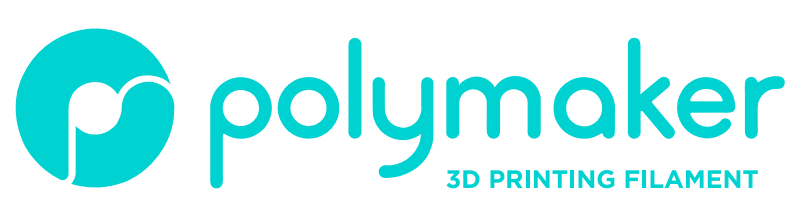


# TECHNICAL DATA SHEET



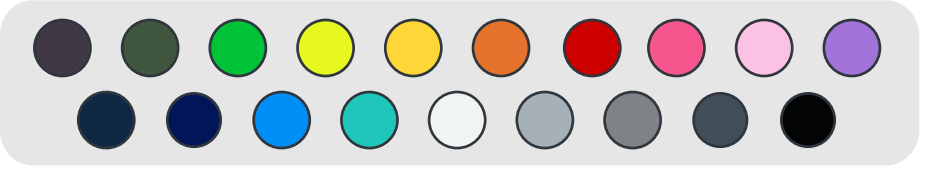
V3.0



## Polymaker™ PETG

Polymaker™ PETG is a cost-effective, high-flow filament engineered for improved all-around performance. It enables faster extrusion, a cleaner surface finish, and offers excellent printability with low odor, perfect for dependable prototyping and robust end-use parts.

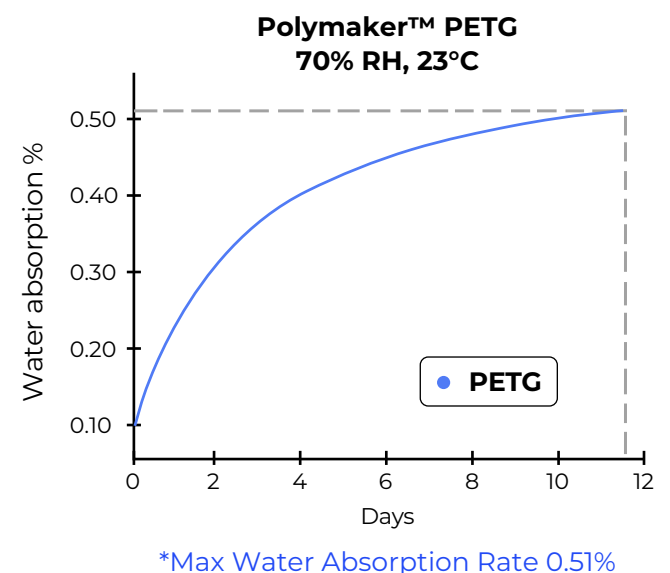
[WWW.POLYMAKER.COM](http://WWW.POLYMAKER.COM)



## PHYSICAL PROPERTIES

PROPERTY	TESTING METHOD	TYPICAL VALUE
Density	ISO1183, GB/T1033	1.30 g/cm <sup>3</sup> at 23°C
Melt index	230°C, 2.16 kg	16.3 g/10min
Light transmission	GB/T 2410	N/A

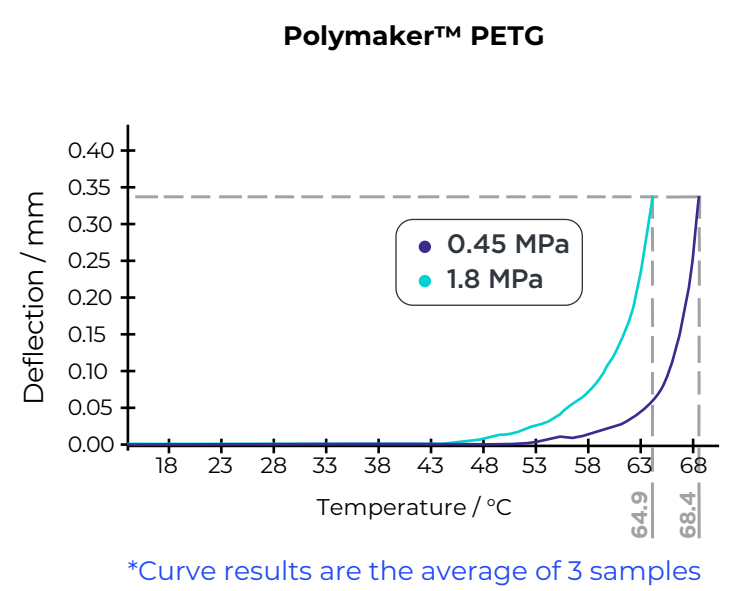
## MOISTURE ABSORPTION CURVE



## THERMAL PROPERTIES

PROPERTY	TESTING METHOD	TYPICAL VALUE
Glass transition temp.	DSC, 10°C/min	71.24°C
Decomposition temp.	TGA, 20°C/min	405.49°C
Vicat softening temp.	ISO 306, GB/T 1633	75°C
Heat deflection temp.	ISO 75 0.45MPa	69°C
Heat deflection temp.	ISO 75 1.8MPa	65°C

## HDT CURVE



## MECHANICAL PROPERTIES

PROPERTY	TESTING METHOD	TYPICAL VALUE
Young's modulus (X-Y)	ISO 527, GB/T 1040	2311.11 ± 92.41 MPa
Young's modulus (Z)		2202.91 ± 52.34 MPa
Tensile strength (X-Y)	ISO 527, GB/T 1040	47.96 ± 4.88 MPa
Tensile strength (Z)		45.71 ± 1.76 MPa
Elongation at break (X-Y)	ISO 527, GB/T 1040	9.33 ± 6.57%
Elongation at break (Z)		3.54 ± 2.35%
Bending modulus (X-Y)	ISO 178, GB/T 9341	2277.34 ± 198.09 MPa
Bending modulus (Z)		1958.74 ± 126.39 MPa
Bending strength (X-Y)	ISO 178, GB/T 9341	80.08 ± 3.53 MPa
Bending strength (Z)		57.65 ± 5.63 MPa
Charpy impact strength (X-Y) notched	ISO 179, GB/T 1043	4.95 ± 0.55 kJ/m <sup>2</sup>
Charpy impact strength (X-Y)		20.24 ± 3.95 kJ/m <sup>2</sup>
Charpy impact strength (Z)		15.74 ± 3.91 kJ/m <sup>2</sup>

## CHEMICAL RESISTANCE DATA

PROPERTY	TYPICAL VALUE
Effect of weak acids	Good
Effect of strong acids	Poor
Effect of weak alkalis	Fair
Effect of strong alkalis	Poor
Effect of oils and grease	Good

**Good:**  
Material may get minor attack after long periods of storage with chemical at ambient temperature

**Fair:**  
Material can be used for short time contact with chemicals at ambient temperature

**Poor:**  
Material becomes unstable on contact with chemical at ambient temperature

## RECOMMENDED PRINTING CONDITIONS

Nozzle temperature	240-260°C
Build plate temperature	60-70°C
Build surface treatment	PC and Textured PEI
Cooling fan	20%-60%
Closure chamber	Not Needed

Printing Speed	Up to 300mm/s
Drying temp. and time	60°C/6H
Retraction distance	1-3 (mm)
Retraction Speed	20-40 (mm/s)

\*Based on 0.4mm nozzle. Printing conditions may vary with different nozzle diameters.



PolyBox™ or PolyDryer™ Box

### NOTE

It is highly recommended to use the PolyBox™ or PolyDryer™ Box when printing or storing Polymaker™ PETG.

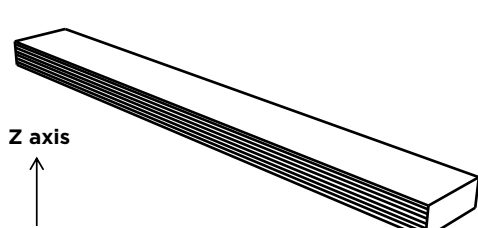
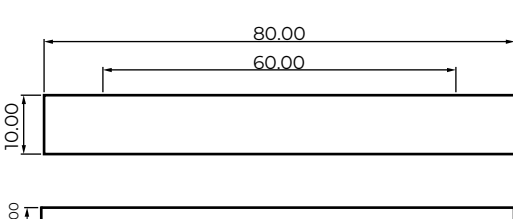
## HOW TO MAKE SPECIMENS

Printing temperature	240°C
Bed temperature	80°C
Top & bottom layer	3
Environmental Temperature	Ambient

Infill	100%
Shell	2
Cooling fan	OFF

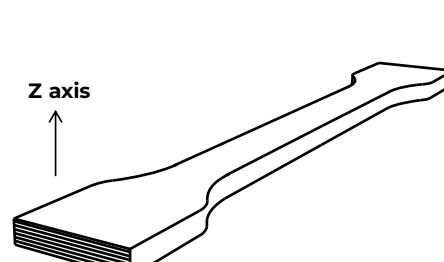
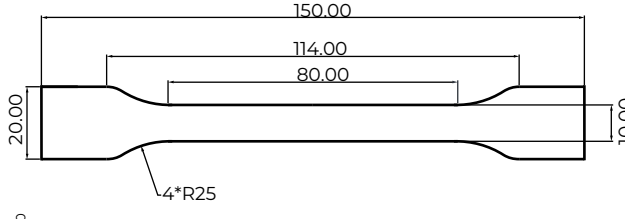
### FLEXURAL TESTING SPECIMEN

ISO 178, GB/T 9341



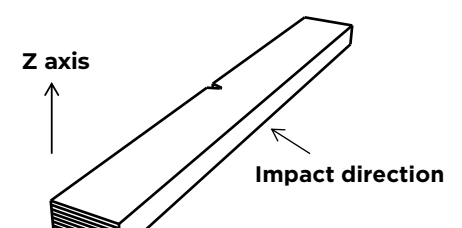
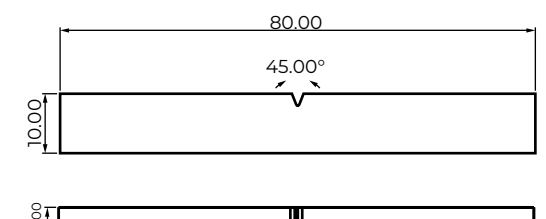
### TENSILE TESTING SPECIMEN

ISO 527, GB/T 1040



### IMPACT TESTING SPECIMEN

ISO 179, GB/T 1043



## DISCLAIMER

The typical values presented in this data sheet are intended for reference and quality control 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.