

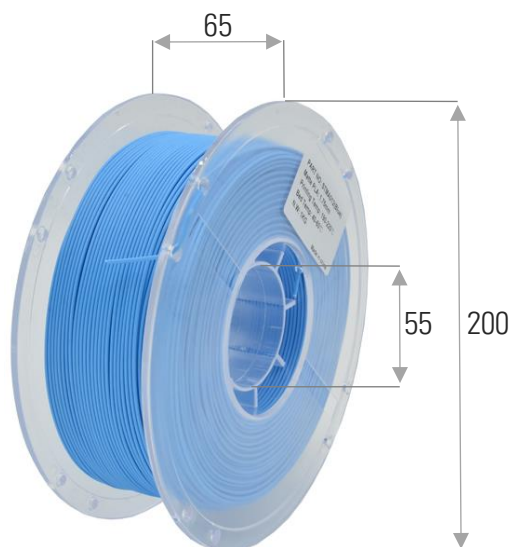


ROYALFILAMENTS

ABS Pro TECHNICAL DATA SHEET

HIGH QUALITY

- Neat winding
- No bubbles
- Solid spool
- No warped



HEALTHY MATERIAL

- No toxic
- Low odor
- RoHS material

PHYSICAL PROPERTIES

ABS PRO		
PROPERTY	TESTING METHOD	TYPICAL VALUE
Density	ISO1183, GB/T1033	1.12 g/cm ³ at 23° C
Melt Index	220° C, 2.16kg	9-14 g/10min

CHEMICAL RESISTANT DATA

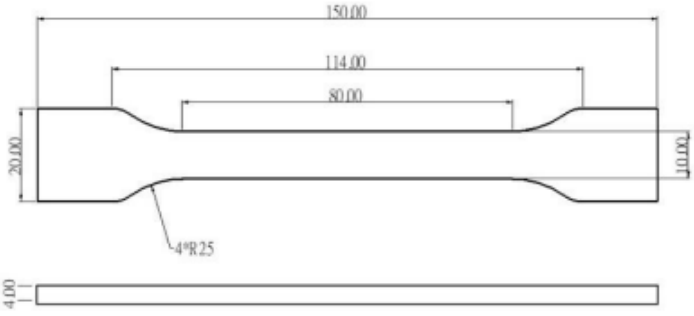
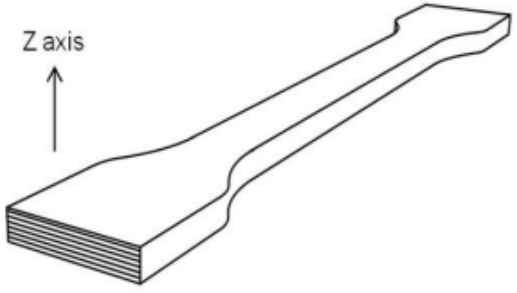
PROPERTY	TESTING METHOD
Effect of weak acids	Not Resistant
Effect of strong acids	Not Resistant
Effect of weak alkalis	Resistant
Effect of strong alkalis	Resistant
Effect of organic solvent	Not Resistant

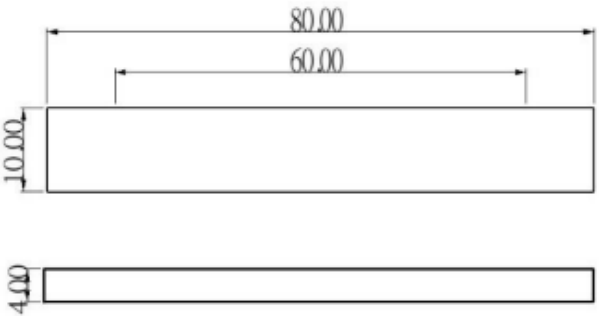
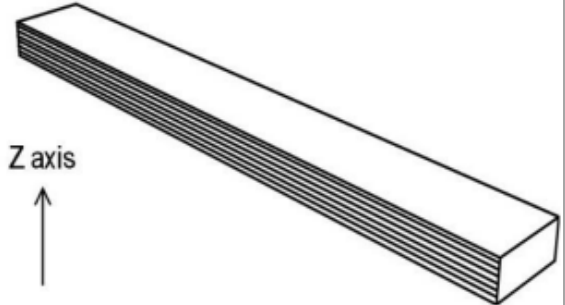
THERMAL PROPERTIES

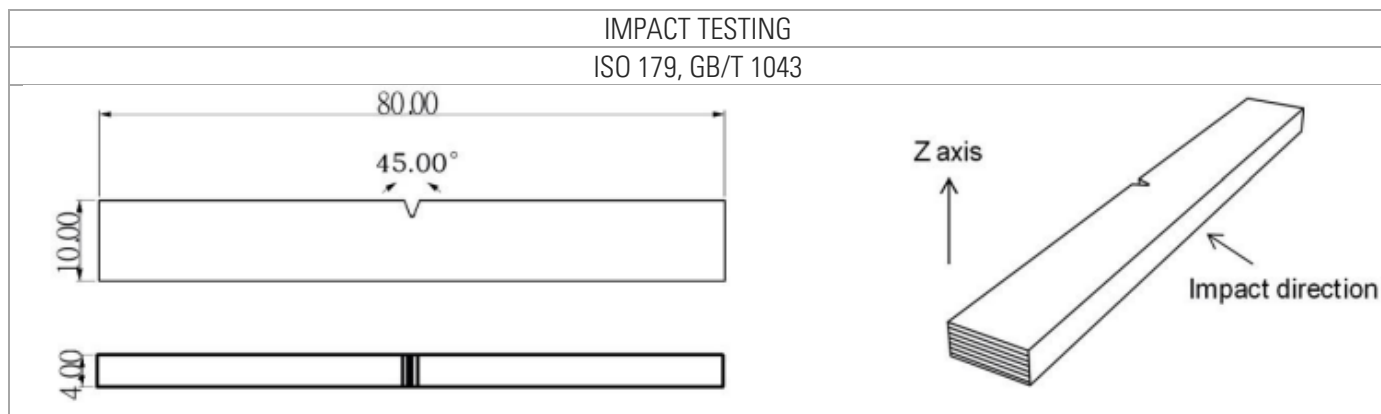
PROPERTY	TESTING METHOD	TYPICAL VALUE
Glass transition	DSC, 10° C/min	101.1 °C
Melting temperature	DSC, 10° C/min	N/A
Crystallization temperature	DSC, 10° C/min	113,5 °C
Decomposition temperature	TGA, 20° C/min	>380 °C
Vicat softening temperature	ISO 306 GB/T 1633	103.8 °C
Heat deflection temperature	ISO 75 1.8MPa	98.1 °C
Heat deflection temperature	ISO 75 0.45MPa	99,5 °C

PRINTING PARAMETERS		
PROPERTY	TESTING METHOD	TYPICAL VALUE
Young's modulus (X-Y)	ISO 527, GB/T 1040	2174 ± 285 MPa
Young's modulus (Z)		1835 ± 36 MPa
Tensile strength (X-Y)	ISO 527, GB/T 1040	33,3 ± 0,8 MPa
Tensile strength (Z)		25,4 ± 0,8 MPa
Elongation at break (X-Y)	ISO 527, GB/T 1040	2,7 ± 0,4 %
Elongation at break (Z)		2,4 ± 1,2 %
Bending modulus (X-Y)	ISO 178, GB/T 9341	2844 ± 411 MPa
Bending modulus (Z)		N/A
Bending strength (X-Y)	ISO 178, GB/T 9341	72,8 ± 0,7 MPa
Bending strength (Z)		N/A
Charpy impact strength (X-Y)	ISO 179, GB/T 1043	12,6 ± 1,1 kJ/m ²
Charpy impact strength (Z)		10,5 ± 0,4 kJ/m ²
Shore hardness	ISO 7619-1, GB/T 531.1	~72D

CHEMICAL RESISTANT DATA	
PARAMETER	TESTING METHOD
Nozzle temperature	220 – 265 (°C)
Build Surface material	Glass, PEI plate,
Build surface treatment	Glue, Magigoo, Dimafix
Build plate temperature	90 - 100 (°C)
Cooling fan	OFF
Printing speed	<200 (mm/s)

TENSILE TESTING	
ISO 527, GB/T 1040	
	

FLEXURAL TESTING	
ISO 178, GB/T 9341	
	



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 RoyalFilaments materials for the intended application. RoyalFilaments makes no warranty of any kind, unless announced separately, to the fitness for any use or application. RoyalFilaments shall not be made liable for any damage, injury or loss induced from the use of RoyalFilaments materials in any application.

Warning: Do not eat / Keep in dry
ABS Pro filament should be dried at a temperature of around 55°C for more than four hours.
Manufacturer: ROYALFILAMENTS OEM , Polymakery Wuyi Sting 3D Technology Co., Ltd.



Print it easily and royally

