

Technical Data Sheet (TDS)

Hyper-Speed PLA+

Eryone Hyper-Speed PLA+ filament is a material specifically designed for high-speed printing, featuring excellent toughness and outstanding tensile properties, making it ideal for the production of engineering models. Its surface is smooth and delicate, with minimal visible layer lines, and the shaping process is relatively simple. Compared to regular PLA, high-speed PLA+ has significantly enhanced elasticity and can also print products like spring-like toys.

Part I: Suggests Printing Parameters

Parameter	Set up
Nozzle temperature	190-230 °C
Bed temperature	35-60°C
Bed material	glass, PEI, spring steel plate
Bottom printing temperature	190-230 °C
Sealed printing	open printing/closed printing
Printing speed	≤600mm/s
Drying conditions	65-75°C, 12h

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	1.23
Vicat Softening Temperature(° C)	ASTM D1525 (ISO 306 GB/T 1633)	°C	54
Heat distortion temperature(° C)	ASTM D648 1.8MPa 0.45MPa	°C	53
Melt Index(g/10 min)	220 ° C, 10kg 240 ° C, 2.16 kg	g/10min	6.3

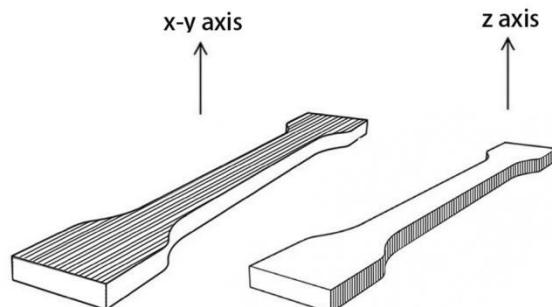
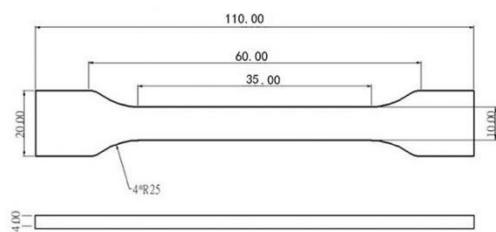
Part III: Mechanical Properties of Printed Samples

Property	Test conditions	Test standards	unit	Typical Value
Tensile strength X-Y	50mm/min	GB/T 1040.4	MPa	33.38
Elastic modulus X-Y	50mm/min	GB/T 1040.1-2006	MPa	538.41
Elongation at break X-Y	50mm/min	GB/T 1040.4	%	14.21
Tensile strength X-Z	50mm/min	GB/T 1843	MPa	28.76
Elastic modulus X-Z	50mm/min	GB/T 1040.1-2006	MPa	503.02
Elongation at break X-Z	50mm/min	GB/T 1040.4	%	6.06

Note: All splines are printed under the following conditions: printing temperature=210 ° C, printing speed=150mm/s, base plate 60 ° C, filling=100%, nozzle diameter=0.4mm

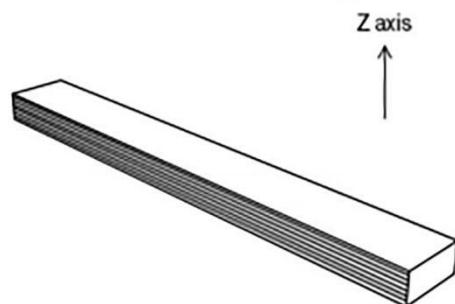
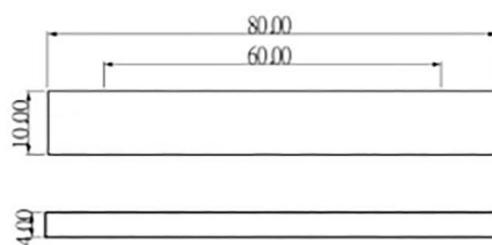
TENSILE TESTING SPECIMEN

ISO 527,GB/T 1040



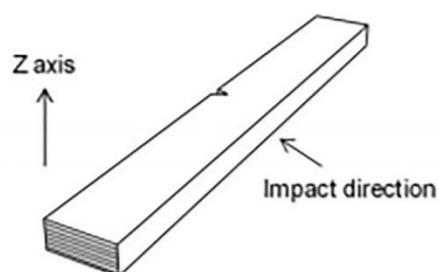
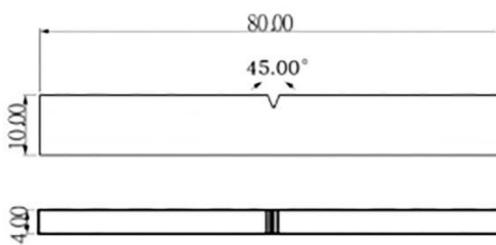
FLEXURAL TESTING SPECIMEN

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.