

Bambu Filament Guide

This filament guide offers a comprehensive comparison of properties, application, and printing requirements for Bambu filaments, aiming to help users select the best-suited material for needs.

For detailed technical information, download filament Technical data sheets (TDS) on product pages.

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		PLA	PETG	ABS	ASA	PC	TPU 95A	PLA-CF	PETG-CF	PET-CF	PAHT-CF	PA6-CF
Filament Properties	Toughness Impact Strength - XY	<div><div></div><div></div><div></div><div></div></div> 26.6 kJ/m²	<div><div></div><div></div><div></div><div></div></div> 52.7 kJ/m²	<div><div></div><div></div><div></div><div></div></div> 39.3 kJ/m²	<div><div></div><div></div><div></div><div></div></div> 41.0 kJ/m²	<div><div></div><div></div><div></div><div></div></div> 29.5 kJ/m²	<div><div></div><div></div><div></div><div></div><div></div></div> 125.2 kJ/m²	<div><div></div><div></div><div></div><div></div></div> 23.2 kJ/m²	<div><div></div><div></div><div></div><div></div></div> 41.2 kJ/m²	<div><div></div><div></div><div></div><div></div></div> 36.0 kJ/m²	<div><div></div><div></div><div></div><div></div></div> 57.5 kJ/m²	<div><div></div><div></div><div></div><div></div></div> 29.1 kJ/m²
	Strength Bending Strength - XY	<div><div></div><div></div><div></div><div></div></div> 76 MPa	<div><div></div><div></div><div></div><div></div></div> 81 MPa	<div><div></div><div></div><div></div><div></div></div> 68 MPa	<div><div></div><div></div><div></div><div></div></div> 74 MPa	<div><div></div><div></div><div></div><div></div></div> 112 MPa	N / A	<div><div></div><div></div><div></div><div></div></div> 96 MPa	<div><div></div><div></div><div></div><div></div></div> 83 MPa	<div><div></div><div></div><div></div><div></div></div> 149 MPa	<div><div></div><div></div><div></div><div></div></div> 140 MPa	<div><div></div><div></div><div></div><div></div></div> 142 MPa
	Stiffness Bending Modulus - XY	<div><div></div><div></div><div></div><div></div></div> 2750 MPa	<div><div></div><div></div><div></div><div></div></div> 1790 MPa	<div><div></div><div></div><div></div><div></div></div> 1880 MPa	<div><div></div><div></div><div></div><div></div></div> 1920 MPa	<div><div></div><div></div><div></div><div></div></div> 2080 MPa	N / A	<div><div></div><div></div><div></div><div></div></div> 3700 MPa	<div><div></div><div></div><div></div><div></div></div> 2890 MPa	<div><div></div><div></div><div></div><div></div></div> 5080 MPa	<div><div></div><div></div><div></div><div></div></div> 4120 MPa	<div><div></div><div></div><div></div><div></div></div> 4480 MPa
	Layer Adhesion Impact Strength - Z	<div><div></div><div></div><div></div><div></div></div> 13.8 kJ/m²	<div><div></div><div></div><div></div><div></div></div> 13 kJ/m²	<div><div></div><div></div><div></div><div></div></div> 7.4 kJ/m²	<div><div></div><div></div><div></div><div></div></div> 4.9 kJ/m²	<div><div></div><div></div><div></div><div></div></div> 9.0 kJ/m²	<div><div></div><div></div><div></div><div></div><div></div></div> 27.2 kJ/m²	<div><div></div><div></div><div></div><div></div></div> 7.8 kJ/m²	<div><div></div><div></div><div></div><div></div></div> 10.7 kJ/m²	<div><div></div><div></div><div></div><div></div></div> 4.5 kJ/m²	<div><div></div><div></div><div></div><div></div></div> 13.3 kJ/m²	<div><div></div><div></div><div></div><div></div></div> 5.7 kJ/m²
	Heat Resistance HDT, 0.45 MPa	57 °C	69 °C	87 °C	100 °C	117 °C	N / A	55 °C	55 °C	205 °C	194 °C	184 °C
	Saturated Water Absorption Rate 25 °C, 55% RH	0.43%	0.42%	0.65%	0.45%	0.25%	1.16%	0.42%	0.3%	0.37%	0.88%	1.88%
Pre-printing Preparation	Dry Out Before Use	Optional	Optional	Optional	Optional	Required	Required	Optional	Optional	Required	Required	Required
	Drying Condition	55 °C, 8 hours	65 °C, 8 hours	80 °C, 8 hours	80 °C, 8 hours	80 °C, 8 hours	70 °C, 8 hours	60 °C, 8 hours	65 °C, 8 hours	80 °C, 8 ~12 hours	80 °C, 8 ~12 hours	80 °C, 8 ~12 hours
	AMS Compatibility	✓	✓	✓	✓	✓	✗	✓	✓	✗	✓	✓
	Nozzle Size/Material	All Size/Material	All Size/Material	All Size/Material	All Size/Material	All Size/Material	0.4 / 0.6 / 0.8 mm Hardened Steel / Stainless Steel	0.4 / 0.6 / 0.8 mm Hardened Steel	0.4 / 0.6 / 0.8 mm Hardened Steel	0.4 / 0.6 / 0.8 mm Hardened Steel	0.6 (recommended) / 0.4 / 0.8 mm Hardened Steel	0.6 (recommended) / 0.4 / 0.8 mm Hardened Steel
	Build Plate	Cool Plate High Temperature Plate Textured PEI Plate	Engineering Plate High Temperature Plate Textured PEI Plate	Engineering Plate High Temperature Plate Textured PEI Plate	Engineering Plate High Temperature Plate Textured PEI Plate	Engineering Plate High Temperature Plate Textured PEI Plate	Cool Plate Engineering Plate High Temperature Plate Textured PEI Plate	Cool Plate Engineering Plate High Temperature Plate Textured PEI Plate	Engineering Plate High Temperature Plate Textured PEI Plate	Engineering Plate High Temperature Plate Textured PEI Plate	Engineering Plate High Temperature Plate Textured PEI Plate	Engineering Plate High Temperature Plate Textured PEI Plate
	Adhesion Methods	Bambu Liquid Glue Glue Stick	Bambu Liquid Glue Glue Stick	Bambu Liquid Glue Glue Stick	Bambu Liquid Glue Glue Stick	Glue Stick	Bambu Liquid Glue Glue Stick	Bambu Liquid Glue Glue Stick	Bambu Liquid Glue Glue Stick	Glue Stick	Glue Stick	Glue Stick
Printer Settings	Print with Enclosure	✗	✗	✓	✓	✓	✗	✗	✗	✗	✓	✓
	Seal with Desiccant	✗	✗	✗	✗	✓	✓	✓	✓	✓	✓	✓
	Print Speed	< 300 mm/s	< 200 mm/s	< 300 mm/s	< 300 mm/s	< 300 mm/s	< 80 mm/s	< 250 mm/s	< 200 mm/s	< 100 mm/s	< 100 mm/s	< 100 mm/s
	Nozzle Temperature	190 - 230 °C	240 - 270 °C	240 - 280 °C	240 - 280 °C	260 - 290 °C	220 - 240 °C	210 - 240 °C	240 - 270 °C	260 - 300 °C	260 - 300 °C	260 - 300 °C
	Bed Temperature	35 - 55 °C	65 - 75 °C	90 - 100 °C	90 - 100 °C	100 - 110 °C	30 - 45 °C	35 - 55 °C	65 - 75 °C	80 - 110 °C	100 - 110 °C	100 - 110 °C
	Part Cooling Fan	50 - 100%	0 - 60%	0 - 80%	0 - 80%	0 - 60%	50 - 100%	50 - 100%	0 - 40%	0 - 40%	0 - 40%	0 - 40%
Post-printing Processes	Annealing	55 ~ 60 °C, 6 ~ 12 hours	65 ~ 70 °C, 6 ~ 12 hours	80 ~ 90 °C, 6 ~ 12 hours	80 ~ 90 °C, 6 ~ 12 hours	85 ~ 100 °C, 6 ~ 12 hours	65 ~ 70 °C, 6 ~ 12 hours	55 ~ 60 °C, 6 ~ 12 hours	65 ~ 70 °C, 6 ~ 12 hours	90 ~ 130 °C 6 ~ 12 hours	90 ~ 130 °C 6 ~ 12 hours	90 ~ 130 °C, 6 ~ 12 hours