

Technical Data Sheet (TDS)

PLA-CF

Eryone-PLA-CF filament is a high-performance functional material with anti-static properties, low shrinkage, and reduced warping, ensuring a high level of precision in models. Compared to regular PLA, it exhibits superior strength and stiffness, with a matte finish that makes it particularly suitable for printing models that require higher strength.

Part I: Suggests Printing Parameters

Parameter	Set up
Nozzle temperature	190℃-220℃
Bed temperature	60-70℃
Bed material	glass, PEI, spring steel plate
Bottom printing temperature	190℃-220℃
Sealed printing	Supports open printing, and the sealing effect is better.
Printing speed	30-100mm/s
Drying conditions	50℃-60℃ , 6h

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	1.24
Vicat Softening Temperature(° C)	ASTM D1525 (ISO 306 GB/T 1633)	℃	69
Heat distortion temperature(° C)	ASTM D648 0.45MPa	℃	54
Glass transition temperature (° C)	DSC, 10 ° C/min	℃	63
Melt Index(g/10 min)	220 ° C, 10kg 240 ° C, 2.16 kg	g/10min	3.7±0.6

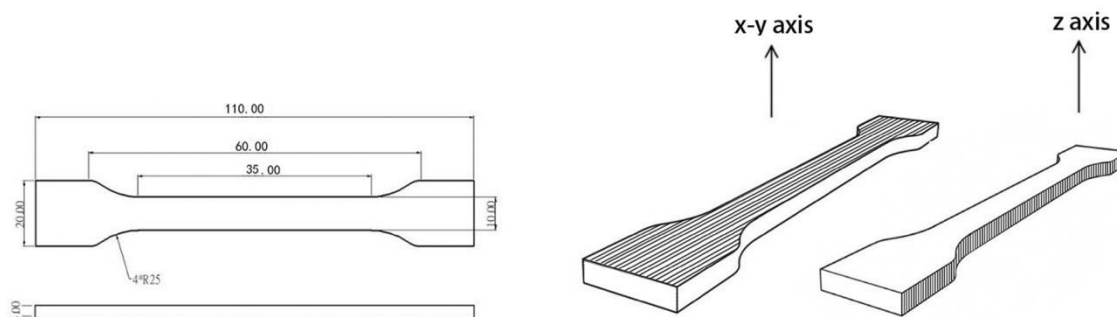
Part III: Mechanical Properties of Printed Samples

Property	Test conditions	Test standards	unit	Typical Value
Tensile strength X-Y	50mm/min	GB/T 1040.4	MPa	43.5
Elastic modulus X-Y	50mm/min	GB/T 1040.1-2006	MPa	1732.7
Elongation at break X-Y	50mm/min	GB/T 1040.4	%	4.5
Tensile strength X-Z	50mm/min	GB/T 1843	MPa	25.3
Elastic modulus X-Z	50mm/min	GB/T 1040.1-2006	MPa	1352.1
Elongation at break X-Z	50mm/min	GB/T 1040.4	%	3.1
Bending strength	2mm/min	GB/T 9341	MPa	67.5
Bending modulus	2mm/min	GB/T 9341	MPa	5513.7
Charpy Impact strenght	2.75J	GB/T 1843	kJ/m2	4.75

Note: All splines are printed under the following conditions: printing temperature=220° C, printing speed=80mm/s, base plate 60 ° C, filling=100%, nozzle diameter=0.4mm

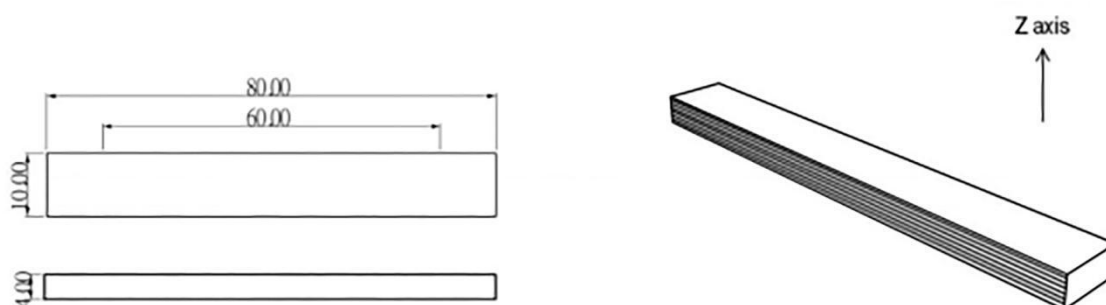
TENSILE TESTING SPECIMEN

ISO 527,GB/T 1040



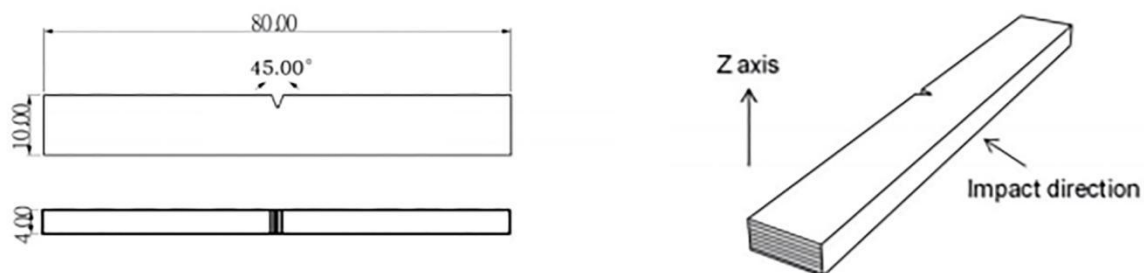
FLEXURAL TESTING SPECIMEN

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.