POLYMAKER PB01001

Polymaker PolyLite PETG Filament User Manual

Brand: POLYMAKER | Model: PB01001

1. INTRODUCTION

This manual provides essential information for the optimal use of Polymaker PolyLite PETG 3D Printer Filament. PolyLite PETG is a high-quality filament designed for a wide range of 3D printing applications, offering excellent mechanical and thermal properties, ease of printing, and consistent results. Please read this manual thoroughly before beginning your printing projects to ensure the best possible outcome and safe operation.

2. PRODUCT FEATURES

- **Good Mechanical and Thermal Properties:** PolyLite PETG offers a heat resistance of 80°C (144°F) and greater toughness than regular PLA, making it suitable for strong and durable creations.

- **Tangle-Free & Moisture-Free:** Meticulously wound to prevent tangling and vacuum-sealed with a desiccant to ensure dryness upon arrival.

- **Good Layer Adhesion & Rigidity:** Designed to minimize common printing issues such as warping, jamming, blobs, and layer delamination, providing excellent bed adhesion and consistent dimensional accuracy.

- **Eco-Friendly Packaging:** Features an upgraded 3.0 packaging with a fully recycled cardboard spool and box.

- **Wide Color Variety:** Available in over 12 colors and effects to suit diverse creative needs.
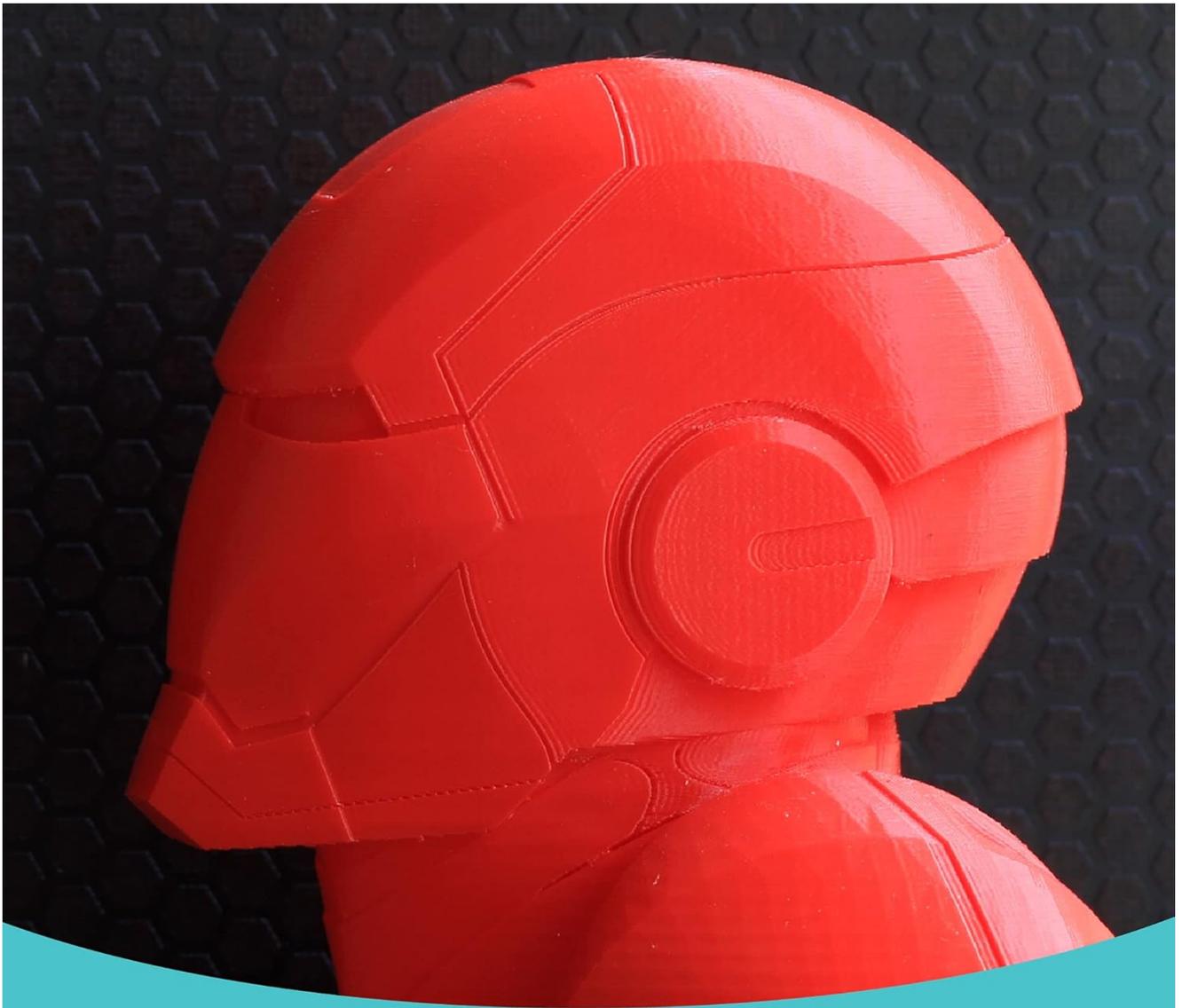
Product Overview

Image: A black spool of Polymaker PolyLite PETG filament, 1.75mm, 1kg, with product information visible on the cardboard spool.
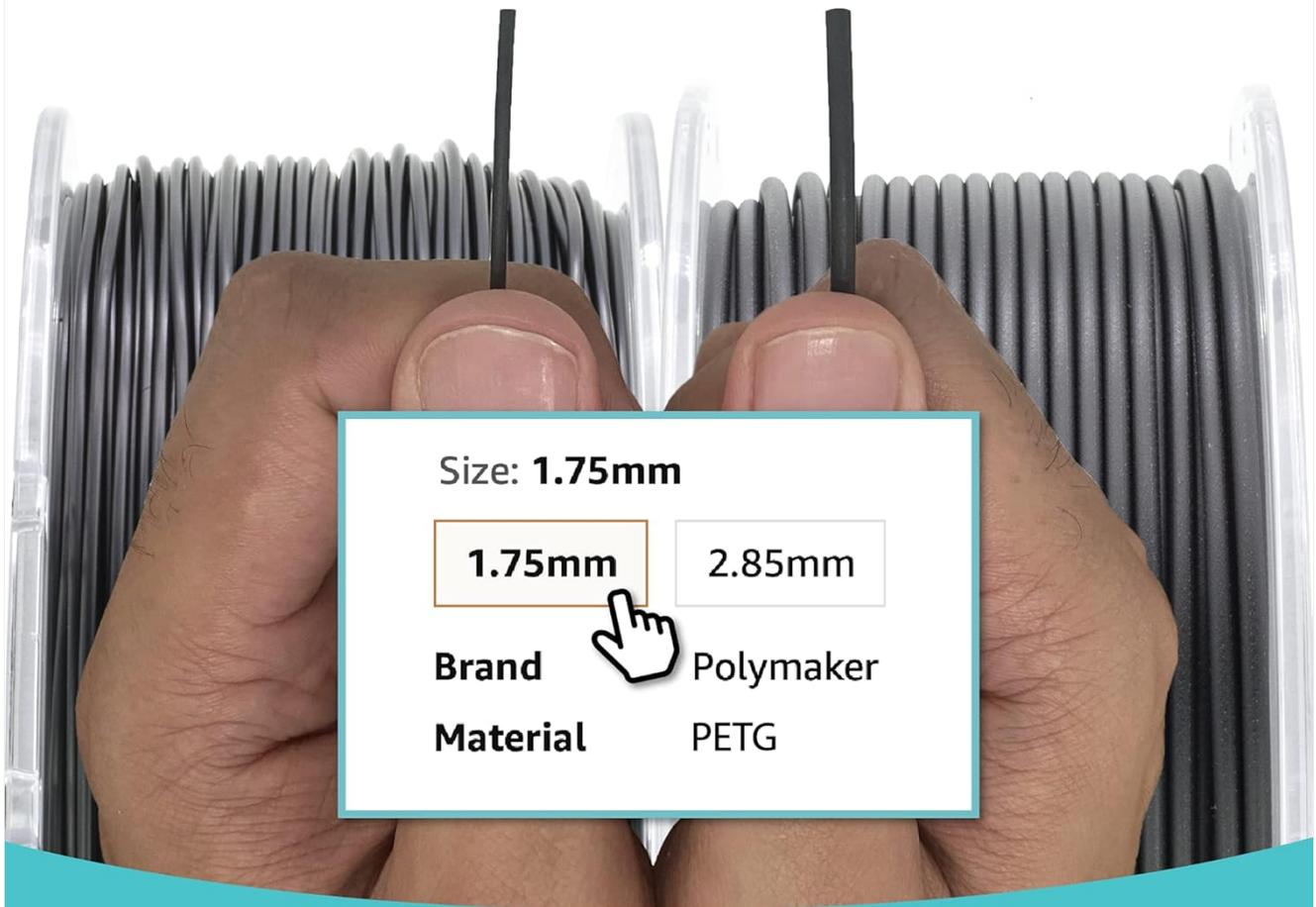
Image: A white 3D printed articulated figure, highlighting the filament's versatility, strong layer bonding, and overall print quality.

UNLEASH YOUR CREATIVITY!

Image: A detailed close-up of a red 3D printed helmet, showcasing the smooth finish achievable with PolyLite PETG.

FILAMENT DIAMETER

Size: **1.75mm**

| 1.75mm | 2.85mm |

Brand Polymaker

Material PETG

⚠ PLEASE MAKE SURE TO CONFIRM COLOR AND DIAMETER BEFORE PURCHASING

Image: A visual comparison illustrating the difference between 1.75mm and 2.85mm filament diameters, emphasizing the importance of selecting the correct size.

Image: The PolyLite PETG filament spool alongside its recycled cardboard packaging box, highlighting the product's presentation.

Image: The reverse side of the PolyLite PETG spool, displaying recommended printing settings and a QR code for additional product information.

Product Videos

Your browser does not support the video tag.

Video: "Polymaker PolyLite PETG filament - Light up Your Daily Life!" This video demonstrates the translucent properties of PolyLite PETG filament when used for lighting fixtures and its application in various functional designs.

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Video: "Polymaker PETG - Light Up Your Daily Life!" This video showcases the versatility of Polymaker PETG, including its ability to create translucent objects, its wide range of available colors, and its ease of post-processing for functional applications.

3. SETUP

Before loading the filament into your 3D printer, ensure proper handling and preparation for optimal print quality.

- **Unpacking:** Carefully remove the filament spool from its vacuum-sealed bag. The bag contains a desiccant

packet to absorb moisture; keep the desiccant for future storage.

- **Filament Handling:** Always hold the tip of the filament to prevent it from unwinding and creating tangles or "nodes" on the spool. Utilize the small holes on the side of the spool to secure the filament end when not in use.

- **Drying Filament:** Although PolyLite PETG is dried and sealed at the factory, PETG is hygroscopic and can absorb moisture over time. If you notice issues like popping sounds during printing, excessive stringing, or poor layer adhesion, consider drying your filament. A recommended drying temperature for PETG is 54°C for 8 hours.

- **Printer Preparation:** Ensure your printer's build plate is clean and level. For PETG, good bed adhesion is crucial. Consider using a suitable adhesive or surface (e.g., PEI sheet, G10) if needed.

4. OPERATING INSTRUCTIONS

Achieving successful prints with PolyLite PETG requires specific printer settings. The following are general recommendations; fine-tuning may be necessary based on your specific printer model and environment.

Recommended Printing Settings:

- **Nozzle Temperature:** 235°C (Range: 230-250°C)
- **Bed Temperature:** 70°C (Range: 70-80°C)
- **Printing Speed:** 60mm/s (Adjust as needed; slower speeds can improve print quality, especially for intricate details or translucent prints.)
- **Cooling Fan:** Turn off the cooling fan for the first layer to enhance bed adhesion. For subsequent layers, a low to moderate fan speed (e.g., 20-50%) is often recommended for PETG to prevent warping and improve bridging, but excessive cooling can lead to delamination.
- **Retraction Settings:** PETG can be prone to stringing. Optimize your retraction distance and speed. A common starting point is 0.8mm retraction distance at 45mm/s speed for direct drive systems. Bowden setups may require longer retraction distances.
- **First Layer Adhesion:** Ensure your build plate is clean. For optimal adhesion, increase the initial layer flow (e.g., 108%) and ensure proper bed leveling.

Note: Always perform calibration prints (e.g., temperature towers, retraction tests) when using a new filament or printer to dial in the perfect settings.

5. MAINTENANCE

Proper maintenance of your filament ensures its longevity and consistent print quality.

- **Storage:** Store PolyLite PETG filament in a cool, dry place, ideally in its original resealable bag with the desiccant packet. This prevents moisture absorption, which can degrade filament quality and lead to printing issues.

- **Spool Care:** When not actively printing, secure the end of the filament in one of the spool's designated holes to prevent unwinding and tangling.

- **Dust Prevention:** Keep the filament free from dust and debris, as these can clog your printer's nozzle. Consider using a filament cleaner or dust filter.

6. TROUBLESHOOTING

Below are common issues encountered during 3D printing with PETG and suggested solutions.

Issue	Possible Cause	Solution
Stringing/Oozing	Incorrect retraction settings, too high nozzle temperature, wet filament.	Increase retraction distance/speed, lower nozzle temperature in 5°C increments, dry filament.
Poor Layer Adhesion	Too low nozzle temperature, insufficient bed temperature, excessive cooling, wet filament.	Increase nozzle/bed temperature, reduce cooling fan speed, dry filament. Ensure first layer fan is off.
Warping/Lifting from Bed	Insufficient bed adhesion, bed not level, drafts, too much cooling.	Ensure bed is level and clean. Increase bed temperature. Use brim/raft. Avoid drafts. Reduce cooling.
Clogging/Jamming	Dust/debris on filament, heat creep, incorrect retraction, worn nozzle.	Clean filament path, optimize retraction, replace nozzle if worn. Ensure proper hotend cooling.
Blobs/Zits	Over-extrusion, poor retraction, start/stop points.	Calibrate E-steps, optimize retraction, enable "Wipe" or "Coast" settings in slicer.

For more detailed troubleshooting, refer to online 3D printing communities and Polymaker's official support resources.

7. SPECIFICATIONS

Attribute	Value
Brand	POLYMAKER
Material	Polyethylene Terephthalate Glycol (PETG)
Color	111 - 1.75mm Black (Hex Code: #161618)
Item Diameter	1.75 Millimeters
Item Weight	1 Kilograms (2.2 Pounds)
Product Dimensions	3.54 x 9.06 x 0.79 inches
Item Model Number	PB01001
Manufacturer	Polymaker
Date First Available	August 25, 2021

8. WARRANTY AND SUPPORT

For detailed warranty information regarding your Polymaker PolyLite PETG filament, please refer to the official Polymaker website or the product packaging.

If you require technical support or have any inquiries, please contact Polymaker directly:

Email: support@polymaker.com

Product Information Sheet (PIS): Download PIS (PDF)

Official Website: polymaker.com