 ± 4.1 kJ/m²
Impact Strength (Z)	ISO 179, GB/T 1043	10.5 ± 1.8 kJ/m²

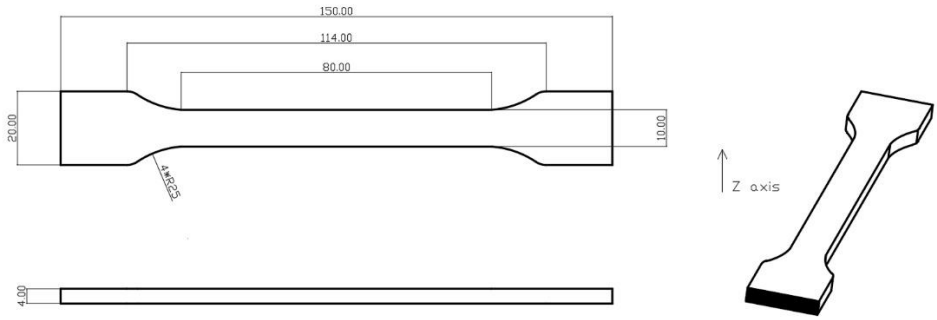
Other Physical and Chemical Properties	
Subjects	**Data**
Odor	Odorless
Composition	PETG
Skin Hazards	No hazard
Chemical Stability	Stable under normal storage and handling conditions
Solubility	Insoluble in water
Resistance to Acid	Not resistant
Resistance to Alkali	Not resistant
Resistance to Organic Solvent	Not resistant to some organic solvents
Resistance to Oil and Grease	Resistant to most kinds of oil and grease
Flammability	Flammable
Combustion Products	Water, carbon oxides
Odor of Combustion Products	Odorless

• Specimen Test

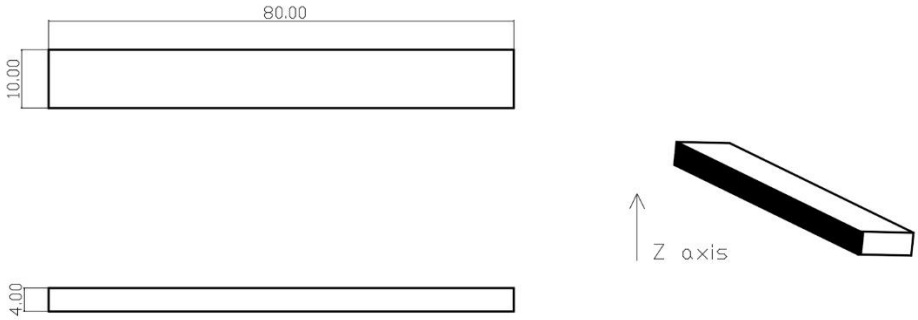
Specimen Printing Conditions	
Subjects	**Data**
Nozzle Temperature	255 °C
Bed Temperature	70 °C
Printing Speed	150 mm/s
Infill Density	100%

All the specimens were printed at the following settings: X1-Carbon， Nozzle Temperature = 255 °C, Printing Speed = 150 mm/s, Bed Temperature = 70 °C, Infill Density = 100%. It's not recommended to anneal prints of PETG Basic, because only very limited promotion of properties can obtain while prints with not very simple shape and structure may deform obviously. If you do want to anneal them, the suggested temperature is 60 to 70 °C, and the time is 6 to 12 hours. When drying the filament and annealing the prints, it's required to use an oven that has big enough inside volume and can provides even temperature distribution, such as a blast drying oven (forced-air drying oven), and the filament and prints need to be away from the heater, and a micro-wave oven or kitchen oven is not compatible, otherwise the filament and prints can get damaged.

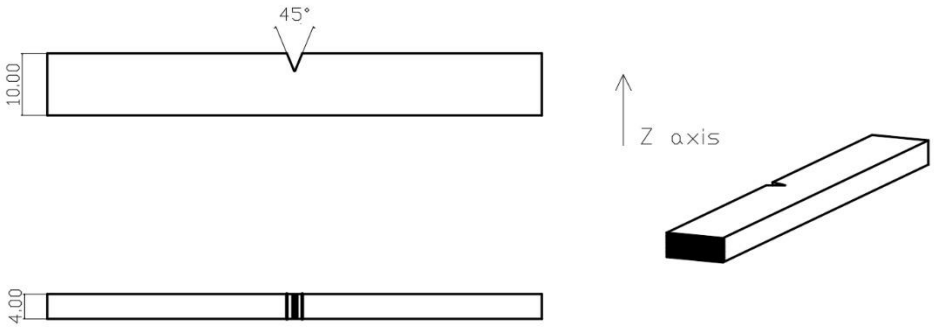
1. Tensile Testing



2. Bending Testing



3. Impact Testing



• Disclaimer

The performance values are tested by standard samples at Bambu Lab, and the values are for design reference and comparison only. Actual 3D printing model performance is related to many other factors, including printers, printing conditions, printing models, printing parameters, etc.

In the process of using Bambu Lab 3D printing filaments, users are responsible for the legality, safety, and performance indicators of printing. Bambu Lab is not responsible for the use of materials and scenarios and is not responsible for any damage that occurs in the process of using our filaments.

Bambu Lab
Filament Hex Code Table

PETG Basic

Red
Hex:#D6001C

Orange
Hex:#FF671F

Yellow
Hex:#FCE300

Reflex Blue
Hex:#001489

Navy Blue
Hex:#0086D6

Misty Blue
Hex:#688197

Green
Hex:#009639

Pine Green
Hex:#034638

Dark Brown
Hex:#4F2C1D

Dark Beige
Hex:#DBC8B6

Black
Hex:#000000

Gray
Hex:#7F7E83

White
Hex:#FFFFFF