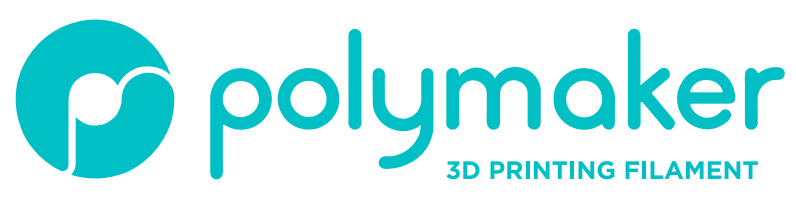


TECHNICAL DATA SHEET



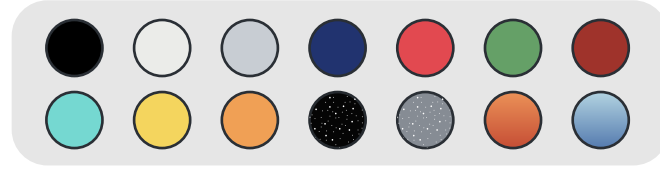
V1.1



POLYMAKER™ ABS-Pro

Polymaker™ ABS Pro is an engineering-grade ABS filament developed for users who require more performance than standard ABS can provide. With enhanced heat resistance, strength, and impact resistance, ABS Pro is the ideal upgrade for demanding functional printing applications.

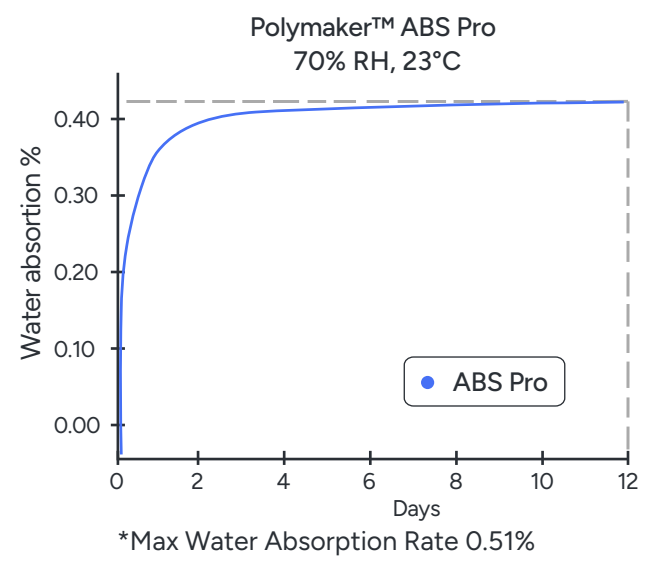
WWW.POLYMAKER.COM



PHYSICAL PROPERTIES

PROPERTY	TESTING METHOD	TYPICAL VALUE
Density	ISO1183, GB/T1033	1.04 g/cm ³ at 23°C
Melt index	210°C, 2.16 kg	11.1 g/10min
Light transmission	GB/T 2410	N/A

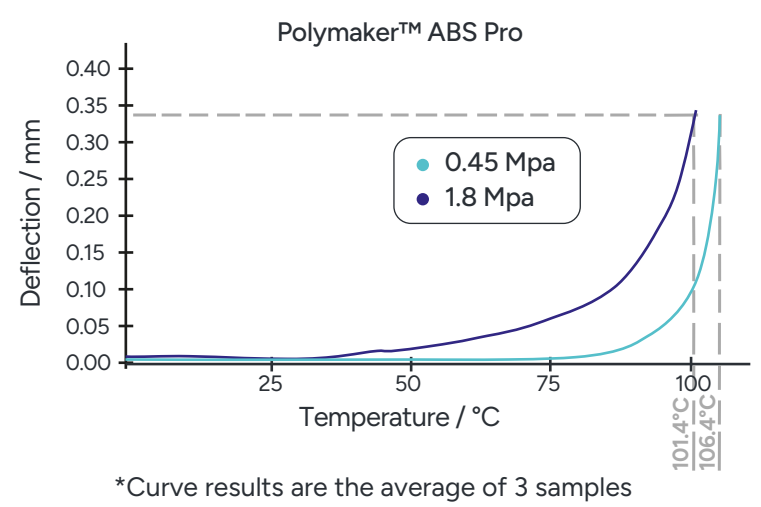
MOISTURE ABSORPTION CURVE



THERMAL PROPERTIES

PROPERTY	TESTING METHOD	TYPICAL VALUE
Glass transition temp.	DSC, 10°C/min	114.9°C
Decomposition temp.	TGA, 20°C/min	436.4°C
Vicat softening temp.	ISO 306, GB/T 1633	116.1°C
Heat deflection temp.	ISO 75 0.45MPa	106.4°C
Heat deflection temp.	ISO 75 1.8MPa	101.4°C

HDT CURVE



MECHANICAL PROPERTIES

PROPERTY	TESTING METHOD	TYPICAL VALUE
Young's modulus (X-Y)	ISO 527, GB/T 1040	2.33±0.03 GPa
Young's modulus (Z)		1.95±0.02 GPa
Tensile strength (X-Y)	ISO 527, GB/T 1040	34.94±0.62 MPa
Tensile strength (Z)		21.87±0.32 MPa
Elongation at break (X-Y)	ISO 527, GB/T 1040	7.34±1.13 %
Elongation at break (Z)		1.54±0.13 %
Bending modulus (X-Y)	ISO 178, GB/T 9341	2.33±0.05 GPa
Bending modulus (Z)		2.17±0.01 GPa
Bending strength (X-Y)	ISO 178, GB/T 9341	60.05±0.46 MPa
Bending strength (Z)		41.24±2.14 MPa
Charpy impact strength (X-Y) notched	ISO 179, GB/T 1043	14.48±0.96 kJ/m ²
Charpy impact strength (X-Y)		8.87±1.14 kJ/m ²
Charpy impact strength (Z)		39.58±12.45 kJ/m ²

CHEMICAL RESISTANCE DATA

PROPERTY	TYPICAL VALUE
Effect of weak acids	Good
Effect of strong acids	Poor
Effect of weak alkalis	Good
Effect of strong alkalis	Fair
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	270-290°C
Build plate temperature	100-110°C
Build surface treatment	PEI
Cooling fan	0-30%
Closure chamber	Yes

Printing speed	Up to 250mm/s
Drying temp. and time	70°C/6H
Retraction distance	1 (mm)
Retraction Speed	20 (mm/s)

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



PolyBox™ or PolyDryer™ Box

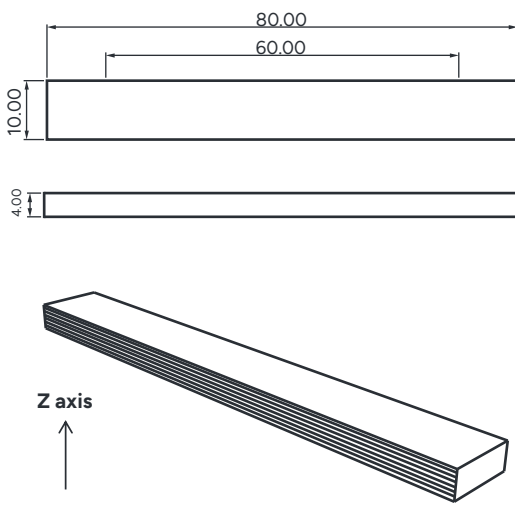
Recommended storage for excellent printing quality

HOW TO MAKE SPECIMENS

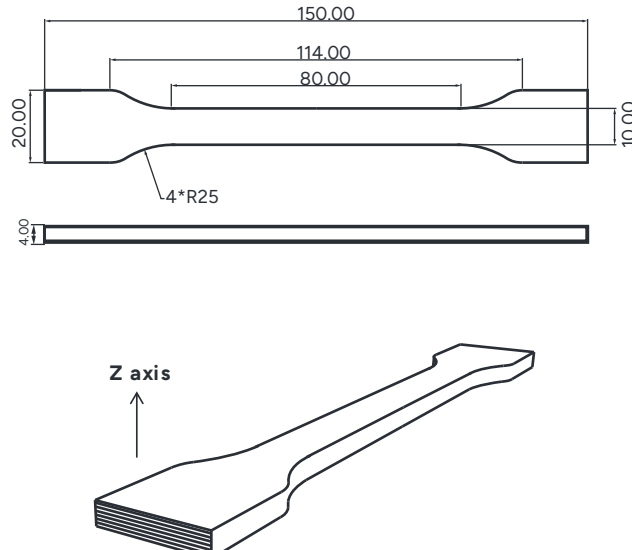
Printing temperature	240°C
Bed temperature	80°C
Top & bottom layer	3
Environmental Temperature	Ambient

Infill	100%
Shell	2
Cooling fan	OFF

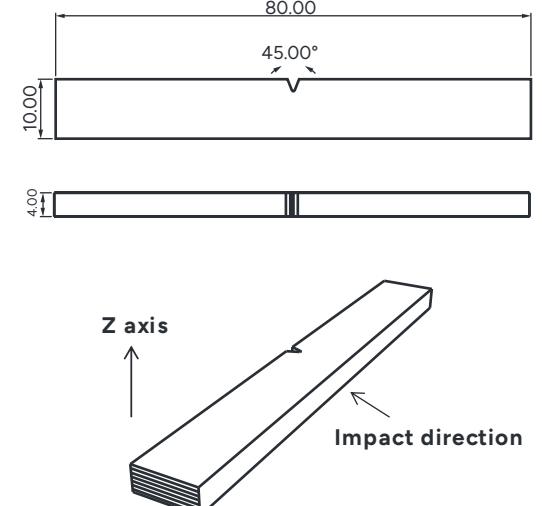
FLEXURAL TESTING SPECIMEN ISO 178, GB/T 9341



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 comparison purposes only. They should not be used for design specifications or quality control purposes. Actual values may vary significantly with different 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.