version 1.0
08/2024

# Technical Data Sheet （TDS）

## PETG-GF

ERYONE PETG-GF filament is an enhanced PETG material that offers excellent flow properties and ease of printing, along with low odor and outstanding chemical resistance. Parts printed with this material are not only strong and durable but also exhibit excellent dimensional stability, featuring a fine matte and frosted texture on the surface. It is particularly suitable for manufacturing structural components or outdoor models that require high impact resistance and durability against drops. It is important to note that this material contains 10% glass fiber.

### Part I: Suggests Printing Parameters

| Parameter | Set up |
|---|---|
| Nozzle temperature | 250-280 ℃ |
| Bed temperature | 60-70℃ |
| Bed material | glass, PEI, spring steel plate |
| Bottom printing temperature | 250℃-280℃ |
| Sealed printing | closed printing |
| Printing speed | 30-150mm/s |
| Drying conditions | 60℃-65℃， 6-8h |

### 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 | 1.33 |
| Heat distortion temperature(° C) | ASTM D648 0.45MPa | ℃ | 80 |
| Glass transition temperature (° C) | DSC, 10 ° C/min | ℃ | 75 |
| Melt Index(g/10 min) | 220 ° C, 10kg 240 ° C, 2.16 kg | g/10min | 10 |

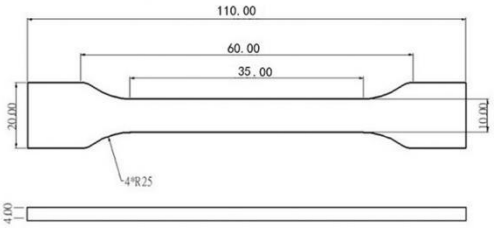
## Part III: Mechanical Properties of Printed Samples

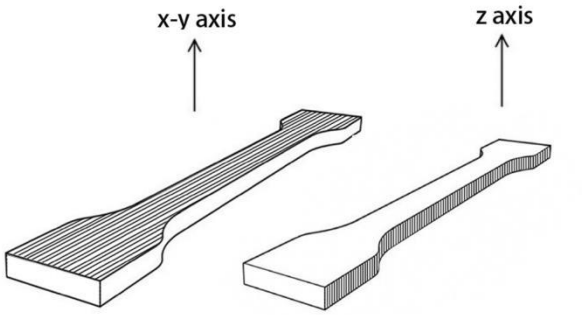
| Property | Test conditions | Test standards | unit | Typical Value |
|---|---|---|---|---|
| Tensile strength X-Y | 50mm/min | GB/T 1040.4 | MPa | 53.6 |
| Elastic modulus X-Y | 50mm/min | GB/T 1040.1-2006 | MPa | 2334.5 |
| Elongation at break X-Y | 50mm/min | GB/T 1040.4 | % | 1.9 |
| Tensile strength X-Z | 50mm/min | GB/T 1843 | MPa | 25.1 |
| Elastic modulus X-Z | 50mm/min | GB/T 1040.1-2006 | MPa | 2109.7 |
| Elongation at break X-Z | 50mm/min | GB/T 1040.4 | % | 1.7 |
| Bending strength | 2mm/min | GB/T 9341 | MPa | 78.5 |
| Bending modulus | 2mm/min | GB/T 9341 | MPa | 3027.5 |
| Charpy Impact strenght | 2.75J | GB/T 1843 | kJ/m2 | 3.9 |

Note: All splines are printed under the following conditions: printing temperature=250 ° C, printing speed=80mm/s, base plate 60 ° C, filling=100%, nozzle diameter=0.4mm

# TENSILE TESTING SPECIMEN

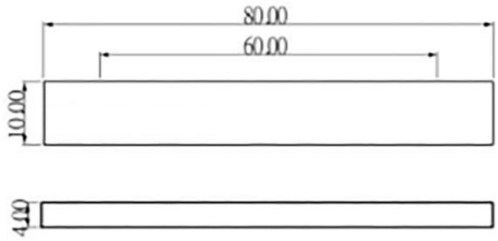
ISO 527,GB/T 1040

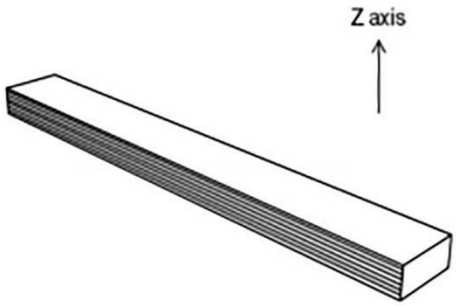



# FLEXURAL TESTING SPECIMEN

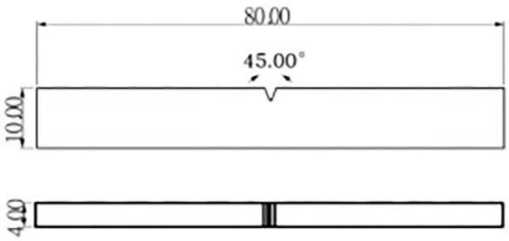
ISO 178,GB/T 9341

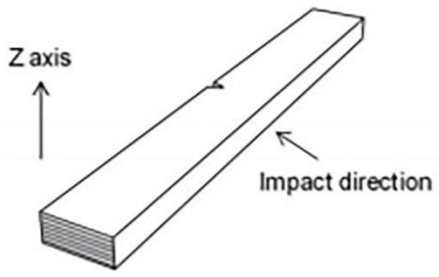



# IMPACT TESTING SPECIMEN

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.