

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

		PLA	PETG	ABS	ASA	PC	TPU 95A	PLA-CF	PETG-CF	PET-CF	PAHT-CF	PA6-CF
Filament Properties	Toughness Impact Strength - XY	26.6 kJ/m ²	52.7 kJ/m ²	39.3 kJ/m ²	41.0 kJ/m ²	34.8 kJ/m ²	125.2 kJ/m ²	23.2 kJ/m ²	41.2 kJ/m ²	36.0 kJ/m ²	57.5 kJ/m ²	40.3 kJ/m ²
	Strength Bending Strength - XY	76 MPa	65 MPa	62 MPa	65 MPa	108 MPa	N / A	89 MPa	70 MPa	131 MPa	125 MPa	151 MPa
	Stiffness Bending Modulus - XY	2750 MPa	1670 MPa	1880 MPa	1920 MPa	2310 MPa	N / A	3950 MPa	2910 MPa	5320 MPa	4230 MPa	5460 MPa
	Layer Adhesion Impact Strength - Z	13.8 kJ/m ²	13.6 kJ/m ²	7.4 kJ/m ²	4.9 kJ/m ²	9.0 kJ/m ²	88.7 kJ/m ²	7.8 kJ/m ²	10.7 kJ/m ²	4.5 kJ/m ²	13.3 kJ/m ²	15.5 kJ/m ²
	Heat Resistance HDT, 0.45 MPa	57 °C	69 °C	87 °C	100 °C	117 °C	N / A	55 °C	74 °C	205 °C	194 °C	184 °C
	Saturated Water Absorption Rate 25 °C, 55% RH	0.43%	0.32%	0.65%	0.45%	0.25%	1.16%	0.42%	0.30%	0.37%	0.88%	2.35%
Pre-printing Preparation	Dry Out Before Use	Optional	Optional	Optional	Optional	Required	Required	Optional	Optional	Required	Required	Required
	Drying Condition	Blast Drying Oven: 55 °C, 8h X1 Series Heatbed: 65 - 75 °C, 12h	Blast Drying Oven: 65 °C, 8h X1 Series Heatbed: 75 - 85 °C, 12h	Blast Drying Oven: 80 °C, 8h X1 Series Heatbed: 90 - 100 °C, 12h	Blast Drying Oven: 80 °C, 8h X1 Series Heatbed: 90 - 100 °C, 12h	Blast Drying Oven: 80 °C, 8h X1 Series Heatbed: 90 - 100 °C, 12h	Blast Drying Oven: 70 °C, 8h X1 Series Heatbed: 80 - 90 °C, 12h	Blast Drying Oven: 55 °C, 8h X1 Series Heatbed: 65 - 75 °C, 12h	Blast Drying Oven: 65 °C, 8h X1 Series Heatbed: 75 - 85 °C, 12h	Blast Drying Oven: 80 °C, 8 - 12h X1 Series Heatbed: 90 - 100 °C, 12h	Blast Drying Oven: 80 °C, 8 - 12h X1 Series Heatbed: 90 - 100 °C, 12h	Blast Drying Oven: 80 °C, 8 - 12h X1 Series Heatbed: 90 - 100 °C, 12h
	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	0.6 (recommended) / 0.4 / 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 & Bed Temperature	Cool Plate (35-55 °C) High Temperature Plate (55-65 °C) Textured PEI Plate (55-65 °C)	Engineering Plate (60-80 °C) High Temperature Plate (60-80 °C) Textured PEI Plate (60-80 °C)	Engineering Plate (90-100 °C) High Temperature Plate (90-100 °C) Textured PEI Plate (90-100 °C)	Engineering Plate (90-100 °C) High Temperature Plate (90-100 °C) Textured PEI Plate (90-100 °C)	Engineering Plate (100-120 °C) High Temperature Plate (100-120 °C) Textured PEI Plate (100-120 °C)	Cool Plate (30-35 °C) Engineering Plate (30-45 °C) High Temperature Plate (30-45 °C) Textured PEI Plate (30-45 °C)	Engineering Plate (45-65 °C) High Temperature Plate (45-65 °C) Textured PEI Plate (55-65 °C)	Engineering Plate (60-80 °C) High Temperature Plate (60-80 °C) Textured PEI Plate (60-80 °C)	Engineering Plate (70-100 °C) High Temperature Plate (70-100 °C) Textured PEI Plate (70-100 °C)	Engineering Plate (100-120 °C) High Temperature Plate (100-120 °C) Textured PEI Plate (100-120 °C)	Engineering Plate (100-120 °C) High Temperature Plate (100-120 °C) Textured PEI Plate (100-120 °C)
	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
	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	50 - 60 °C, 6 - 12 hours	N / A	80 - 90 °C, 6 - 12 hours	80 - 90 °C, 6 - 12 hours	85 - 100 °C, 6 - 12 hours	N / A	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