FDM · FILAMENT · PLA FAMILY

PLA Matte

Hides layer lines

Always in stock

TENSILE STRENGTH	STIFFNESS	SOFTENS FROM	DENSITY
30 MPa	2360 MPa	58 °C	1.31 g/cm³
printed flat	flexural modulus	HDT at 0.45 MPa	

WHAT IT IS LIKE

A flat, paint-like finish that makes layer lines almost disappear, so parts look finished straight off the printer. It is a little less stiff and strong than PLA Basic and clearly weaker across the layers, with the same limits on heat and outdoor use.

GOOD FOR

- Display and concept models
- Cosplay and props
- Anything that will be photographed
- Parts to be primed and painted

THINK TWICE FOR

- × Load-bearing parts: PETG is tougher
- × Thin upright features loaded sideways
- × Hot places or permanent outdoor use
- × Food contact or medical use: ask us first

HOW WE PRINT IT

Process	FDM on Bambu Lab X1C, enclosed
Layer height	0.2 mm standard; other heights on the quote form
Largest single part	256 × 256 × 256 mm
Infill	You choose, 10–100%
Colours	Matte range; tell us the colour you need
Finish	Matte, as printed
Lead time	In stock: no wait for material

MECHANICAL PROPERTIES

PROPERTY	TEST STANDARD	PRINTED FLAT (X-Y)	PRINTED UPRIGHT (Z)
Tensile strength	ISO 527	30 ± 5 MPa	22 ± 4 MPa
Young's modulus	ISO 527	1960 ± 180 MPa	1670 ± 140 MPa
Elongation at break	ISO 527	14.8 ± 4.2 %	–
Flexural strength	ISO 178	53 ± 6 MPa	29 ± 5 MPa
Flexural modulus	ISO 178	2360 ± 250 MPa	1770 ± 210 MPa
Impact strength, Charpy unnotched	ISO 179	19.2 ± 3.7 kJ/m²	–

THERMAL AND PHYSICAL PROPERTIES

PROPERTY	TEST STANDARD	VALUE
Density	ISO 1183	1.31 g/cm³
Glass transition temperature	DSC, 10 °C/min	61 °C
Vicat softening temperature	ISO 306	63 °C
Heat deflection temperature, 0.45 MPa	ISO 75	58 °C
Heat deflection temperature, 1.8 MPa	ISO 75	52 °C
Melting temperature	DSC, 10 °C/min	163 °C

READING THESE FIGURES

Figures are typical values published by the filament manufacturer (Bambu Lab, PLA Matte Technical Data Sheet V3.0), measured on test bars printed solid (100% infill). "Flat" is loaded along the layers (X-Y); "upright" is loaded across the layers (Z), which is always the weaker direction. A real part's strength depends on its shape, wall thickness, infill and the way it is orientated on the printer, so use these figures to compare materials, not as design allowables. If a part carries a critical load or runs warm, tell us and we will advise on material and orientation before printing.