



**FILATECH**  
Making It Better

# PETG Filament

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## PETG - POLYETHYLENE TEREPHTHALATE GLYCOL-MODIFIED

PETG (Polyethylene terephthalate Glycol-Modified) is a very strong and versatile material with great thermal resistance. It is the great material for printing mechanical parts. PETG is great for printing large object, because it has almost no warping. PETG filament, is an industrial strength filament with several great features.

Figuratively speaking, it combines the ease of use of PLA filament with the strength and durability of ABS filament. First, its strength is much higher than PLA and it is FDA approved for food containers and tools used for food consumption.

Unlike ABS filament, it barely warps, and produces no odors or fumes when printed. PET filament is not biodegradable, but it is 100% reclaimable. It's known for its clarity and is also very good at bridging. Our PETG filaments are available in a wide range of color options and they come in 1.75mm and 2.85mm diameter.

### OPTIONS:

Size:	1.75	mm +/- 0.03 mm
	2.85	mm +/- 0.03 mm
Color:	Full Color Range (Special Colors By Order)	
Packaging:	0.5	Kg Spools
	1.0	Kg Spools
	30	Gr Loops (Sample)

### FEATURES:

Higher melting temperature for better mechanical strength at higher temperature.

Free from harmful or hazardous materials.

Low shrinkage rate.

High rigidity combined with good flex.

Produces objects with higher toughness.

Proper for objects with good toughness, higher working and with minimum warping during printing.

Shall be printed on heat bed.

Parts can withstand temperatures of up to 80 °C without losing strength.

Parts can be vapor smoothed for greater strength and better surface finish

Easy to glue with acetone.

### SPECIFICATIONS:

Filament Material:	PETG	
Specific Gravity:	1.27	gr/cm <sup>3</sup>
Size:	1.75	mm +/- 0.03 mm
	2.85	mm +/- 0.03 mm
Printing Information:	Extruder: 220 – 240 °C	
	Bed:	50 – 90 °C
Working Temperature:	Withstands up to 80 °C	

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## ENGINEERING PROPERTIES:

Properties	Test Method	Unit	Value
Rockwell Hardness	ASTM D785	R-Scale	108
Specific Gravity	ASTM D792	gr/cm <sup>3</sup>	1.27
Moisture Absorption Factor	ASTM D570	%	0.13
Tensile Strength @ Yield <i>50mm/min (2 inch/min)</i>	ASTM D638	kgf/cm <sup>2</sup>	300
Tensile Strength @ Break <i>50mm/min (2 inch/min)</i>	ASTM D638	kgf/cm <sup>2</sup>	510
Elongation @ Yield <i>50mm/min (2 inch/min)</i>	ASTM D638	%	4.5
Elongation @ Break <i>50mm/min (2 inch/min)</i>	ASTM D638	%	180
Flexural Strength <i>1.27mm/min (0.05 inch/min)</i>	ASTMD790	kgf/cm <sup>2</sup>	700
Flexural Modulus <i>1.27mm/min (0.05 inch/min)</i>	ASTMD790	kgf/cm <sup>2</sup>	21400
Izod Impact Test <i>Notched @ 23 °C</i>	ASTM D256	J/m	105
Heat Distortion Temperature <i>@0.455 Mpa (66 psi)</i>	ASTM D648	°C	70
Optical Haze	ASTM D1003	%	<1.0
Transmittance	ASTM D1003	%	90
Retractive Index, n <sub>D</sub>	ASTM D542	-	1.57

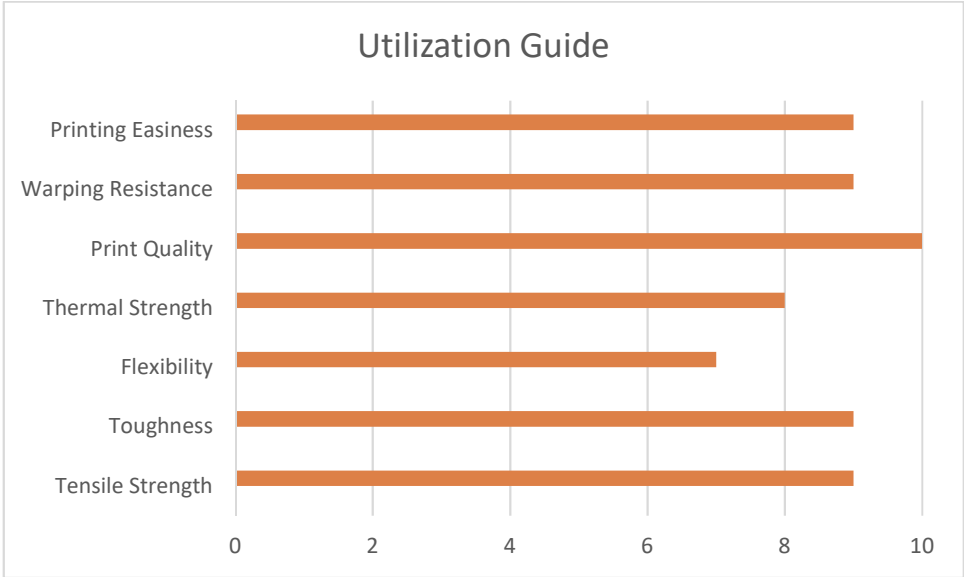
## UTILIZATION GUIDE:

*(Comparative, Out of 10)*

Tensile Strength	9
Toughness	9
Flexibility	7
Thermal Strength	8
Print Quality	10
Warping Resistance	9
Printing Easiness	9

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**CERTIFICATES:**

Management: BS EN ISO 9001:2015  
Quality: CE (CE-2924)  
Environment: RoHS (UQ-5724)