

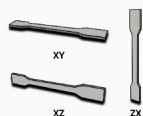
DESCRIPTION

PLA+ filament is an enhanced PLA material designed for stronger, more durable prints while maintaining the ease and reliability of classic PLA. With improved layer adhesion, reduced brittleness, and a smooth, slightly matte finish, PLA+ is ideal for functional parts, prototypes, mechanical components, miniatures, and decorative objects.

KEY BENEFITS

- Stronger than PLA
- Improved layer adhesion
- Reduced brittleness
- Slightly matte finish
- Easy to print

MECHANICAL PROPERTIES



BUILD ORIENTATION KEY

Each tensile bar was printed flat (XY), on its side (XZ) or upright (ZX). The columns below report each build orientation's measured values —ZX (across layers) is the weakest axis.

PROPERTY	STANDARD	XY	XZ	ZX	UNIT
Tensile strength	ISO 527-2	35.6	37.1	11.4	MPa
Yield strength	ISO 527-2	24.6	27.4	/	MPa
Tensile modulus	ISO 527-2	3100	3200	2300	MPa
Strain at yield	ISO 527-2	3.2	2.9	0.5	%
Flexural strength	ISO 178	76.0	85.1	21.3	MPa
Flexural modulus	ISO 178	6700	7300	5100	MPa
TEST SPECIMENS Printer Bambu Lab H2S Nozzle 0.4 mm Line width 0.42 mm Layer height 0.15 mm First layer 0.28 mm Walls 2 Top / bottom layers 5 / 3 Infill 100% rectilinear Nozzle temp. 210 °C Bed temp. 45 °C Print speed 50 mm/s					

PRINTING RECOMMENDATIONS

Printing temp.	210 °C	Bed temp.	45 °C
Chamber temp.	35 °C	Recommended speed	≤300 mm/s
Max printing speed	≤270 mm/s	Retraction	0.8 mm

HANDLING, STORAGE & THERMAL

Max flow rate	20 mm³/s	Heat deflection temp.	53 °C
Vicat softening temp.	62 °C	Glass transition temp.	60 °C
Drying temp.	45 °C	Drying time	≥8 h
Enclosed printer	Not recommended	Multi-material compatibility	Compatible

TIPS & TRICKS

- Print at 210 °C for best results**
Start at 210 °C before tuning for machine-specific flow.
- Use steady cooling after first layers**
Keep cooling consistent to preserve clean overhangs and bridging.
- Dry thoroughly before printing**
Dry at 45 °C for at least 8 h if the spool has been open.
- Check bed adhesion before increasing speed**
Use first layers around 60 mm/s before faster moves.
- Avoid heated chambers**
Avoid extra chamber heat if heat creep appears.
- Recommended print speed**
Use ≤ 300 mm/s for normal prints, but stay within the lower ≤ 270 mm/s max printing speed, which is derived from the 20 mm³/s flow limit.