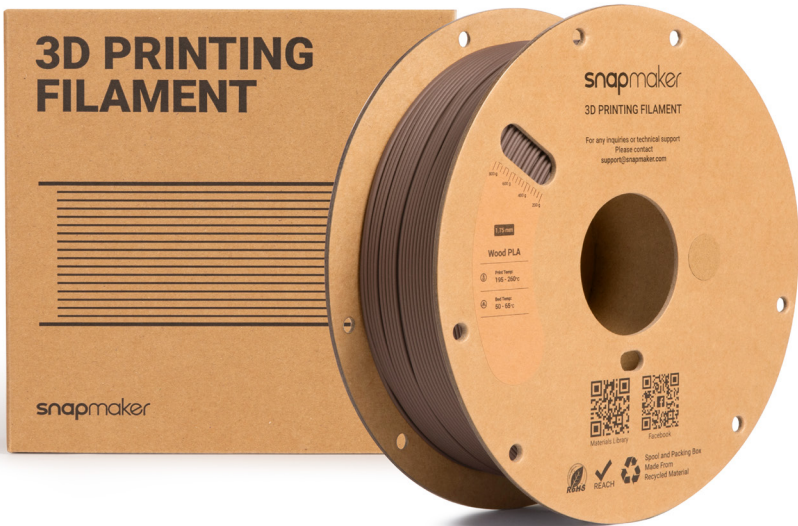


snapmaker | **Wood PLA**

Technical Data Sheet



www.snapmaker.com

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1 Filament Introduction

Snapmaker Wood PLA delivers a wood-like appearance with wood fibers. Its refined matte finish creates a surface with a wood feel, while wood powder enables easy sanding, painting, and staining. Available in classic wood tones, it brings the warmth and character of traditional woodwork to your creations.

2 Specifications

Subjects	Data
Diameter	1.75 ± 0.02 mm
Net Filament Weight	1 kg
Length	320 m
Spool Material	Cardboard Spool
Spool Size	Diameter: 200 mm; Height: 67 mm

3 Recommended Printing Settings

Subjects	Data
Drying Settings Before Printing	55°C, 8 h
Printing and Storage Humidity	< 20% RH
Nozzle Size	0.4, 0.6, 0.8 mm
Nozzle Temperature	195–260°C
Bed Type	Textured PEI Plate, Smooth PEI Plate, Graphic Effect Steel Plate (Carbon-Fiber Textured)
Bed Surface Preparation	Glue
Bed Temperature	50–65°C
Cooling Fan	ON
Printing Speed	50–250 mm/s
Retraction Length	0.4–0.8 mm
Retraction Speed	20–30 mm/s

Subjects	Data
Chamber Temperature	25–45°C
Max Overhang Angle	60°
Max Bridging Length	≤ 30 mm
Support Material	PVA

Printing Tips

1. Drying & Storage

- **Drying:** Due to the added wood powder, Wood PLA is sensitive to moisture. For best results, we highly recommend drying the filament before printing. Recommended settings: 55°C for 8 hours.

- **Storage:** Wood PLA is prone to photodegradation and oxidation under UV light, which can cause yellowing. When not in use, store the filament in a cool, dry place away from direct sunlight.

2. Printing

- **Hotend Selection:** Do not use hotends with a diameter of 0.2 mm or smaller.

- **Resolving Clogs:** If frequent clogging occurs, try lowering the nozzle temperature slightly to reduce the risk of wood powder charring inside the nozzle.

- **Resolving Discoloration / Whitening:** Noticeable color inconsistency or localized whitening on the printed model indicates that the filament has absorbed significant moisture. It needs to be dried before further use.

4 Properties

Physical Properties

Subjects	Testing Methods	Data
Density	ISO 1183	1.17 g/cm ³
Melt Index	ISO 1133	3.8 ± 1.5 g/10 min at 190°C/2.16 kg
Melting Temperature	ISO 11357-3	164°C at 10°C/min
Glass Transition Temperature	ISO 11357-2	60°C at 10°C/min
Decomposition Temperature	ISO 11358	≥ 355°C at 20°C/min
Vicat Softening Temperature	ISO 306	54°C at 5 kg, 50°C/h
Heat Deflection Temperature	ISO 75	55 ± 3°C at 0.45 MPa

Mechanical Properties

Subjects	Testing Methods	Data
Young's Modulus (X-Y)	ISO 527-2	413 ± 70 MPa
Young's Modulus (Z)	ISO 527-2	238 ± 50 MPa
Tensile Strength (X-Y)	ISO 527-2	33 ± 6 MPa
Tensile Strength (Z)	ISO 527-3	12.7 ± 4 MPa
Breaking Elongation Rate (X-Y)	ISO 527-4	10 ± 5%
Breaking Elongation Rate (Z)	ISO 527-5	6 ± 2%
Bending Modulus (X-Y)	ISO 178	3040 ± 200 MPa
Bending Modulus (Z)	ISO 178	1550 ± 150 MPa
Bending Strength (X-Y)	ISO 178	55 ± 5 MPa
Bending Strength (Z)	ISO 178	24.6 ± 5 MPa
Impact Strength (X-Y)	ISO 180	6 ± 3 kJ/m ²
Impact Strength (Z)	ISO 180	2.8 ± 1 kJ/m ²

Other Physical and Chemical Properties

Subjects	Data
Odor	Odorless
Composition	Polylactic Acid (PLA), Wood Powder
Skin Hazards	Non-Hazardous
Chemical Stability	Stable at Room Temperature
Solubility	Insoluble in Water
Resistance to Acid	Poor
Resistance to Alkali	Poor
Resistance to Organic Solvent	Fair
Resistance to Oil and Grease	Good
Flammability	HB rating (for samples of 3–13 mm, a burning rate less than 40 mm/min)
Combustion Products	CO ₂ , Water, Dehydrated Magnesium Silicate, Trace Ash (0.1%–2%)
Odor of Combustion Products	Odorless

5 Specimen Test

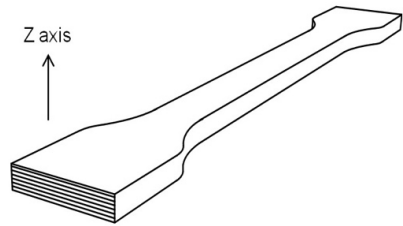
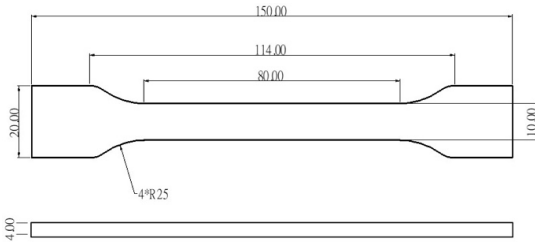
Specimen Printing Conditions

Subjects	Data
Nozzle Temperature	220°C
Bed Temperature	55°C
Printing Speed	≤ 230 mm/s
Infill Density	100%



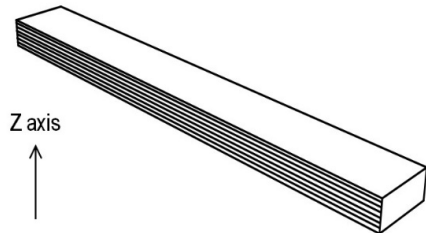
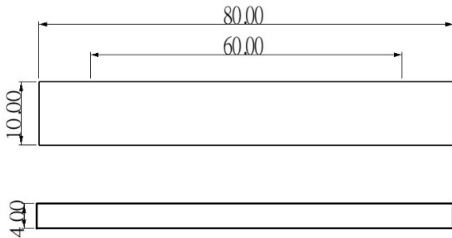
Based on 0.4 mm nozzle. Printing conditions may vary with different nozzle diameters.

Tensile Testing Specimen



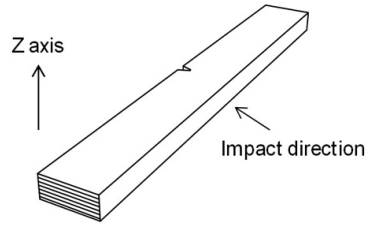
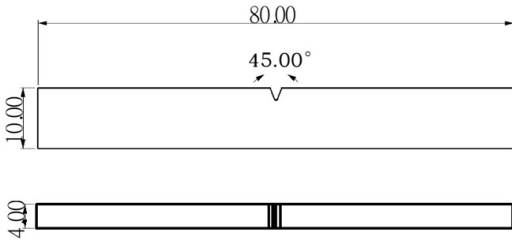
ISO 527, GB/T 1040

Flexural Testing Specimen



ISO 178, GB/T 9341

Impact Testing Specimen



ISO 179, GB/T 1043

6 Disclaimer

The performance and printing parameters of the aforementioned filaments are obtained by Snapmaker through testing filament samples with sample 3D printers. All data provided is for reference and comparison purposes only, and does not constitute design specifications or any warranty of quality. Actual 3D printing quality and final part performance are subject to various factors including, but not limited to, printer equipment, model design, environmental conditions, and printing parameters. Users shall independently evaluate the compliance and safety of printed models and finished parts, including legal compliance, application safety, and structural reliability. Snapmaker shall not be held liable for any direct or indirect losses arising from the use of the aforementioned filaments, including equipment damage, print failure, personal injury, and property damage.

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