

## PETG FILAMENT

### END USE

PETG is a modified version of PET (the most commonly used plastic in the world) The 'G' stands for "glycol-modified", which is added to the material composition during polymerisation. The result is a filament that is clearer, less brittle, and easier to use than its base form of PET. Our PETG filament has the reputation of combining the functionality of ABS (stronger, temperature resistant, more durable) and reliability of PLA (easy to print) in one material.

### PHYSICAL PROPERTIES

Product Code(s)	PETG-CF-1000, PETG-PURPLE-1000, PETG-YELLOW-1000, PETG-BLUE-1000, PETG-TRANS-1000, PETG-BLACK-1000, PETG-GREEN-1000, PETG-GREY-1000, PETG-ORNG-1000, PETG-RED-100, PETG-WHITE-1000
Colour(s)	Carbon Fiber, Purple, Yellow, Blue, Transparent, Black, Green, Grey, Red, White, Orange
Specific Gravity	1.27 (Test Standard - ASTM D792)
Mold Shrinkage (%)	0.3 - 0.6 (Test Standard - ASTM D955)
Hardness (R-Scale)	110 (Test Standard - ASTM D785)
Water Absorption (%)	0.2 (Test Standard - ASTM D570)
Tensile Strength at Yield (Mpa)	50 (Test Standard - ASTM D638)
Tensile Strength at Break (Mpa)	28 (Test Standard - ASTM D638)
Break Elongation (%)	140 (Test Standard - ASTM D638)
Flexural Strength at Yield (MPa)	140 (Test Standard - ASTM D790)
Izod Impact Strength (J/m)	100 (Test Standard - ASTM D256)
Heat Distortion (°C)	70 (Test Standard - ASTM D648)
Vicat Softening (°C)	83 (Test Standard - ASTM D1525)
Glass Transition (Tg) (°C)	180 (Test Standard - DSC method)
Haze (%)	<1 (Test Standard - ASTM D1003)
Total Transmittance (M%)	91 (Test Standard - ASTM D1003)
Dielectric Strength (kV/mm)	15 (short time, 500 V/s) (Test Standard - ASTM D149)
Volume Resistivity (Ω.cm)	10 (Test Standard - ASTM D257)
Dielectric Constant	2.5 @ 1MHz (Test Standard - ASTM D150)
Dissipation Factor	0.023 @ 1MHz (Test Standard - ASTM D150)



### APPLICATION

It is food and skin safe, so it can be used in medical and food applications. In medical applications, it stands up to radiation and chemical sterilization techniques without changing colour. It is not hygroscopic and is also chemical resistant. PETG's low shrink rate makes it ideal for large prints, or where tolerance can be an issue.

### PRINTER SETTINGS

Spool Net Weight: 1kg	Print Temperature: 220-250°C	Bed Temperature: 0-50°C
Diameter: 1.75mm ± 0.05mm	Print Speed: 40 - 80mm/s	