Shenzhen Elegoo Technology Co.,Ltd.
Technical Data Sheet

Basic Introduction

Product Name: ELEGOO PETG PRO

Applicable Industry: Toys, artistic design and interior decorations etc.

Manufacturer: Shenzhen Elegoo Technology Co.,Ltd.

Manufacturer Address: 101, No. 30, Dahe Industrial Zone, Guancheng Community, Guanhu Street, Longhua District, Shenzhen, Guangdong Province, China

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Advantages

ELEGOO PETG PRO seamlessly integrates the user-friendly printing attributes of PLA with the robust strength and durability characteristic of ABS, effectively addressing common challenges associated with PETG, such as nozzle adhesion and warping. This filament exhibits exceptional resistance to both high and low temperatures, ensuring sustained strength while providing remarkable impact and tear resistance.

Recommended Printing Settings

Drying Settings Before Printing: 60 °C, 8 h (Air Drying Oven)

Printing Temperature and Humidity: ≤ 20% RH (sealed with desiccant)

Storage Temperature and Humidity: ≤ 20% RH (sealed with desiccant)

Printer Type: Enclosed-frame, open-frame

Nozzle Size: 0.2, 0.4, 0.6, 0.8 mm

Plate Type: Textured PEI plate, smooth PEI plate or other plates

Plate Surface Pretreatment: Applying the glue

Nozzle Temperature: 230 - 260 °C

Bed Temperature: 65 - 75 °C

Printing Speed: < 270 mm/s

Chamber Temperature: 25 - 50 °C

Support Material: Self-generated support or PETG special support

Physical Properties

Subjects	Testing Methods	Data
Density	ρ = m / v	1.27 g/cm³
Saturated Water Absorption Rate	25 °C , 55% RH, Indoor air	0.35%
Melt Index	230 °C, 2.16 kg	8.2 ± 3.2 g/10 min
Glass Transition Temperature	DSC, 10 °C/min	68 °C
Crystallization Temperature	DSC, 10 °C/min	N / A
Melting Temperature	DSC, 10 °C/min	218 °C
Vicar Softening Temperature	ISO 306, GB/T 1633	71 °C
Heat Deflection Temperature 1	ISO 75, 1.80 MPa	69 °C
Heat Deflection Temperature 2	ISO 75, 0.45 MPa	73 °C

Mechanical Properties

Subjects	Testing Methods	Data
Tensile Strength (XY)	ISO 527, GB/T 1040	40 ± 2 MPa
Tensile Strength (Z)	ISO 527, GB/T 1040	25 ± 3 MPa
Young’s Modulus (XY)	ISO 527, GB/T 1040	1771 ± 135 MPa
Young's Modulus (Z)	ISO 527, GB/T 1040	1125 ± 126 MPa
Breaking Elongation Rate (XY)	ISO 527, GB/T 1040	7.6% ± 1.1%

Breaking Elongation Rate (Z)	ISO 527, GB/T 1040	5.8% ± 1.7%
Bending Strength (XY)	ISO 178, GB/T 9341	70 ± 2 MPa
Bending Strength (Z)	ISO 178, GB/T 9341	42 ± 3 MPa
Bending Modulus (XY)	ISO 178, GB/T 9341	2111 ± 119 MPa
Bending Modulus (Z)	ISO 178, GB/T 9341	1846 ± 145 MPa
Impact Strength (XY)	ISO 179, GB/T 1043	78.5 ± 2.5 kJ/m²
Impact Strength (Z)	ISO 179, GB/T 1043	8.7 ± 1.4 kJ/m²

Other Physical and Chemical Properties

Component: PETG

Skin Irritation: No

Resistance to Water: Resistant

Resistance to Oil and Grease: Resistant to most kinds of oil and grease

Resistance to Organic Solvent: Not resistant to organic solvents

Resistance to Acid: Not resistant

Resistance to Alkali: Not resistant

Flammability: Yes

Odor During Printing: Odorless

Specimen Information

Size: Refer to the following pictures.

Nozzle Temperature: 255 ℃

Bed Temperature: 70 ℃

Printing Speed: 150 mm/s

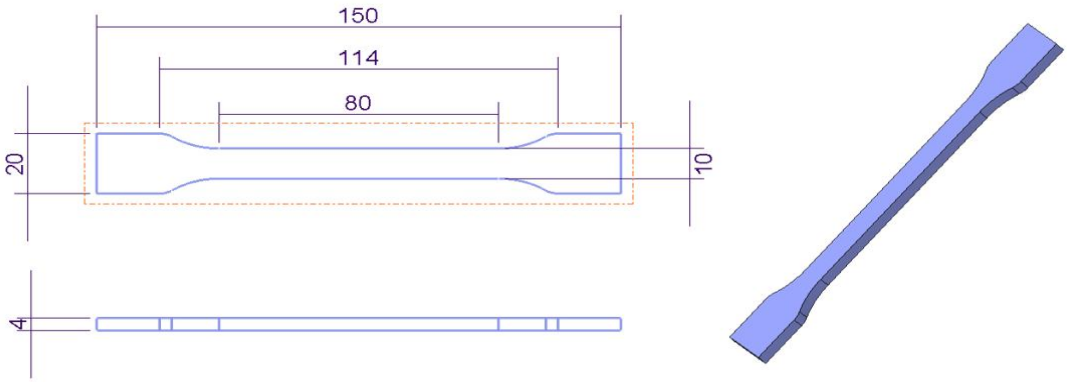
Infill Density: 100%

Infill Pattern: Concentric pattern

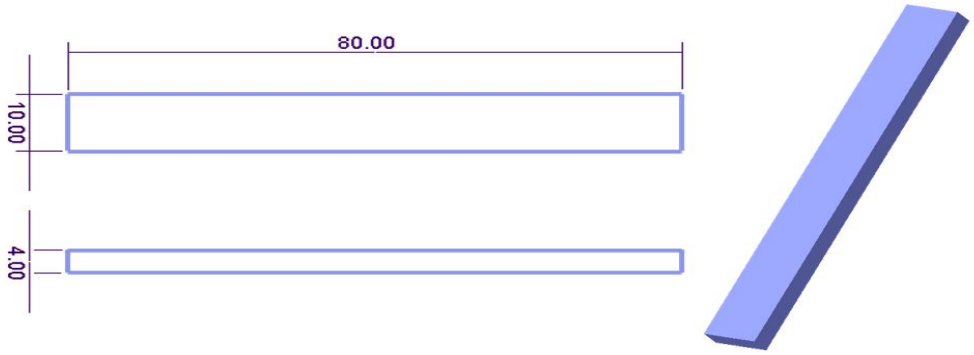
Statements: The test specimens were printed under the key parameters mentioned above. Before testing, all specimens

were annealed at 65 °C for 8 hours and then placed in an indoor environment at approximately 25 °C for 24 hours.

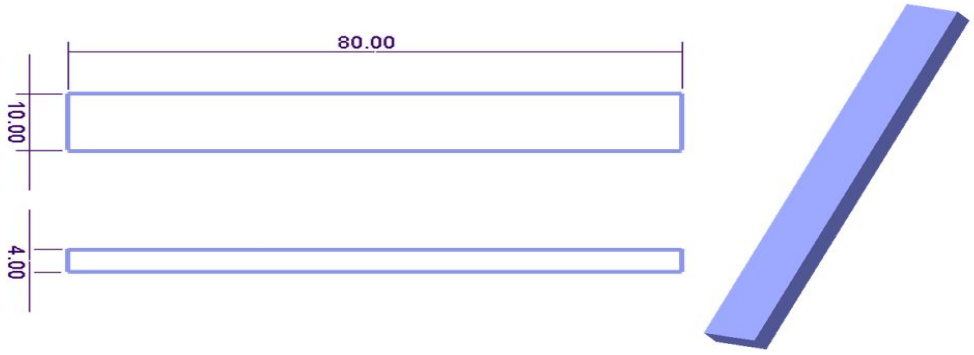
1. Tensile Testing



2. Bending Testing



3. Impact Testing



Disclaimer

The above properties data is obtained by ELEGOO through testing with standard samples, standard methods, and specific equipment, and is for reference and comparison only. The actual performance of 3D printed products depends not only on the characteristics used but also on many factors, such as the moisture absorption of the filaments, the printer, environmental conditions, model characteristics, printing parameters, etc.

When using the ELEGOO FDM 3D printing filaments, users are responsible for the legality, safety, and performance of the printing. ELEGOO is not responsible for the usage scenarios, or any damage or injury that occurs during using our filaments.