

# Technical Data Sheet (TDS)

## Hyper -Speed ABS

Eryone High-speed ABS filament is a type of ABS material designed specifically for high-speed printing. By enhancing the material's flow properties, it significantly increases printing speed, allowing for the production of more products. This material effectively relieves stress and reduces shrinkage, ensuring stability during the printing process. Additionally, the impact strength of ABS is nearly twice that of PLA, making the printed models more robust and durable. Furthermore, high-speed ABS has a higher heat distortion temperature, granting it excellent high-temperature resistance, and it is widely used in various fields, including mechanical components, medical devices, and the automotive industry.

### Part I: Suggests Printing Parameters

Parameter	Set up
Nozzle temperature	240°C-290°C
Bed temperature	80-110°C
Bed material	glass, PEI, spring steel plate
Bottom printing temperature	240°C-290°C
Sealed printing	closed printing printing
Printing speed	30-600mm/s
Drying conditions	90-100°C, 12H

## Part II: 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>	1.1
Vicat Softening Temperature(° C)	ASTM D1525 (ISO 306 GB/T 1633)	°C	/
Heat distortion temperature(° C)	ASTM D648 1.8MPa 0.45MPa	°C	95
Glass transition temperature (° C)	DSC, 10 ° C/min	°C	/
Melt Index(g/10 min)	220 ° C, 10kg 240 ° C, 2.16 kg	g/10min	20

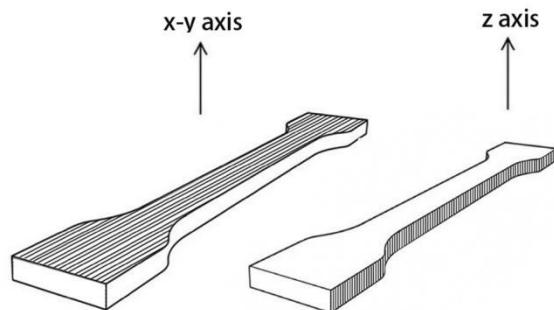
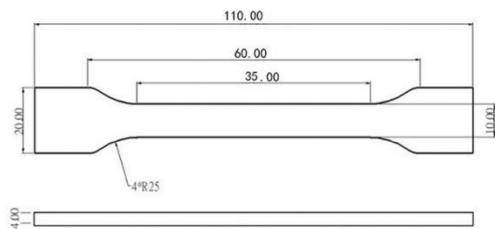
## Part III: Mechanical Properties of Printed Samples

Property	Test conditions	Test standards	unit	Typical Value
Tensile strength X-Y	50mm/min	GB/T 1040.4	MPa	15.68
Elastic modulus X-Y	50mm/min	GB/T 1040.1-2006	MPa	217.08
Elongation at break X-Y	50mm/min	GB/T 1040.4	%	10.16
Tensile strength X-Z	50mm/min	GB/T 1843	MPa	13.16
Elastic modulus X-Z	50mm/min	GB/T 1040.1-2006	MPa	217.16
Elongation at break X-Z	50mm/min	GB/T 1040.4	%	5.11

Note: All splines are printed under the following conditions: printing temperature=270 ° C, printing speed=100mm/s, base plate 95 ° C, filling=100%, nozzle diameter=0.4mm

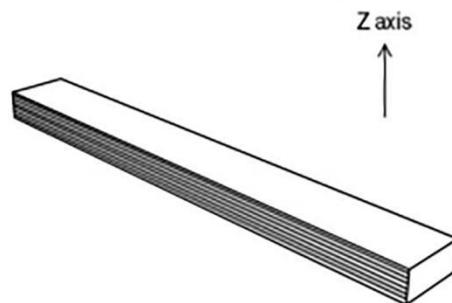
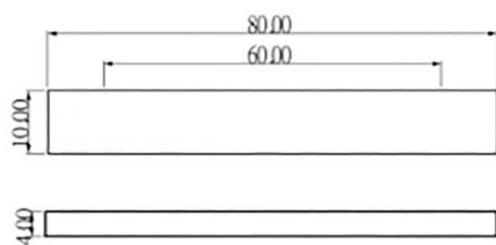
## TENSILE TESTING SPECIMEN

ISO 527,GB/T 1040



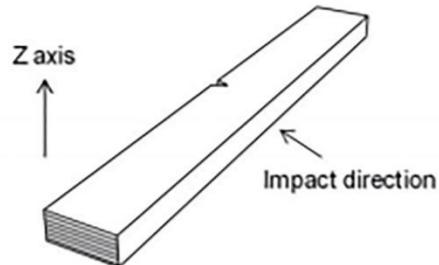
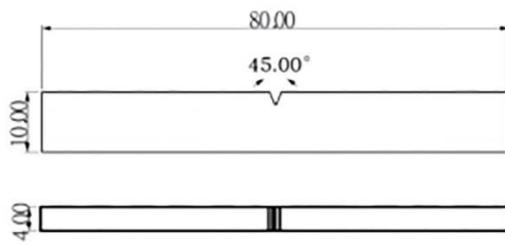
## FLEXURAL TESTING SPECIMEN

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.