



# Technical Data Sheet

## Filalab PETG

### Product Information

Product Name	Filalab PETG
Chemical Name	Polyethylene Terephthalate Glycol Copolymer
Diameter	1.75 ± 0.05 mm
Manufacturer	Filalab, Vilnius, Lithuania

### General Description

Filalab PETG Filament is a versatile and durable 3D printing material that combines the ease of use of PLA with the strength and durability of ABS. It is a glycol-modified version of PET, which enhances its printing performance by improving clarity, impact resistance, and flexibility. PETG is known for its excellent chemical resistance, low shrinkage, and strong layer adhesion, making it ideal for both functional and aesthetic 3D printed parts.



## Product Properties

Property	Test Method	Result
Specific Gravity	ASTM D792	1.27 g/cm <sup>3</sup>
Shrinkage	ASTM D955	0.2 – 0.5 %
Rockwell Hardness	ASTM D785	105 R
Tensile Strength @ Yield	ISO 527	49 MPa
Tensile Strength @ Break	ISO 527	23 Mpa
Elongation @ Yield	ISO 527	4.1 %
Elongation @ Break	ISO 527	40 %
Flexural Strength	ISO 178	67 Mpa
Flexural Modulus	ISO 178	1,890 Mpa
Izod Impact Strength Notched @ 23°C	ISO 180	7.0 KJ/m <sup>2</sup>
Heat Distortion Temperature @ 0.455MPa / @ 1.820 MPa	ISO 75	72/62 °C
Haze	ASTM D1003	< 1.0 %
Transmittance	ASTM D1003	90%



## Recommended Printing Settings

Nozzle Temperature	230-270 °C (255 °C for Bambu Lab printers)
Bed Temperature	65-75 °C
Fan Speed	10-60%
Printing Speed	40-250 mm/s
Bed Type	Textured PEI Sheet, Smooth PEI Sheet*
Optional Adhesives for Build Plate	Bambu Lab Glue Stick, Magigoo
Filament Drying Recommendations	Temperature: 55-65 °C, Drying Time 6-12 hours

\*Use a glue stick to prevent build plate damage.

## Safety Information:

Filalab PETG Filament is non-toxic and safe for general use. However, ensure proper ventilation during printing to avoid inhaling any fumes that may be produced. Always consult the Safety Data Sheet (SDS) for more detailed safety guidelines.



## Storage, Handling, and Drying Process:

PETG filament is hygroscopic, meaning it readily absorbs moisture from the air. Excessive moisture can lead to printing defects such as bubbling, poor surface finish, and reduced layer adhesion. To ensure optimal print quality, proper storage and drying of Filalab PETG Filament are essential.

### Storage:

- **Environment:** Store in a cool, dry place away from direct sunlight and high humidity.
- **Sealing:** Keep the filament sealed in an airtight container with desiccant to prevent moisture absorption.
- **Desiccant Use:** Use silica gel packets or other desiccants inside the storage container to maintain low humidity levels.

### Drying Process:

- **Drying Temperature:** 65-70°C (149-158°F)
- **Drying Duration:** 4-6 hours, depending on the level of moisture absorption
- **Drying Equipment:** Use a filament dryer, convection oven, or a food dehydrator with temperature control to remove moisture before printing.

After drying, immediately store the filament in an airtight container to prevent reabsorption of moisture during or between printing sessions.



## Features:

- **Durability:** PETG offers a balance of strength and flexibility, making it ideal for functional parts that require durability.
- **Chemical Resistance:** Excellent resistance to chemicals, including water, acids, and alcohols, making it suitable for a wide range of applications.
- **Transparency:** PETG can produce clear, transparent prints, making it a good choice for aesthetic projects.
- **Low Odor:** PETG emits very little odor during printing, providing a more comfortable working environment.
- **Strong Layer Adhesion:** PETG has excellent interlayer bonding, reducing the risk of delamination and improving the overall strength of printed parts.

## Pros and Cons:

### Pros:

- High strength and flexibility
- Excellent chemical resistance
- Low shrinkage and good clarity

### Cons:

- Higher printing temperatures required
- Prone to stringing if not properly tuned and dried