

Technical Data Sheet (TDS)

PLA+

The Eryone PLA+ filament is a printing material known for its exceptional toughness and excellent surface quality, featuring a smooth finish that minimizes layer lines. Its high quality simplifies the printing process, making it suitable for parts that need to withstand pressure and impact, offering great durability and resistance to breakage. Compared to traditional PLA, Airewan PLA+ shows significant improvements in hardness and toughness while maintaining the ease of shaping characteristic of PLA, ensuring a user-friendly printing experience.

Part I: Suggests Printing Parameters

| Parameter | Set up |
|-----------------------------|--------------------------------|
| Nozzle temperature | 190°C-220°C |
| Bed temperature | 55-70°C |
| Bed material | glass, PEI, spring steel plate |
| Bottom printing temperature | 190°C-220°C |
| Sealed printing | Open Printing/closed printing |
| Printing speed | 30-100mm/s |
| Drying conditions | 65°C-75°C, 12H |

Part II: Physical Properties of Materials

| Property | Testing Method | Unit | Typical Value |
|--|---------------------------------|-------------------|---------------|
| Density(g/cm ³ at 21.5 ° C) | ASTM D792 (ISO 1183, GB/T 1033) | g/cm ³ | 1.23 |
| Vicat Softening Temperature(° C) | ASTM D1525 (ISO 306 GB/T 1633) | °C | 54 |
| Heat distortion temperature(° C) | ASTM D648 1.8MPa 0.45MPa | °C | 53 |
| Melt Index(g/10 min) | 220 ° C, 10kg 240 ° C, 2.16 kg | g/10min | 6.3 |

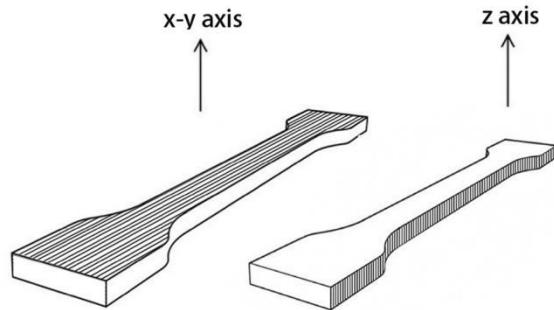
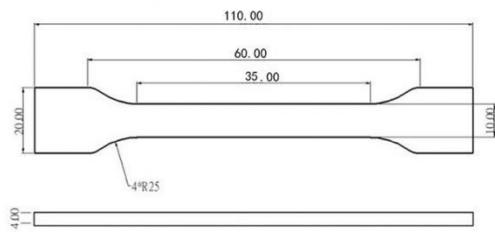
Part III: Mechanical Properties of Printed Samples

| Property | Test conditions | Test standards | unit | Typical Value |
|-------------------------|-----------------|------------------|-------------------|---------------|
| Tensile strength X-Y | 50mm/min | GB/T 1040.4 | MPa | 51.5 |
| Elastic modulus X-Y | 50mm/min | GB/T 1040.1-2006 | MPa | 1805.7 |
| Elongation at break X-Y | 50mm/min | GB/T 1040.4 | % | 1.8 |
| Tensile strength X-Z | 50mm/min | GB/T 1843 | MPa | 14 |
| Elastic modulus X-Z | 50mm/min | GB/T 1040.1-2006 | MPa | 1679.5 |
| Elongation at break X-Z | 50mm/min | GB/T 1040.4 | % | 1.5 |
| Bending strength | 2mm/min | GB/T 9341 | MPa | 85.9 |
| Bending modulus | 2mm/min | GB/T 9341 | MPa | 2968.1 |
| Charpy Impact strength | 2.75J | GB/T 1843 | kJ/m ² | 4.2 |

Note: All splines are printed under the following conditions: printing temperature=210° C, printing speed=80mm/s, base plate 60 ° C, filling=100%, nozzle diameter=0.4mm

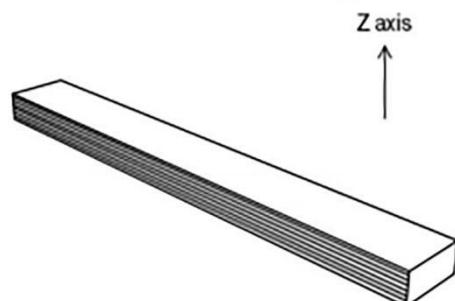
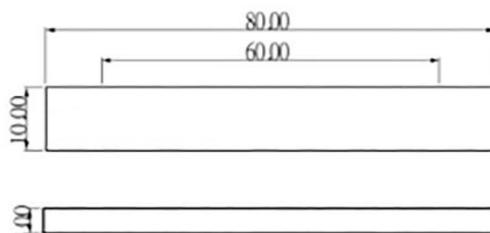
TENSILE TESTING SPECIMEN

ISO 527,GB/T 1040



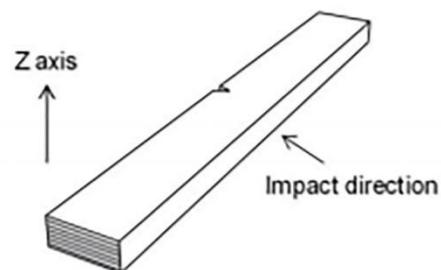
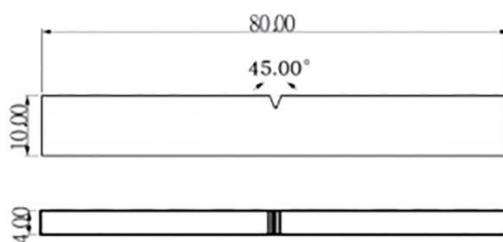
FLEXURAL TESTING SPECIMEN

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.