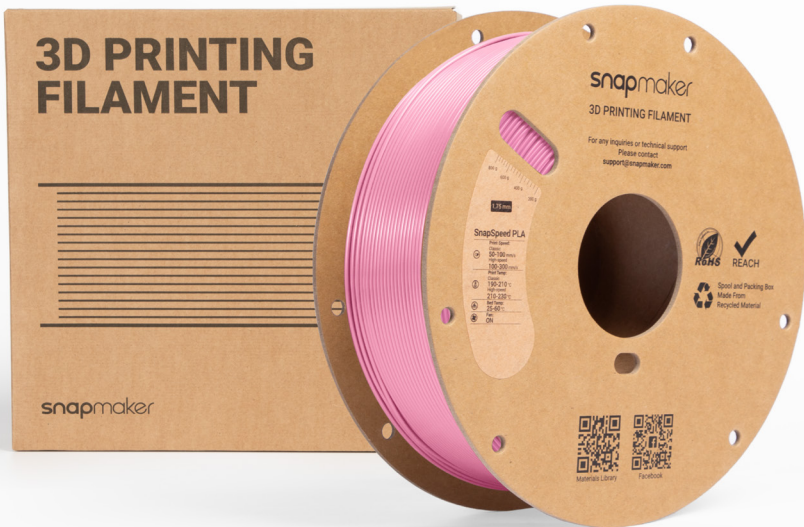


snapmaker | SnapSpeed PLA

Technical Data Sheet



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1 Filament Introduction

Snapmaker SnapSpeed PLA is engineered for high-speed printing through an optimized formula based on regular PLA. Featuring enhanced melt fluidity, it significantly boosts printing speed while maintaining accuracy and surface quality. It is ideal for model creation and prototyping, with wide applications in toys and games, creative home decor, hobbies and DIY, as well as fashion and arts.

2 Specifications

Subjects	Data
Diameter	1.75 ± 0.03 mm
Net Filament Weight	1 kg
Length	337 m
Spool Material	Cardboard Spool
Spool Size	Diameter: 200 mm; Height: 66 mm

3 Recommended Printing Settings

Subjects	Data
Drying Settings Before Printing	55°C, 6 h
Printing and Storage Humidity	< 20% RH (Sealed, with Desiccant)
Nozzle Size	0.2, 0.4, 0.6, 0.8 mm
Nozzle Temperature	210–230°C
Bed Type	Textured PEI Plate, Smooth PEI Plate
Bed Surface Preparation	Glue
Bed Temperature	65°C
Cooling Fan	ON
Printing Speed	< 300 mm/s
Retraction Length	1–1.5 mm
Retraction Speed	20–30 mm/s

(continued)

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

Printing Tips

1. Drying & Storage

- **Drying:** For best results, it is recommended to dry the filament at 55°C for 6 hours before use.
- **Re-Dry:** After prolonged air exposure, recommend re-drying the filament before starting a print.
- **Storage:** It's best to keep the filament in a sealed container with desiccant to prevent moisture buildup.

4 Properties

Physical Properties

Subjects	Testing Methods	Data
Density	ISO 1183, GB/T 1033	1.23 g/cm³ at 21.5°C
Melt Index	210°C, 2.16 kg	15.4 g/10 min
Melting Temperature	DSC, 10°C/min	164°C
Glass Transition Temperature	DSC, 10°C/min	59°C
Decomposition Temperature	TGA, 20°C/min	370°C
Crystallization Temperature	DSC, 10°C/min	96°C
Vicat Softening Temperature	ISO 306, GB/T 1633	61°C
Heat Deflection Temperature	ISO 75, 1.8 MPa	52°C
Heat Deflection Temperature	ISO 75, 0.45 MPa	53°C
Saturated Water Absorption Rate	23°C, 70% RH	0.40%

Mechanical Properties

Subjects	Testing Methods	Data (Classic Speed)	Data (High Speed)
Young's Modulus (X-Y)	ISO 527, GB/T 1040	2878.3 ± 74.3 MPa	2649.7 ± 78.3 MPa
Young's Modulus (Z)	ISO 527, GB/T 1040	2689.8 ± 92.0 MPa	2433.4 ± 79.4 MPa
Tensile Strength (X-Y)	ISO 527, GB/T 1040	46.0 ± 0.5 MPa	43.9 ± 0.4 MPa
Tensile Strength (Z)	ISO 527, GB/T 1040	37.3 ± 0.7 MPa	32.4 ± 0.4 MPa
Breaking Elongation Rate (X-Y)	ISO 527, GB/T 1040	21.5 ± 5.02%	15.1 ± 3.9%
Breaking Elongation Rate (Z)	ISO 527, GB/T 1040	4.2 ± 2.0%	3.3 ± 0.5%
Bending Modulus (X-Y)	ISO 178, GB/T 9341	2868.2 ± 78.4 MPa	2797.9 ± 40.7 MPa
Bending Modulus (Z)	ISO 178, GB/T 9341	N/A	N/A

(continued)

Subjects	Testing Methods	Data (Normal Speed)	Data (High Speed)
Bending Strength (X-Y)	ISO 178, GB/T 9341	76.5 ± 0.9 MPa	71.4 ± 0.6 MPa
Bending Strength (Z)	ISO 178, GB/T 9341	N/A	N/A
Impact Strength (X-Y)	ISO 179, GB/T 1043	6.1 ± 0.6 kJ/m ²	5.0 ± 0.5 kJ/m ²
Impact Strength (Z)	ISO 179, GB/T 1043	N/A	N/A



Data (Classic Speed) is based on 0.4mm nozzle and 0.2mm layer thickness. Classic printing speed = 46.7mm/s, printing temperature = 210 °C.

Data (High Speed) is based on 0.4mm nozzle and 0.2mm layer thickness. High printing speed = 300mm/s, printing temperature = 230 °C

Other Physical and Chemical Properties

Subjects	Data
Odor	Odorless
Composition	Polylactic Acid
Skin Hazards	Non-Hazardous
Chemical Stability	Stable under normal storage and handling conditions
Solubility	Insoluble in Water
Resistance to Acid	Weak Acid Resistance
Resistance to Alkali	Non-Resistant
Resistance to Organic Solvent	Poor
Resistance to Oil and Grease	Fair
Flammability	Flammable
Combustion Products	Water, Carbon Oxides
Odor of Combustion Products	Odorless

5 Specimen Test

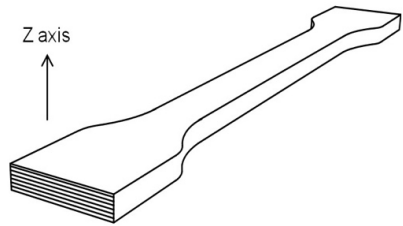
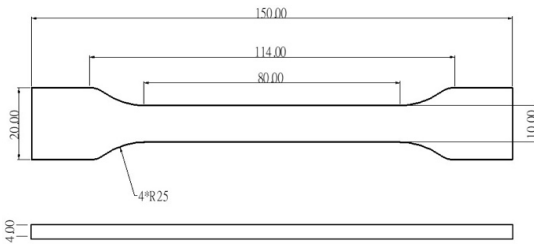
Specimen Printing Conditions

Subjects	Data
Nozzle Temperature	210°C, 230°C
Bed Temperature	55°C
Printing Speed	50, 300 mm/s
Infill Density	100%



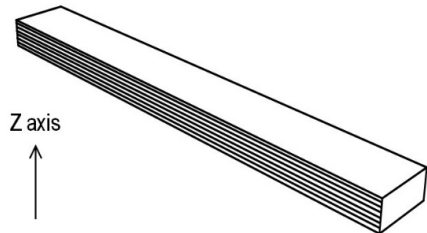
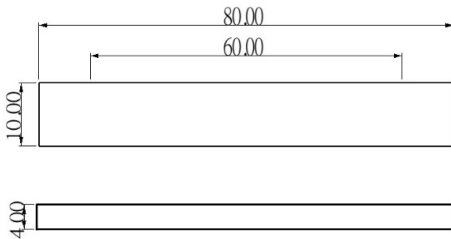
Based on 0.4 mm nozzle. Printing conditions may vary with different nozzle diameters.

Tensile Testing Specimen



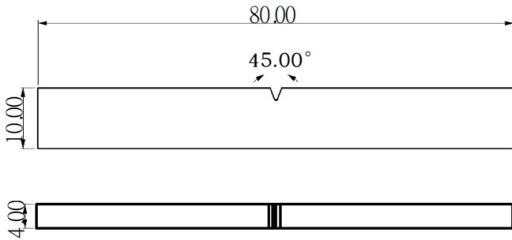
ISO 527, GB/T 1040

Flexural Testing Specimen

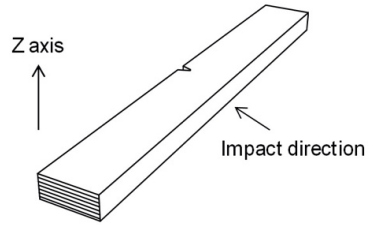


ISO 178, GB/T 9341

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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