

## technical data sheet (TDS)

### ASA-CF

Eryone ASA-CF is an outdoor high-performance filament with excellent resistance to cold weather and UV radiation. Due to the addition of carbon fiber, its stiffness is 60% higher than that of ordinary ASA, meeting the requirements of high load and bending resistance. At the same time, it also reduces the impact of curled edges during the printing process, greatly improving the dimensional accuracy and stability of the model. The printed part has no traces and presents a matte texture, which is very beautiful. We can print some gardening tools, outdoor furniture, electronic product protective cases, etc.

#### Part one suggests printing parameters

Parameter	Set up
Nozzle temperature	240-280 °C
Bed temperature	90-110°C
Bed material	glass, PEI, spring steel plate
Bottom printing temperature	240-280 °C
Sealed printing	supports open printing, and the sealing effect is better if it is sealed
Printing speed	30-100mm/s
Drying conditions	80°C, 4h

#### Part two Physical Properties of Materials

Property	Testing Method	Unit	Typical Value
Density(g/cm <sup>3</sup> at 21.5 ° C)	ASTM D792 (ISO 1183, GB/T 1033)	g/cm <sup>3</sup>	1.17
Vicat Softening Temperature(° C)	ASTM D1525 (ISO 306 GB/T 1633)	°C	108
Heat distortion temperature(° C)	ASTM D648 1.8MPa 0.45MPa	°C	86
Glass transition temperature (° C)	DSC, 10 ° C/min	°C	/
Melt Index(g/10 min)	220 ° C, 10kg 240 ° C, 2.16 kg	g/10min	1.74±0.3

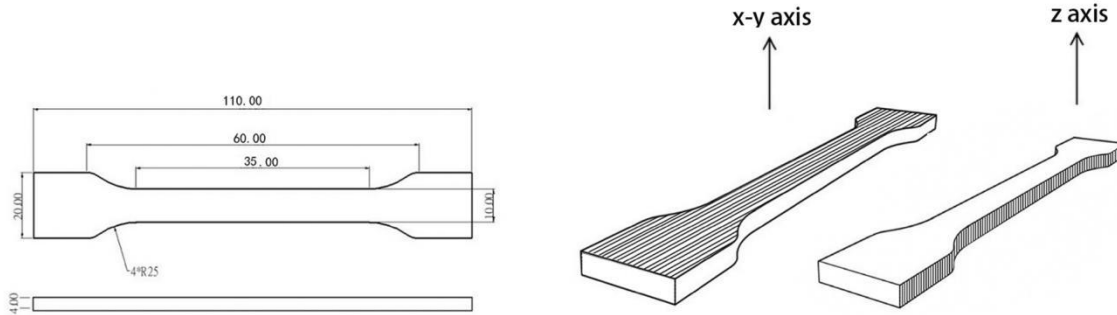
### Part three: Mechanical Properties of Printed Samples

Property	Test conditions	Test standards	unit	Typical Value
Tensile strength X-Y	50mm/min	GB/T 1040.4	MPa	39.1
Tensile modulus X-Y	50mm/min	GB/T 1040.1-2006	MPa	1934.7
Elongation at breakX-Y	50mm/min	GB/T 1040.4	MPa	2.3
Tensile strength X-Z	50mm/min	GB/T 1843	MPa	17±2
Tensile modulus X-Z	50mm/min	GB/T 1040.1-2006	MPa	1799.2
Elongation at breakX-Z	50mm/min	GB/T 1040.2	%	1.8
Bending strength	2mm/min	GB/T 9341	MPa	60.1
Bending modulus	2mm/min	GB/T 9341	MPa	2531.9
Charpy Impact strenght	2.75J	GB/T 1043.1-2008	kJ/m2	12.0

Note: All splines are printed under the following conditions: printing temperature=260 ° C, printing speed=80mm/s, base plate 95 ° C, filling=100%, nozzle diameter=0.4mm

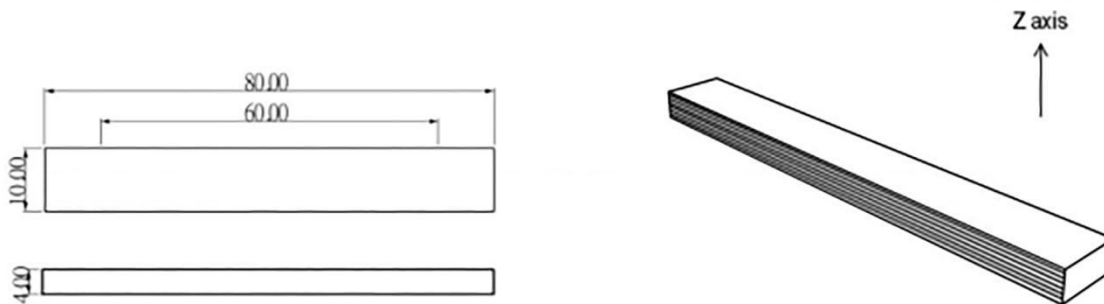
## TENSILE TESTING SPECIMEN

ISO 527,GB/T 1040



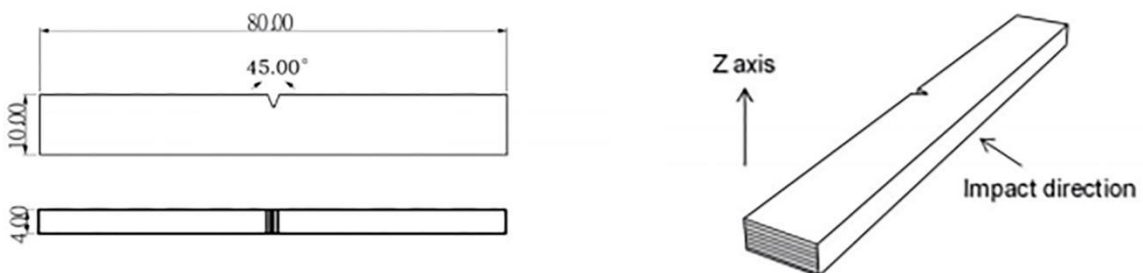
## FLEXURAL TESTING SPECIMEN

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.