version 1.0
08/2024

Technical Data Sheet （TDS）

PETG-CF

ERYONE PETG-CF filament is an optimized printing material designed to effectively address common issues such as stringing, oozing, nozzle clogging, and jamming, resulting in a smoother printing process. It features excellent transparency and, compared to PLA, exhibits higher toughness and impact resistance, along with good water and weather resistance. This makes it suitable for a variety of applications, including printing flower pots, fixtures, and water valve switches.The carbon fiber content is approximately 15%.

Part I： Suggests Printing Parameters

Parameter	Set up
Nozzle temperature	230-250 ℃
Bed temperature	75-80℃
Bed material	glass, PEI, spring steel plate
Bottom printing temperature	230-250℃
Sealed printing	open printing/closed printing
Printing speed	30-80mm/s
Drying conditions	80℃, 12h

Part II: Physical Properties of Materials

Property	Testing Method	Unit	Typical Value
Density(g/cm³ at 21.5 ° C)	ASTM D792 (ISO 1183, GB/T 1033)	g/cm³	1.25
Vicat Softening Temperature(° C)	ASTM D1525 (ISO 306 GB/T 1633)	℃	85
Heat distortion temperature(° C)	ASTM D648 1.8MPa 0.45MPa	℃	68
Glass transition temperature (° C)	DSC, 10 ° C/min	℃	68
Melt Index(g/10 min)	220 ° C, 10kg 240 ° C, 2.16 kg	g/10min	19.3±2

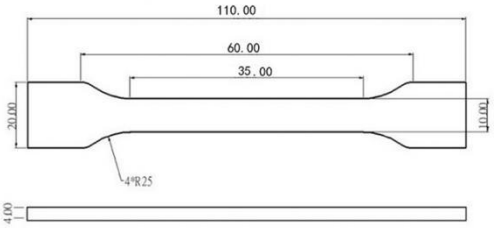
Part III: Mechanical Properties of Printed Samples

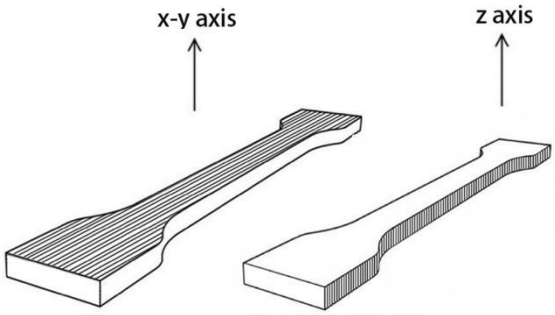
Property	Test conditions	Test standards	unit	Typical Value
Tensile strength X-Y	50mm/min	GB/T 1040.4	MPa	48.7
Elastic modulus X-Y	50mm/min	GB/T 1040.1-2006	MPa	1768.6
Elongation at break X-Y	50mm/min	GB/T 1040.4	%	1.9
Tensile strength X-Z	50mm/min	GB/T 1843	MPa	24.1
Elastic modulus X-Z	50mm/min	GB/T 1040.1-2006	MPa	1700.3
Elongation at break X-Z	50mm/min	GB/T 1040.4	%	1.5
Bending strength	2mm/min	GB/T 9341	MPa	63.8
Bending modulus	2mm/min	GB/T 9341	MPa	3208.9
Charpy Impact strenght	2.75J	GB/T 1843	kJ/m2	3

Note: All splines are printed under the following conditions: printing temperature=240 ° C, printing speed=80mm/s, base plate 65 ° C, filling=100%, nozzle diameter=0.4mm

TENSILE TESTING SPECIMEN

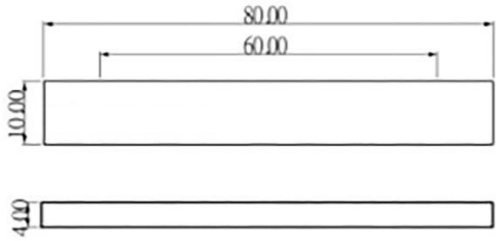
ISO 527,GB/T 1040

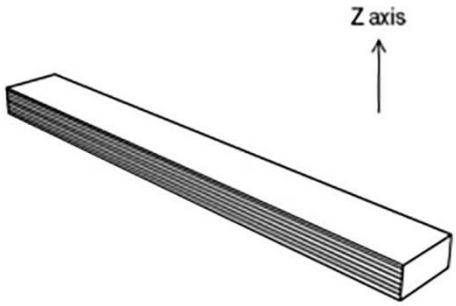




FLEXURAL TESTING SPECIMEN

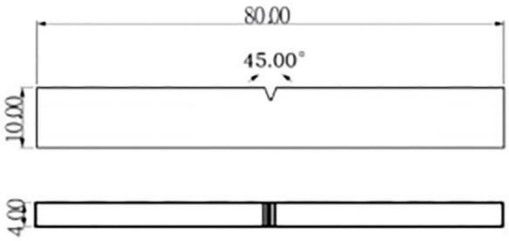
ISO 178,GB/T 9341

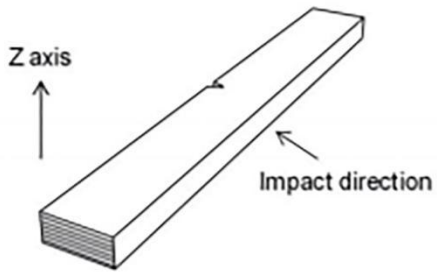




IMPACT TESTING SPECIMEN

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.