

Technical Data Sheet (TDS)

Standard PP

Eryone Standard PP filament is a material with excellent chemical resistance and mechanical properties, showcasing good flexibility, making it ideal for applications such as handles, lockable containers, and bottles for holding chemicals. This material is a tough, semi-rigid thermoplastic with outstanding heat resistance, electrical insulation, and wear resistance. During the printing process, it is recommended to apply specialized PP printing glue on the heated bed to ensure optimal results.

Part I: Suggests Printing Parameters

Parameter	Set up
Nozzle temperature	220-240 °C
Bed temperature	60-80°C
Bed material	glass, PEI, spring steel plate
Bottom printing temperature	220-240 °C
Sealed printing	closed printing
Printing speed	30-100mm/s
Drying conditions	50-60°C, 8h

Part II: Physical Properties of Materials

Property	Testing Method	Unit	Typical Value
Density(g/cm ³ at 21.5 ° C)	ASTM D792 (ISO 1183, GB/T 1033)	g/cm ³	0.95
Vicat Softening Temperature(° C)	ASTM D1525 (ISO 306 GB/T 1633)	°C	55-63
Heat distortion temperature(° C)	ASTM D648 1.8MPa 0.45MPa	°C	55
Melt Index(g/10 min)	220 ° C, 10kg 240 ° C, 2.16 kg	g/10min	12-15

Part III: Mechanical Properties of Printed Samples

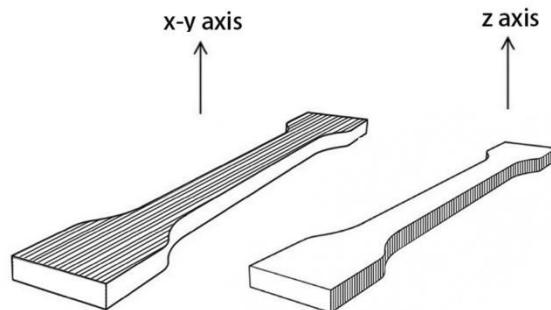
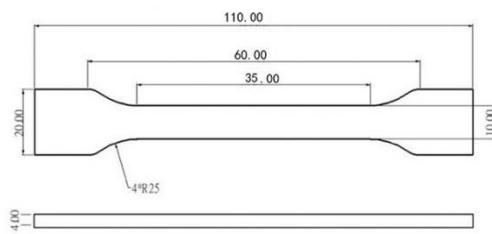
Property	Test conditions	Test standards	unit	Typical Value
Tensile strength X-Y	50mm/min	GB/T 1040.4	MPa	23-29
Elastic modulus X-Y	50mm/min	GB/T 1040.1-2006	MPa	35-45
Elongation at break X-Y	50mm/min	GB/T 1040.4	%	> 80

Note: All splines are printed under the following conditions: printing temperature=230 ° C, printing speed=80mm/s, base plate 80 ° C, filling=100%, nozzle diameter=0.4mm

TENSILE TESTING SPECIMEN

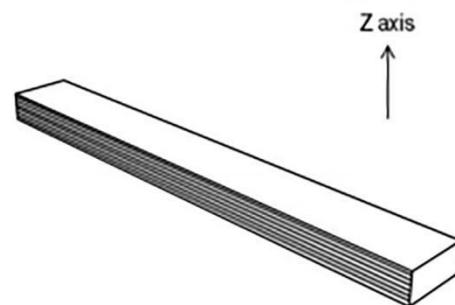
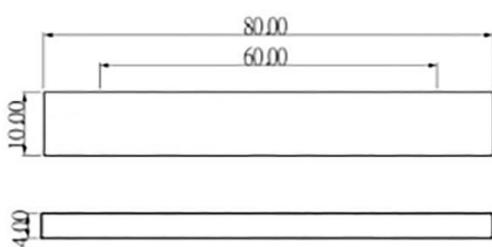
ISO 527,GB/T 1040

td



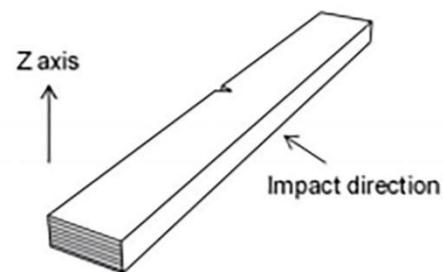
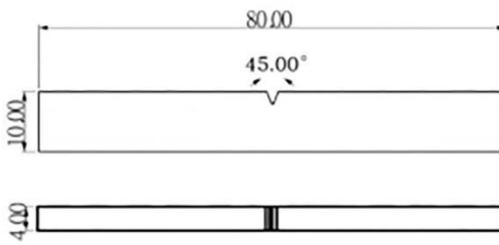
FLEXURAL TESTING SPECIMEN

ISO 178,GB/T 9341



IMPACT TESTING SPECIMEN

ISO 179,GB/T 1043



Disclaimers

The values given in this data table are for reference and comparison only. They should not be used for design specifications or quality control. The actual value may vary depending on the printing conditions. The final performance of printed components depends not only on the material, but also on the component design, environmental conditions, printing conditions, and so on. Product specifications are subject to change without prior notice.