

## Technical Data Sheet

# PolyLite™ PETG

[www.polymaker.com](http://www.polymaker.com)

V5.0



## PolyLite™ PETG

PolyLite™ PETG is an affordable PETG filament with balanced mechanical properties and ease of printing.

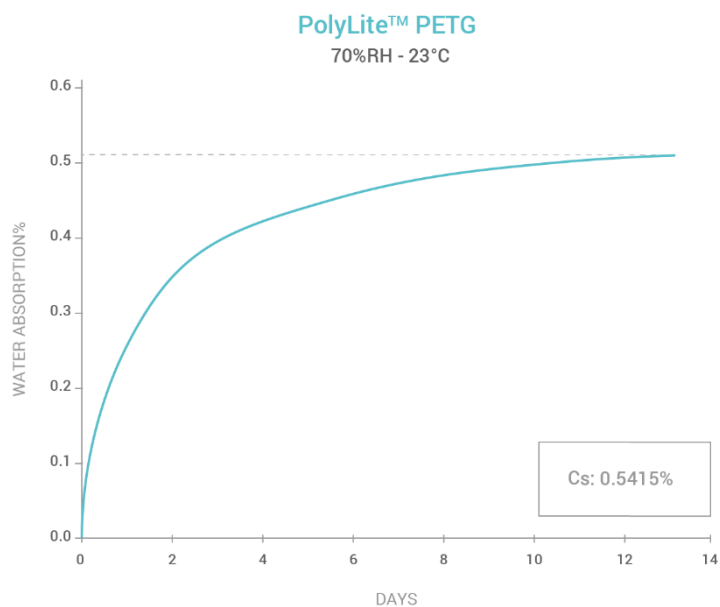
### PHYSICAL PROPERTIES

| Property            | Testing Method    | Typical Value                  |
|---------------------|-------------------|--------------------------------|
| Density             | ISO1183, GB/T1033 | 1.25 g/cm <sup>3</sup> at 21°C |
| Melt Index          | 240°C, 2.16kg     | 10.8 g/10min                   |
| Light Transmission  | N/A               | N/A                            |
| Flame retardancy V2 | UL94              | V2                             |

### CHEMICAL RESISTANT DATA

| Property                  | Testing Method    |
|---------------------------|-------------------|
| Effect of weak acids      | Not Resistant     |
| Effect of strong acids    | Not Resistant     |
| Effect of weak alkalis    | Not Resistant     |
| Effect of strong alkalis  | Not Resistant     |
| Effect of organic solvent | Resistance most   |
| Effect of oils and grease | No data available |
| Effect of Sunlight        | No data available |

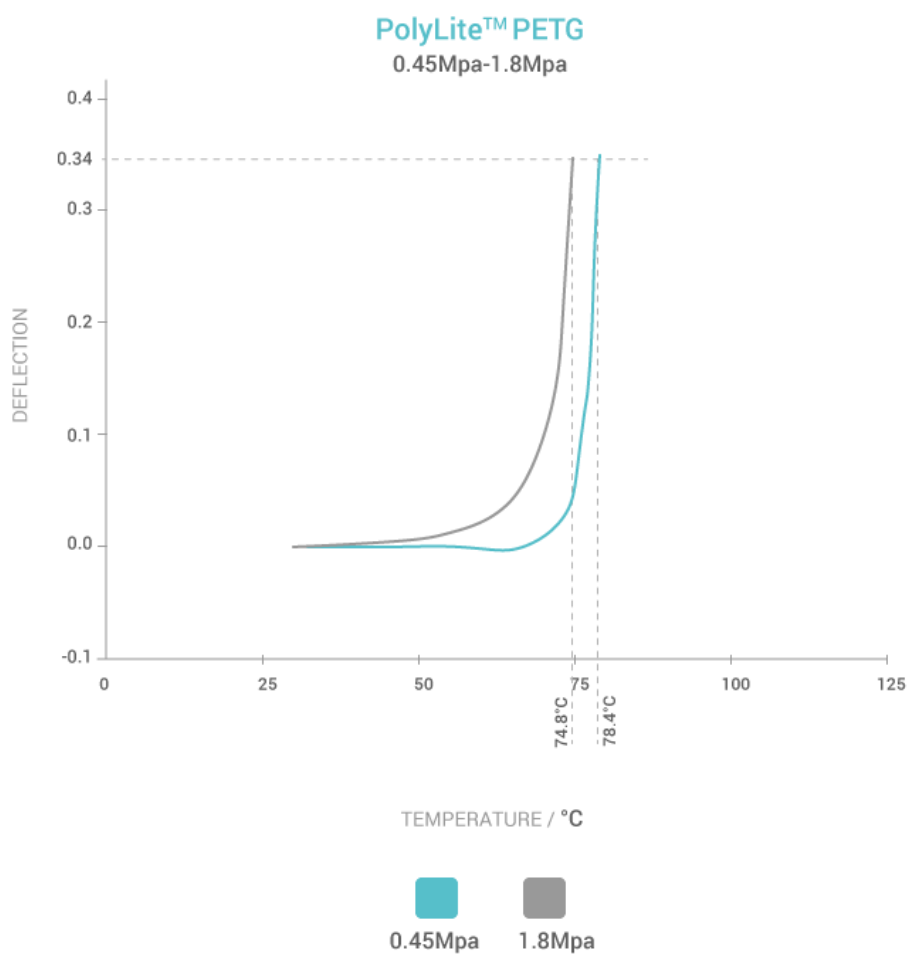
### MOISTURE ABSORPTION CURVE



## THERMAL PROPERTIES

| Property                    | Testing Method    | Typical Value |
|-----------------------------|-------------------|---------------|
| Glass transition            | DSC, 10°C/min     | 81 °C         |
| Melting temperature         | DSC, 10°C/min     | N/A           |
| Crystallization temperature | DSC, 10°C/min     | N/A           |
| Decomposition temperature   | TGA, 20°C/min     | N/A           |
| Vicat softening temperature | ISO 306 GB/T 1633 | 84 °C         |
| Heat deflection temperature | ISO 75 1.8MPa     | 74.8 °C       |
| Heat deflection temperature | ISO 75 0.45MPa    | 78.4 °C       |
| Thermal conductivity        | N/A               | N/A           |
| Low temperature resistance  | N/A               | N/A           |
| Heat shrinkage rate         | N/A               | N/A           |

## HDT CURVE



## MECHANICAL PROPERTIES

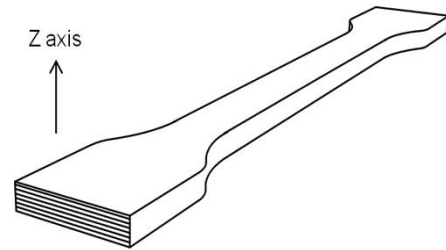
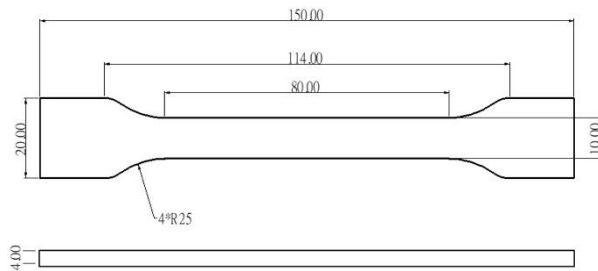
| Property                     | Testing Method     | Typical Value               |
|------------------------------|--------------------|-----------------------------|
| Young's modulus (X-Y)        | ISO 527, GB/T 1040 | 1472 ± 270 MPa              |
| Young's modulus (Z)          |                    | 1087 ± 79 MPa               |
| Tensile strength (X-Y)       | ISO 527, GB/T 1040 | 31.9 ± 1.1 MPa              |
| Tensile strength (Z)         |                    | 13.4 ± 2.0 MPa              |
| Elongation at break (X-Y)    | ISO 527, GB/T 1040 | 6.8 ± 0.9 %                 |
| Elongation at break (Z)      |                    | 1.3 ± 0.2 %                 |
| Bending modulus (X-Y)        | ISO 178, GB/T 9341 | 1174 ± 64 MPa               |
| Bending modulus (Z)          |                    | N/A                         |
| Bending strength (X-Y)       | ISO 178, GB/T 9341 | 53.7 ± 2.4 MPa              |
| Bending strength (Z)         |                    | N/A                         |
| Charpy impact strength (X-Y) | ISO 179, GB/T 9343 | 5.1 ± 0.3 kJ/m <sup>2</sup> |
| Charpy impact strength (Z)   |                    | N/A                         |

## HOW TO MAKE SPECIMENS

|                           |        |
|---------------------------|--------|
| Printing temperature      | 240 °C |
| Bed temperature           | 80 °C  |
| Shell                     | 2      |
| Top & bottom layer        | 4      |
| Infill                    | 100%   |
| Environmental temperature | 25 °C  |
| Cooling fan               | OFF    |

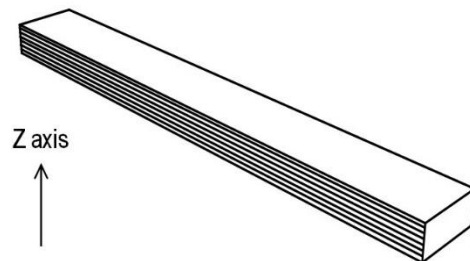
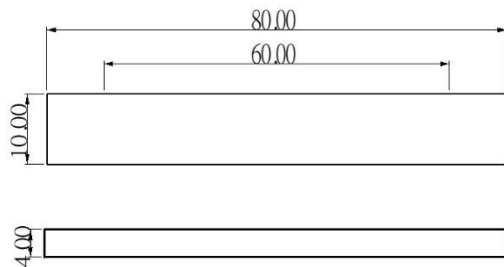
## TENSILE TESTING SPECIMEN

ASTM D638 (ISO 527, GB/T 1040)



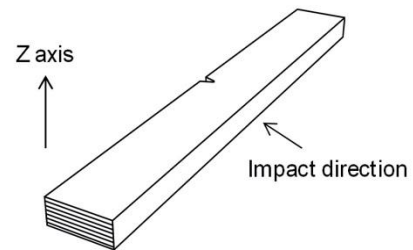
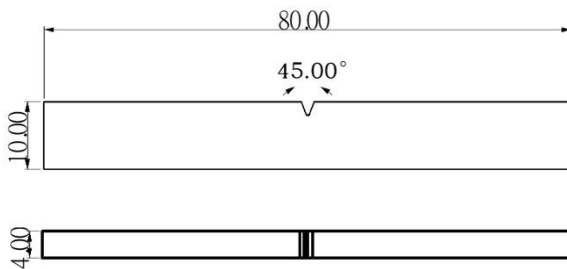
## FLEXURAL TESTING SPECIMEN

ASTM D638 (ISO 527, GB/T 1040)



## IMPACT TESTING SPECIMEN

ASTM D638 (ISO 179, GB/T 1043)



### DISCLAIMER:

The typical values presented in this data sheet are intended for reference and comparison purposes only. They should not be used for design specifications or quality control purposes. Actual values may vary significantly with printing conditions. End- use performance of printed parts depends not only on materials, but also on part design, environmental conditions, printing conditions, etc. Product specifications are subject to change without notice.

Each user is responsible for determining the safety, lawfulness, technical suitability, and disposal/ recycling practices of Polymaker materials for the intended application. Polymaker makes no warranty of any kind, unless announced separately, to the fitness for any use or application. Polymaker shall not be made liable for any damage, injury or loss induced from the use of Polymaker materials in any application.