

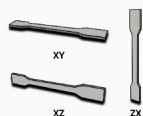
DESCRIPTION

LumberLay is a unique material with the look and feel of real wood, combining 40% recycled wood with 60% PLA. Prints take on the appearance of natural wood with very similar physical properties. Because it is abrasive, we recommend at least a 0.6 mm wear-resistant nozzle.

KEY BENEFITS

- 40% recycled wood
- Natural wood look
- Real wood feel
- Sandable
- Sustainable
- PLA-based

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	25.8	30.4	13.2	MPa
Yield strength	ISO 527-2	24.5	27.7	13.5	MPa
Tensile modulus	ISO 527-2	2200	2400	1800	MPa
Strain at yield	ISO 527-2	4.1	5.5	0.7	%
Flexural strength	ISO 178	50.3	54.7	2.7	MPa
Flexural modulus	ISO 178	2400	2900	1600	MPa
Impact strength	ISO 179	19.7	/	/	kJ/m ²

TEST SPECIMENS Specimens 3D-printed Infill 100% Shells 2 Layer height 0.2 mm

PRINTING RECOMMENDATIONS

Printing temp.	200 °C
Bed temp.	55 °C
Chamber temp.	35 °C
Recommended speed	≤200 mm/s
Max printing speed	≤200 mm/s
Retraction	0.8 mm
Cooling	100 %

PHYSICAL & THERMAL

Specific gravity	ISO 1133	0.97 g/cc
Melt flow rate	ISO 1133	5.2 cm ³ /10 min
Melting temp.	ISO 294	>210 °C
Heat deflection temp.	ISO 75	87 * °C

* measured after annealing

HANDLING, STORAGE & THERMAL

Max flow rate	15 mm ³ /s	Max-flow test printer	Bambu Lab H2D
Vicat softening temp.	92 °C	Glass transition temp.	60 °C
Drying temp.	45 °C	Drying time	4 h
Enclosed printer	Not recommended	Multi-material compatibility	Not recommended

TIPS & TRICKS

- **Use a larger nozzle**
Use 0.4 mm minimum; 0.6 mm is safer for wood-filled particles.
- **0.2 mm nozzles are not supported**
Wood fill can clog small nozzles.
- **Dry thoroughly before printing**
Dry at 45 °C for 4 h and store sealed.
- **Avoid heated chambers**
Avoid extra chamber heat if heat creep appears.
- **Purge after wood-filled prints**
Purge with standard PLA to reduce residue and dark specks.
- **Recommended print speed**
Use ≤ 200 mm/s for normal prints; Max Printing Speed is the tested ceiling.

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