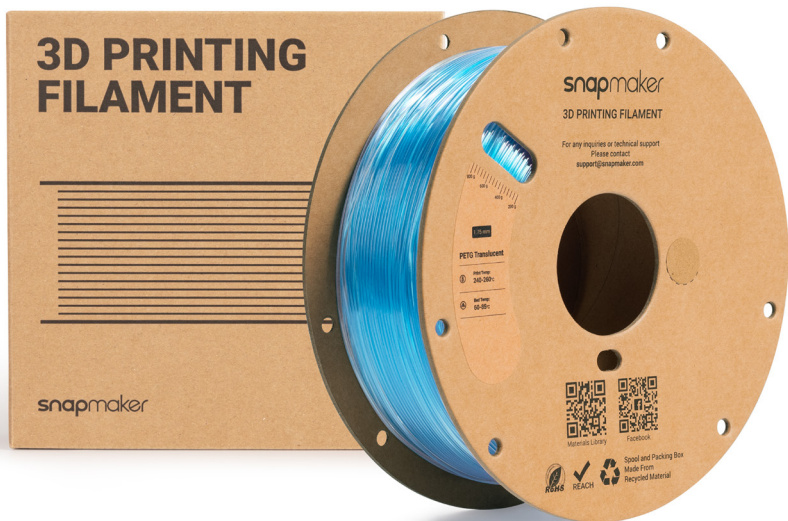


snapmaker | PETG Translucent

Technical Data Sheet



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1 Filament Introduction

Snapmaker PETG Translucent combines mechanical strength with a clear, translucent appearance, offering up to 90% light transmittance under optimized print settings. It provides superior load-bearing performance and reduced brittleness compared to PLA, remaining stable even at temperatures up to 77°C (HDT). With good water and UV resistance, it is ideal for outdoor fixtures, garden accessories, and lampshades.

2 Specifications

Subjects	Data
Diameter	1.75 ± 0.03 mm
Net Filament Weight	1 kg
Length	320 m
Spool Material	Cardboard Spool
Spool Size	Diameter: 200 mm; Height: 66 mm

3 Recommended Printing Settings

Subjects	Data
Drying Settings Before Printing	65°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	240–260°C
Bed Type	Textured PEI Plate, Smooth PEI Plate
Bed Surface Preparation	Glue
Bed Temperature	60–85°C
Cooling Fan	0%–60%
Printing Speed	50–150 mm/s
Retraction Length	1–1.5 mm
Retraction Speed	20–30 mm/s

Subjects	Data
Chamber Temperature	25–50°C
Max Overhang Angle	65°
Max Bridging Length	≤ 30 mm

Printing Tips

1. Drying & Storage

- **Pre-Drying:** PETG Translucent is highly sensitive to moisture. Exposure to air causes it to absorb ambient humidity, leading to excessive bubbling and degraded print quality. Always dry the filament at 65°C for 6 hours before printing. *(Note: The product is shipped pre-dried, and can be used immediately upon opening. If not used immediately, please follow the instructions above.)*

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

- **Recommended Solution:** We highly recommend using SnapDryer, which serves as an all-in-one solution to perfectly dry and store your filament. Watch our [video guide](#) to get started with SnapDryer.

2. Printing

- **Moisture Troubleshooting:** If you hear popping or crackling sounds during extrusion, or notice excessive bubbles on the surface, the filament is damp. Please dry it before printing.

- **Moisture Protection While Printing:** We strongly recommend printing directly from a sealed container with desiccant to prevent the filament from absorbing moisture mid-print.

- **Achieving Maximum Translucency:** If you want your prints to be highly translucent, you can apply the following settings. (*Note: Achieving glass-like transparency is inherently challenging with FDM 3D printing, especially for complex geometries.*)

- * **Reduce all speed settings and set them to the same value.** (*Note: This will increase total print time.*)

- * **Slightly increase the nozzle temperature.**

- * **Lower the layer height.**

- * **Slightly increase the Flow Ratio.**

- * **Turn off all cooling fans** to prevent uneven shrinkage caused by over-cooling.

- **Infill Settings:**

- * **For shell-like models** (e.g., translucent lampshades): Enable Spiral Vase mode for optimal clarity.

- * **For solid geometric models:** If you want to hide internal infill patterns, set the sparse infill density to 100%. (*Note: This will significantly increase printing time.*)

- **Resolving Poor Layer Adhesion:** If cooled too quickly, PETG Translucent may lose its layer-to-layer bonding strength. If you experience delamination or splitting, consider turning off the cooling fan, reducing the fan speed to a minimum, or increasing the printing temperature by 5–10°C.

4 Properties

Physical Properties

Subjects	Testing Methods	Data
Density	ISO 1183, GB/T 1033	1.30 g/cm ³
Melt Index	210°C , 2.16 kg	11.5 g/10 min
Melting Temperature	DSC, 10 °C/min	N/A
Glass Transition Temperature	DSC, 10 °C/min	79.20°C
Decomposition Temperature	TGA, 20 °C/min	382.93°C
Crystallization Temperature	DSC, 10 °C/min	N/A
Vicat Softening Temperature	ISO 306, GB/T 1633	83.2°C
Heat Deflection Temperature	ISO 75, 1.8 MPa	74.3°C
Heat Deflection Temperature	ISO 75, 0.45 MPa	77.1°C
Saturated Water Absorption Rate	25°C, 55% RH	0.42%

Mechanical Properties

Subjects	Testing Methods	Data
Young's Modulus (X-Y)	ISO 527, GB/T 1040	2.13 ± 0.0 GPa
Young's Modulus (Z)	ISO 527, GB/T 1040	1.88 ± 0.05 GPa
Tensile Strength (X-Y)	ISO 527, GB/T 1040	46.00 ± 1.00 MPa
Tensile Strength (Z)	ISO 527, GB/T 1040	30.99 ± 1.52 MPa
Breaking Elongation Rate (X-Y)	ISO 527, GB/T 1040	8.17 ± 0.98%
Breaking Elongation Rate (Z)	ISO 527, GB/T 1040	3.16 ± 0.6%
Bending Modulus (X-Y)	ISO 178, GB/T 9341	2.26 ± 0.03 GPa
Bending Modulus (Z)	ISO 178, GB/T 9341	1.88 ± 0.03 GPa
Bending Strength (X-Y)	ISO 178, GB/T 9341	72.07 ± 0.72 MPa
Bending Strength (Z)	ISO 178, GB/T 9341	61.24 ± 0.82 MPa
Impact Strength (X-Y)	ISO 179, GB/T 1043	34.16 ± 1.22 kJ/m ² ; 2.91 ± 0.11 kJ/m ² (Notched)
Impact Strength (Z)	ISO 179, GB/T 1043	5.51 ± 0.96 kJ/m ² ; 1.09 ± 0.06 kJ/m ² (Notched)

Other Physical and Chemical Properties

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

5 Specimen Test

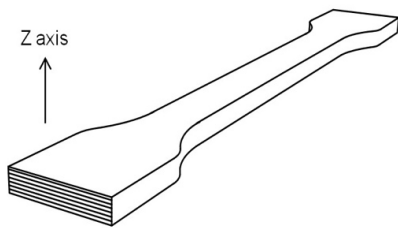
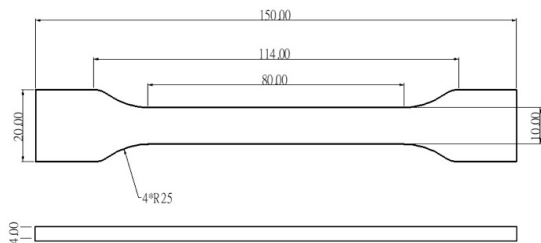
Specimen Printing Conditions

Subjects	Data
Nozzle Temperature	240°C
Bed Temperature	80°C
Printing Speed	50 mm/s
Infill Density	100%



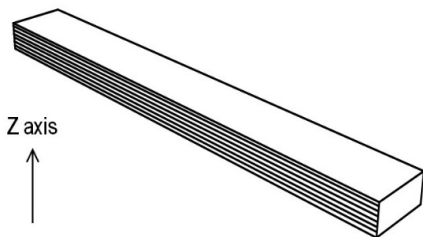
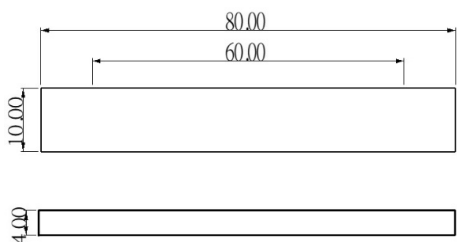
Based on 0.4 mm nozzle. Printing conditions may vary with different nozzle diameters.

Tensile Testing Specimen

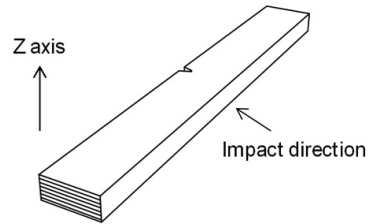
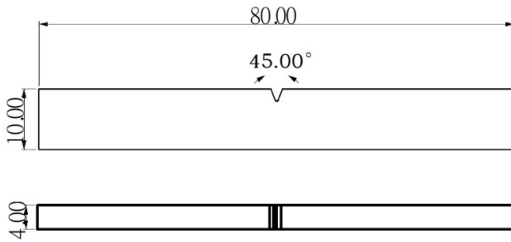


ISO 527, GB/T 1040

Flexural Testing Specimen



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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