snapmaker

Support for PLA Filament

Technical Data Sheet



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1 Filament Introduction

Snapmaker Support for PLA is designed for PLA prints, providing an easy-to-remove and clean support solution. It reduces bonding between the support interface and the model, allowing for easy removal with less reliance on tools and saving post-processing time. It stays securely bonded to the PLA support body, helping minimize color streaks and dirty marks on the model compared to PETG interfaces. With Snapmaker Orca settings, it sits close beneath curved overhangs to reduce sagging. It also separates cleanly, minimizing stress on delicate features to keep every detail intact.

2 Specifications

Subjects	Data
Diameter	1.75 ± 0.03 mm
Net Filament Weight	500 g
Length	160 m
Spool Material	Cardboard Spool
Spool Size	Diameter: 200 mm; Height: 66 mm

3 Recommended Printing Settings

Subjects	Data
Drying Settings Before Printing	50°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	200–230°C
Bed Type	Textured PEI Plate, Smooth PEI Plate
Bed Surface Preparation	Glue
Bed Temperature	25–65°C
Cooling Fan	ON
Printing Speed	< 200 mm/s

(continued)

Subjects	Data
Retraction Length	1–1.5 mm
Retraction Speed	20–30 mm/s
Chamber Temperature	25–45°C
Max Overhang Angle	55°
Max Bridging Length	30 mm
Support Material	N/A

Printing Tips

1. Drying & Storage

- **Pre-Drying:** Support for PLA Filament has low moisture sensitivity and generally does not require drying. However, pre-drying is recommended for optimal print results. The recommended setting is 50°C for 6 hours.

- **Storage:** When not in use, we recommend keeping the filament away from direct sunlight in a sealed container with desiccant.

2. Printing

- **Use Only as a Support Interface:** We strongly recommend using Support for PLA Filament only as a support interface material. Do not use it for the entire support body. In "Process," switch to "Advanced" mode. Then go to "Support > Support filament," enable support, and set "Support/raft interface" to "Sup. PLA." Continue using the same PLA as the model for the support body.

- **Choose Support Type Based on Model Geometry:** For large flat areas, regular overhangs, or structures that need stable support, standard support is recommended. For curved surfaces or other complex geometries, tree support is recommended to reduce contact area and material use. Results may vary by model, so check support coverage in the slicer preview.

- **Improve Support Interface Quality:** Setting "Top Z distance," "Bottom Z distance," "Top interface spacing," and "Bottom interface spacing" all to 0 mm gives a smoother support interface. To bring supports closer to the model's side walls, slightly reduce "Support/object xy distance" (avoid setting it to 0 mm by default, as overly tight contact can make removal difficult). If some overhangs lack sufficient support, increase the “Threshold angle" in increments of 5–10° while checking the slicer preview. If the interface surface is still uneven, try enabling "Ironing Support Interface."

- **Reduce Standby Filament Carbonization:** During multi-color printing, filament in the standby toolhead may gradually carbonize due to prolonged heating, affecting extrusion stability. Increase the prime tower's purge volume and purge line spacing as appropriate to help flush out carbonized filament and improve print reliability.

4 Properties

Physical Properties

Subjects	Testing Methods	Data
Density	ISO 1183, GB/T 1033	1.296 g/cm³ at 23°C
Melt Index	210°C, 2.16 kg	25.944 g/10 min
Melting Temperature	DSC, 10°C/min	N/A
Glass Transition Temperature	DSC, 10°C/min	58.2°C
Decomposition Temperature	TGA, 20°C/min	N/A
Crystallization Temperature	DSC, 10°C/min	N/A
Vicat Softening Temperature	ISO 306, GB/T 1633	65.5°C
Heat Deflection Temperature	ISO 75, 1.8 MPa	N/A
Heat Deflection Temperature	ISO 75, 0.45 MPa	N/A
Saturated Water Absorption Rate	25°C, 55% RH	N/A

Mechanical Properties

Subjects	Testing Methods	Data
Young's Modulus (X-Y)	ISO 527, GB/T 1040	N/A
Young's Modulus (Z)	ISO 527, GB/T 1040	N/A
Tensile Strength (X-Y)	ISO 527, GB/T 1040	N/A
Tensile Strength (Z)	ISO 527, GB/T 1040	N/A
Breaking Elongation Rate (X-Y)	ISO 527, GB/T 1040	N/A
Breaking Elongation Rate (Z)	ISO 527, GB/T 1040	N/A
Bending Modulus (X-Y)	ISO 178, GB/T 9341	N/A
Bending Modulus (Z)	ISO 178, GB/T 9341	N/A

(Continued)

Bending Strength (X-Y)	ISO 178, GB/T 9341	N/A
Bending Strength (Z)	ISO 178, GB/T 9341	N/A
Impact Strength (X-Y)	ISO 179, GB/T 1043	N/A
Impact Strength (Z)	ISO 179, GB/T 1043	N/A

Other Physical and Chemical Properties

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

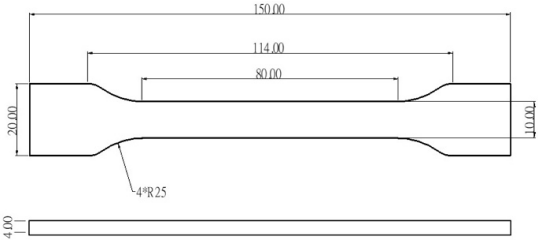
5 Specimen Test

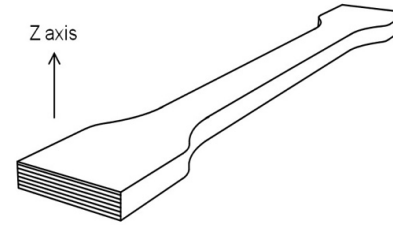
Specimen Printing Conditions

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

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

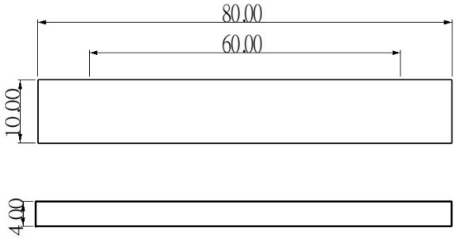
Tensile Testing Specimen

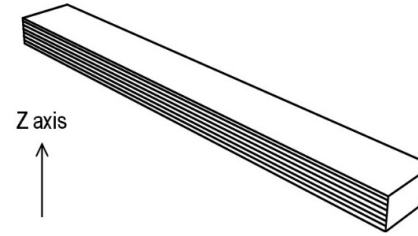




ISO 527, GB/T 1040

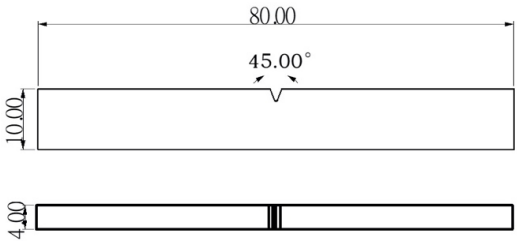
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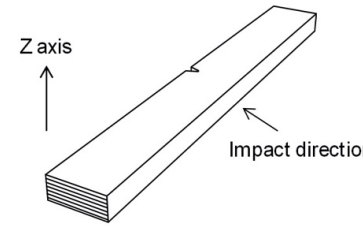




ISO 178, GB/T 9341

Impact Testing Specimen

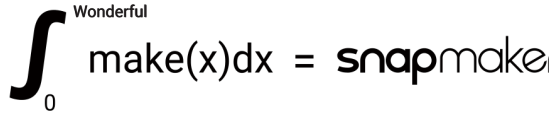




ISO 179, GB/T 1043

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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