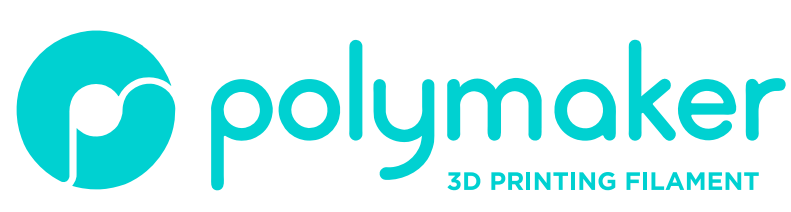


TECHNICAL DATA SHEET



V5.5



PolyMax™ PETG

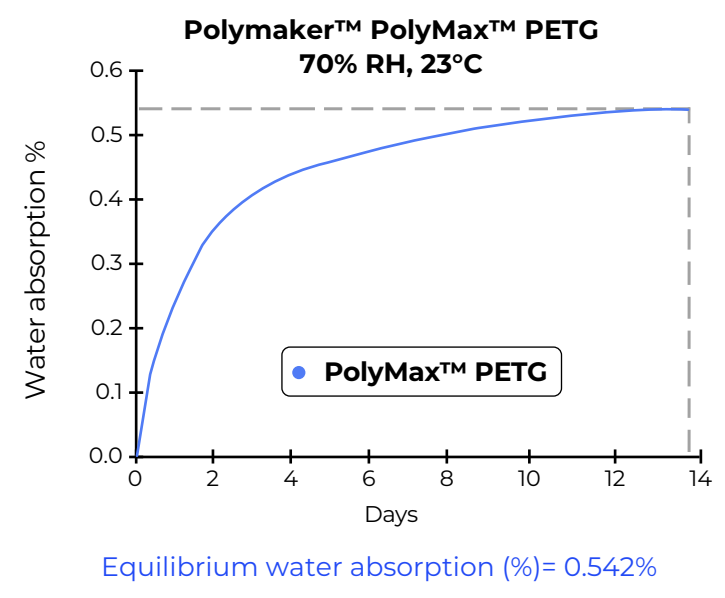
PolyMax™ PETG offers better mechanical properties than any other regular PETG making it a good candidate for a wide range of applications.

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PHYSICAL PROPERTIES

PROPERTY	TESTING METHOD	TYPICAL VALUE
Density	ISO1183, GB/T 1033	1.24 g/cm ³ at 23°C
Melt index	210°C, 2.16 kg	9 g/10min

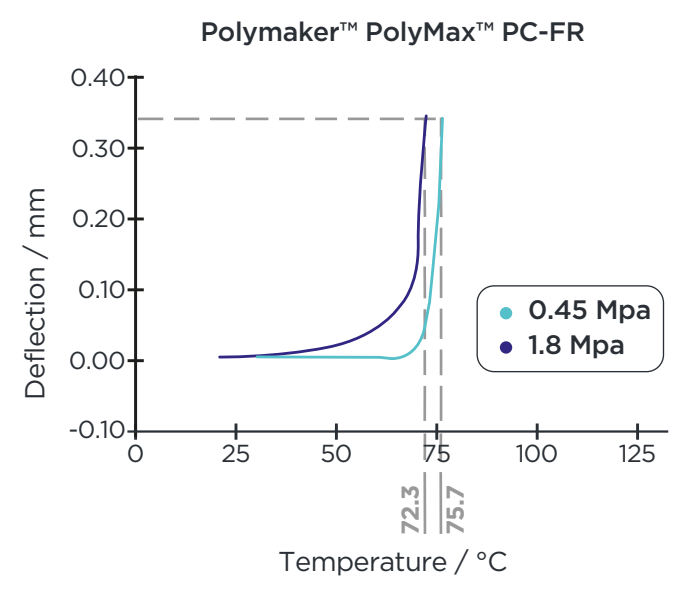
MOISTURE ABSORPTION CURVE



THERMAL PROPERTIES

PROPERTY	TESTING METHOD	TYPICAL VALUE
Glass transition temp.	DSC, 10°C/min	79°C
Melting temp.	DSC, 10°C/min	N/A
Crystallization temp.	DSC, 10°C/min	N/A
Decomposition temp.	TGA, 20°C/min	373°C
Vicat softening temp.	ISO 306, GB/T 1633	82°C
Heat deflection temp.	ISO 75 1.8MPa	72°C
Heat deflection temp.	ISO 75 0.45MPa	76°C

HDT CURVE



MECHANICAL PROPERTIES

PROPERTY	TESTING METHOD	TYPICAL VALUE
Young's modulus (X-Y)	ISO 527, GB/T 1040	1684 ± 135 MPa
Young's modulus (Z)		1603 ± 40 MPa
Tensile strength (X-Y)	ISO 527, GB/T 1040	37.9 ± 1.4 MPa
Tensile strength (Z)		29.4 ± 1.0 MPa
Elongation at break (X-Y)	ISO 527, GB/T 1040	5.22 ± 1.5 %
Elongation at break (Z)		3.10 ± 0.51 %
Bending modulus (X-Y)	ISO 178, GB/T 9341	1068 ± 94 MPa
Bending modulus (Z)		N/A
Bending strength (X-Y)	ISO 178, GB/T 9341	58.3 ± 0.38 MPa
Bending strength (Z)		55.1 ± 4.9 MPa
Notched charpy impact strength (X-Y)	ISO 179, GB/T 1043	11.6 ± 0.8 kJ/m ²
Notched charpy impact strength (Z)		2.4 ± 0.6 kJ/m ²

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	230-260°C
Build plate temperature	70-80°C
Build surface treatment	PC and Textured PEI
Cooling fan	OFF-20%
Closure chamber	Not needed

Printing speed	50-100mm/s
Drying temp. and time	65°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.



PolyDissolve™ S1
Recommended support material



PolyBox™ or PolyDryer™ Box
Recommended storage for excellent printing quality

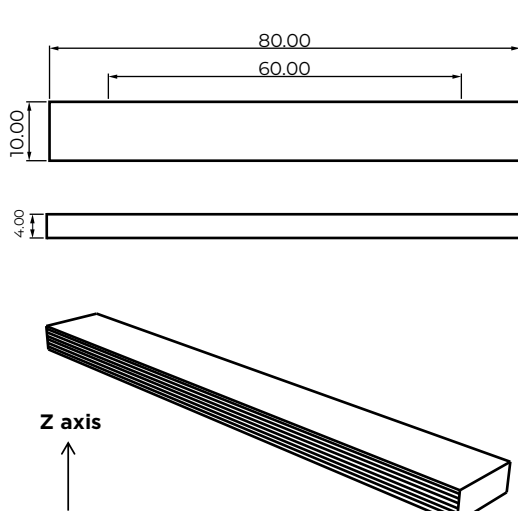
HOW TO MAKE SPECIMENS

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

Infill	100%
Shell	2
Cooling fan	OFF

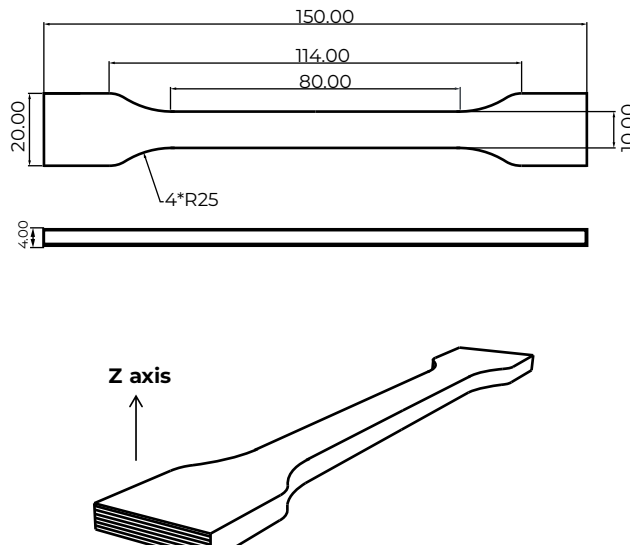
FLEXURAL TESTING SPECIMEN

ISO 178, GB/T 9341



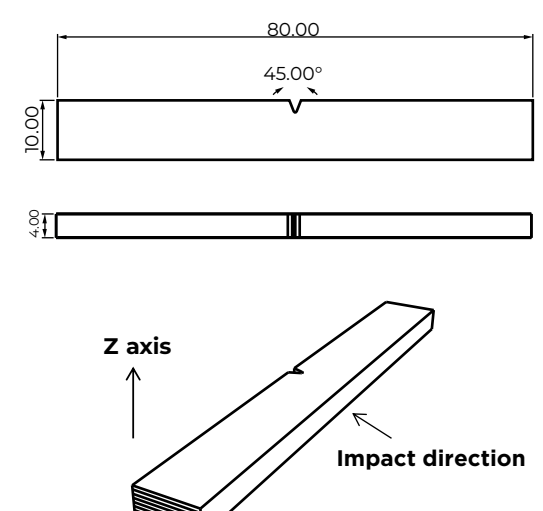
TENSILE TESTING SPECIMEN

ISO 527, GB/T 1040



IMPACT TESTING SPECIMEN

ISO 179, GB/T 1043



*Based on testing with Polymaker™ PolyMax™ PETG (SKU: PB02002)

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.