version 1.0
08/2024

Technical Data Sheet (TDS)

Wood PLA

Eryone PLA Wood filament is a 3D printing material that closely resembles the appearance of natural wood, emitting a subtle wood scent during the printing process. It showcases natural wood grain and a matte surface finish. This material is resistant to nozzle clogging and has a low shrinkage rate, making it suitable for a variety of printing projects, including everyday accessories, decorative items, toys, sculptures, and casings. The wood powder content is 5%.

Part I: Suggests Printing Parameters

Parameter	Set up
Nozzle temperature	190℃-220℃
Bed temperature	55-70℃
Bed material	glass, PEI, spring steel plate
Bottom printing temperature	190℃-220℃
Sealed printing	Open Printing/closed printing
Printing speed	30-60mm/s
Drying conditions	50℃-60℃， 6H

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	1.1
Vicat Softening Temperature(° C)	ASTM D1525 (ISO 306 GB/T 1633)	℃	54
Heat distortion temperature(° C)	ASTM D648 0.45MPa	℃	54
Melt Index(g/10 min)	220 ° C, 10kg 240 ° C, 2.16 kg	g/10min	10.4

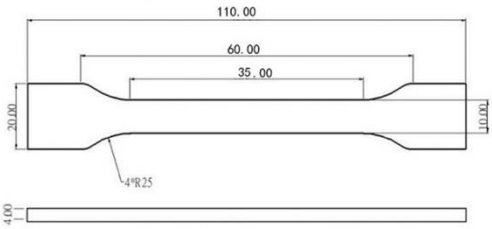
Part III: Mechanical Properties of Printed Samples

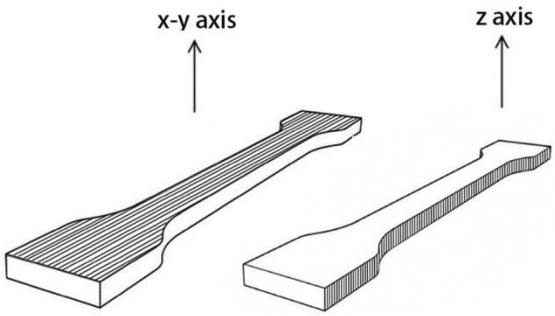
Property	Test conditions	Test standards	unit	Typical Value
Tensile strength X-Y	50mm/min	GB/T 1040.4	MPa	30.1
Elastic modulus X-Y	50mm/min	GB/T 1040.1-2006	MPa	1405.1
Elongation at break X-Y	50mm/min	GB/T 1040.4	%	1.2
Tensile strength X-Z	50mm/min	GB/T 1843	MPa	8.9
Elastic modulus X-Z	50mm/min	GB/T 1040.1-2006	MPa	1157.7
Elongation at break X-Z	50mm/min	GB/T 1040.4	%	0.9
Bending strength	2mm/min	GB/T 9341	MPa	47.9
Bending modulus	2mm/min	GB/T 9341	MPa	2051.8
Charpy Impact strenght	2.75J	GB/T 1843	kJ/m2	3.9

Note: All splines are printed under the following conditions: printing temperature=210° C, printing speed=60mm/s, base plate 60 ° C, filling=100%, nozzle diameter=0.4mm

TENSILE TESTING SPECIMEN

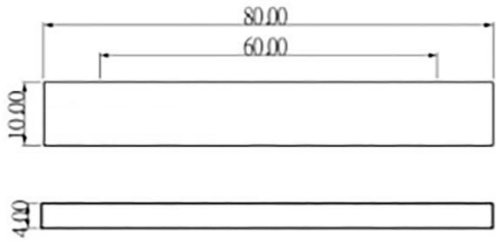
ISO 527,GB/T 1040

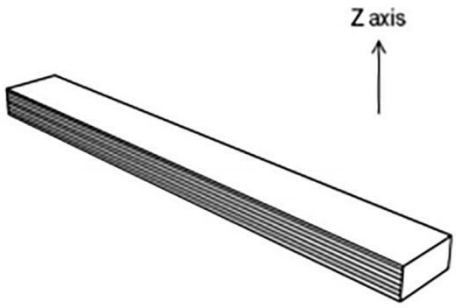




FLEXURAL TESTING SPECIMEN

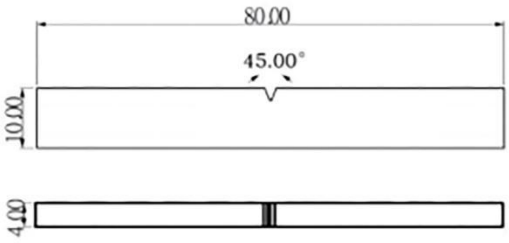
ISO 178,GB/T 9341

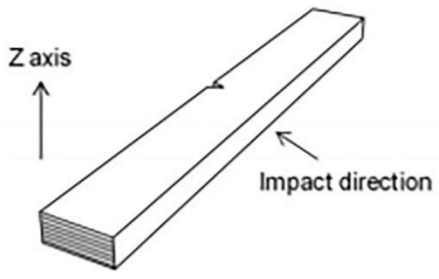




IMPACT TESTING SPECIMEN

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.