# PETG

Technical Data Sheet

PETG is a high cost performance material with water resistance, chemical resistance and high toughness. It's tougher than ABS. The printed product has translucent and smooth surface. It's easy to print as PLA with no need of temperature chamber.

| Material Status | Mass Production | |
|---|---|---|
| Characteristics | • Transparent<br>• Great toughness | • Chemical resistance<br>• Water resistance |
| Applications | • Advertisement<br>• Waterproof application | • Snap-in parts<br>• Flower pot |
| Form | • Filament | |
| Processing method | • 3D Print, FDM Print | |

| | testing method | Typical value | |
|---|---|---|---|
| **Physical Properties** | | | |
| Density | GB/T 1033 | 1.27 | $g/cm^3$ |
| Melt Flow Index | GB/T 3682 | 20 | (190°C/2.16kg) |
| **Mechanical Properties** | | | |
| Tensile Strength | GB/T 1040 | 52.2 | MPa |
| Elongation at Break | GB/T 1040 | 83 | % |
| Flexural Strength | GB/T 9341 | 58.1 | MPa |
| Flexural Modulus | GB/T 9341 | 1073 | MPa |
| IZOD Impact Strength | GB/T 1843 | 4.7 | $kJ/m^2$ |
| **Thermal Properties** | | | |
| Heat distortion Temperature | GB/T 1634 | 64 | ℃ |
| Continuous Service Temperature | IEC 60216 | N/A | |
| Maximum (short term) Use Temperature | | N/A | |
| **Electrical Properties** | | | |
| Insulation Resistance | DIN IEC 60167 | N/A | |
| Surface Resistance | DIN IEC 60093 | N/A | |

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## Recommended printing parameters

| | |
|---|---|
| Extruder Temperature | 230- 250°C |
| Build Platform Temperature | 75-90°C |
| Fan Speed | 100% |
| Printing Speed | 40 - 100mm/s |

Based on 0.4 mm nozzle and Simplify 3D v.4.1.2. Printing conditions may vary with different nozzle diameters

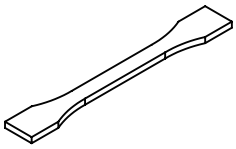
## Drying Recommendations

N/A

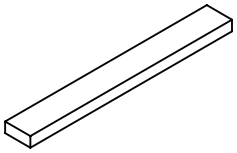
## Precautions:

Turn on the Z seam alignment . Turn off the Z-axis lifting with drawing.
Slower the printing speed.

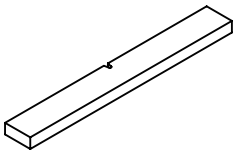
## Mechanical Properties



Tensile testing specimen GB/T 1040



Flexural testing specimen GB/T 9341



Impact testing specimen GB/T 1043

The physical properties, mechanical properties, thermal properties, and electrical properties of the line are obtained based on the injection molding spline test.

### Print test condition:

| | |
|---|---|
| Extruder Temperature | 230-250°C |
| Build Platform Temperature | 75°C |
| Outline/Perimeter Shells | 4 |
| Top/Bottom Layers | 4 |
| Infill Percentage | 20% |
| Fan speed | 100% |
| Printing speed | 40mm/s |

Based on 0.4 mm nozzle and Simplify 3D v.4.1.2.

## Notice



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