

technical data sheet (TDS)

ABS-GF

ABS-GF is a glass fiber reinforced ABS material that supports printing in open environments. It has balanced strength, rigidity, and anti curling ability, with a heat resistance temperature of 82 °C and a printing speed of 200mm/s. The surface has a matte fine sand smooth texture, and has good mechanical properties, thermal stability, and printing efficiency. It is suitable for 3D printing applications such as fixtures, manufacturing tools, shells, and structural components that require strength, rigidity, and heat resistance.

The first part suggests printing parameters

Parameter	Set up
Nozzle temperature	240-280 °C, recommended 270 °C
Bed temperature	90°C
Bed material	glass, PEI, spring steel plate
Bottom printing temperature	/
Sealed printing	supports open printing, and the sealing effect is better if it is sealed
Printing speed	100-200mm/s
Drying conditions	60°C, 4h

Part 2 Physical Properties of Materials

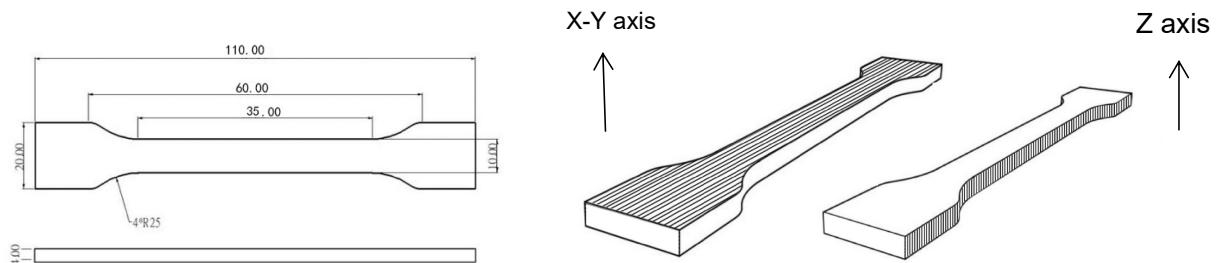
Property	Testing Method	Typical Value
Density(g/cm ³ at 21.5 ° C)	ASTM D792 (ISO 1183, GB/T 1033)	
Vicat Softening Temperature(° C)	ASTM D1525 (ISO 306 GB/T 1633)	
Heat distortion temperature(° C)	ASTM D648 1.8MPa 0.45MPa	
Glass transition temperature (° C)	DSC, 10 ° C/min	
Melt Index(g/10 min)	220 °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

Part Three: Mechanical Properties of Printed Samples

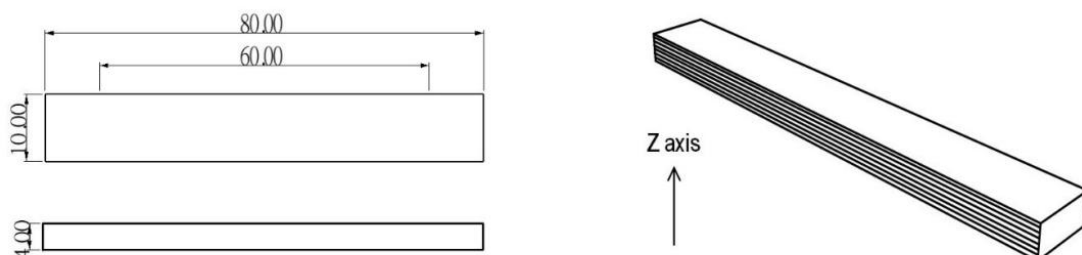
Property	Test conditions	Test standards	unit	Typical Value
Tensile strength X-Y	50mm/min	GB/T 1040.2	MPa	36
Tensile modulus X-Y	50mm/min	GB/T 1040.2	MPa	2650
Tensile strength X-Z	50mm/min	GB/T 1040.2	MPa	20
Tensile modulus X-Z	50mm/min	GB/T 1040.2	MPa	1600
Elongation at break	50mm/min	GB/T 1040.2	%	3
Bending strength	2mm/min	GB/T 9341	MPa	55
Bending modulus	2mm/min	GB/T 9341	MPa	2700
Charpy Impact strenght	2.75J	GB/T 1843	kJ/m2	6

Note: All splines are printed under the following conditions: printing temperature=270 ° C, printing speed=150mm/s, base plate 90 ° C, filling=100%, nozzle diameter=0.4mm

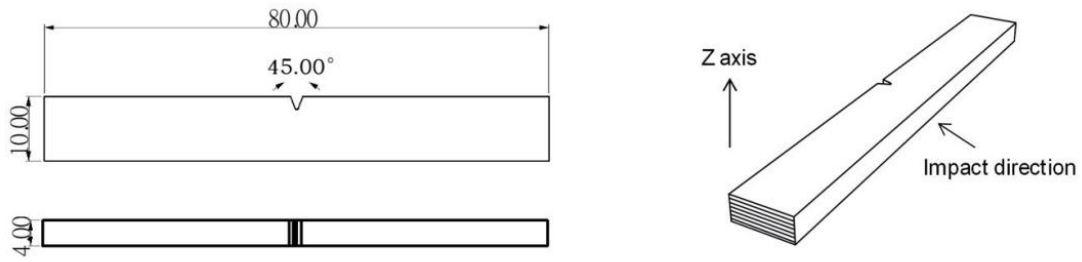
TENSILE TESTING SPECIMEN ISO 527,GB/T 1040



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.