



Bambu Filament

Technical Data Sheet V1.0

PVA

• Basic Info

Bambu PVA is a water-dissolvable support material. It provides reliable support for complex designs and overhangs, which can be easily dissolved in water after printing. Compatible with various filaments, it simplifies post-processing and reduces the risk of damaging the printed object during support removal.

• Specifications

Subjects	Data
Diameter	1.75 mm
Net Filament Weight	0.5 kg
Spool Material	PC+ABS (Temperature resistance 90 °C)
Spool Size	Diameter: 200 mm; Height: 67 mm

• Recommended Printing Settings

Subjects	Data
Drying Settings before Printing	Blast Drying Oven: 80 °C, 8 - 12 h X1 Series Printer Heatbed: 90 - 100 °C, 12 h
Printing and Storage Humidity	< 20% RH (Sealed, with desiccant)
Nozzle Size	0.2, 0.4, 0.6, 0.8 mm
Nozzle Temperature	220 - 250 °C
Bed Type	Cool Plate, High Temperature Plate or Textured PEI Plate
Bed Surface Preparation	Glue
Bed Temperature	35 - 45°C
Cooling Fan	Turn on
Printing Speed	< 200 mm/s
Retraction Length	0.6 - 1.0 mm
Retraction Speed	20 - 40 mm/s
Chamber Temperature	25 - 45 °C
Max Overhang Angle	55 °

Max Bridging Length	~ 30 mm
Support Material	/

• Properties

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

Physical Properties		
Subjects	Testing Methods	Data
Density	ISO 1183	1.27 g/cm ³
Melt Index	210 °C, 2.16 kg	7.2 ± 1.1 g/10 min
Melting Temperature	DSC, 10 °C/min	202 °C
Glass Transition Temperature	DSC, 10 °C/min	N / A
Crystallization Temperature	DSC, 10 °C/min	N / A
Vicar Softening Temperature	ISO 306, GB/T 1633	N / A
Heat Deflection Temperature	ISO 75 1.8 MPa	N / A
Heat Deflection Temperature	ISO 75 0.45 MPa	N / A
Saturated Water Absorption Rate	25 °C, 55% RH	6.25%

Mechanical Properties		
Subjects	Testing Methods	Data
Young's Modulus (X-Y)	ISO 527, GB/T 1040	N / A
Young's Modulus (Z)	ISO 527, GB/T 1040	N / A
Tensile Strength (X-Y)	ISO 527, GB/T 1040	N / A
Tensile Strength (Z)	ISO 527, GB/T 1040	N / A
Breaking Elongation Rate (X-Y)	ISO 527, GB/T 1040	N / A
Breaking Elongation Rate (Z)	ISO 527, GB/T 1040	N / A
Bending Modulus (X-Y)	ISO 178, GB/T 9341	N / A
Bending Modulus (Z)	ISO 178, GB/T 9341	N / A
Bending Strength (X-Y)	ISO 178, GB/T 9341	N / A
Bending Strength (Z)	ISO 178, GB/T 9341	N / A
Impact Strength (X-Y)	ISO 179, GB/T 1043	N / A
Impact Strength (Z)	ISO 179, GB/T 1043	N / A

Other Physical and Chemical Properties	
Subjects	Data
Odor	Odorless
Composition	Polyvinyl alcohol
Skin Hazards	Not available
Chemical Stability	Stable under normal storage and handling conditions
Solubility	Soluble 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, etc
Odor of Combustion Products	Light pungent odor

- **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.