

High Temperature PLA Tough PLA Filament



Technical Data Sheet

Product Description

Zyltech PLA filament is engineered to deliver the best characteristics of Polylactic Acid (PLA), a widely used and sustainable bioplastic derived from renewable natural resources like tapioca and corn starch. PLA is both renewable and biodegradable, making it an eco-friendly choice for 3D printing.

Our filament is made from virgin Natureworks resin, with each spool traceable to a specific batch sourced directly from the Ingeo plant in Nebraska and manufactured at our Houston facility. To ensure consistent quality, Zyltech employs advanced manufacturing processes and rigorous testing procedures, utilizing top-quality raw materials sourced from the USA.

Filament Specifications

Parameter	Value
Filament Diameter	1.75 ± 0.02 mm
Ovality	< 0.02 mm
Net Filament Weight	1 KG

Spool Specifications

Parameter	Value
Spool Diameter	198 mm
Spool Height	60 mm
Hole Diameter	58 mm
Spool Material	ABS
Spool Heat deflection temperature	65 °C
Spool Weight	150 g

Recommended Printer Setting

Parameter	Value
Bed temperature	55 – 70 °C for PEI build plate
Nozzle temperature	190 – 230 °C
Chamber temperature	< 40 °C
Print speed	up to 500 mm/s
Maximum flow rate	20 – 25 mm ³ /s
Part cooling fan	Full On

Typical Properties

Physical Property	Value	Test Method
Density	1.22 g/cm ³	ISO 1183
Thermal Property	Value	Test Method
Melting temperature	165 – 180 °C	ISO 11357
Heat deflection temperature, 0.45 MPA	55 – 60 °C	ISO 75
Mechanical Property	Value	Test Method
Young's modulus	2300 – 2600 MPa	ISO 527
Tensile Strength at break	38 – 40 MPa	ISO 527
Breaking elongation	5 – 6 %	ISO 527
Flexural modulus	2200 – 2400 MPa	ISO 178
Izod impact strength, Notched (23 °C)	5 – 7 KJ/m ²	ISO 180
Heat deflection temperature (0.45 MPa)	105°C (annealed)	ISO 75

Disclaimer:

The information included in this document is for reference purposes only. Testing results may vary between colors and batches. Printing conditions also greatly affect the testing results. It is the user's responsibility to determine whether the filament and the information in this document are appropriate for any specific application. Zyltech Engineering LLC assumes no obligation or liability for the information in this document.

For additional information, please contact Zyltech Engineering LLC customer support email csr@zyltech.com.