



# TECHNICAL DATA SHEET

## INFILL PLA FILAMENT

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**PLA** is the most widely used material in 3D printing due to its ease of use and affordability. It offers sufficient stiffness and strength for most applications. Additionally, PLA can biodegrade under specific industrial composting conditions. **INFILL PLA FILAMENT** is high-quality, cost-effective 3D printing filament engineered specifically for reliable 3D printing without compromising strength or consistency.

### Application:

- Prototyping & design
- Architecture models
- Orthopaedic Models
- Education & visualization
- Art
- Models required to be biodegradable



### Specifications:

Subjects	Data
Material Name	PLA
Chemical Name	Polylactic Acid
Diameter	1.75 ± 0.03 mm
Net Filament Weight	1 kg
Spool Material	PLA (Temperature resistance 40 °C)
Spool Size	Diameter: 200mm; Height: 58mm

### Recommended Print Settings:

Subjects	Data
Drying Settings before Printing	Filament Dryer: 40 °C, 4h
Printing and Storage Humidity	< 20% RH (Sealed with desiccant)
Nozzle Size	0.2, 0.4, 0.6, 0.8 mm
Nozzle Temperature	190 - 230 °C
Bed Type	Cool Plate Super Tack, Smooth PEI Plate / High Temp Plate or Textured PEI Plate
Bed Surface Preparation	Glue
Bed Temperature	35 - 55 °C
Cooling Fan	100%
Printing Speed	< 300 mm/s
Max Volumetric Speed	20 mm <sup>3</sup> /s
Retraction Length	0.3 - 0.8 mm
Retraction Speed	10 - 25 mm/s
Chamber Temperature	Open Chamber (20 - 35 °C)



Max Overhang Angle	55°
Max Bridging Length	30 mm

### Physical Properties:

Property	Method	Metric
Density	ISO1183	1.26 g/cm <sup>3</sup>
Melt Index	210 °C, 2.16 kg	45.6 ± 4.6 g/10 min
Melting Temperature	DSC, 10 °C/min	155 °C
Glass Transition Temperature	DSC, 10 °C/min	55 °C

### Mechanical Properties:

Property	Method	Metric
Tensile Strength	ASTM D638 / ISO527	55 ± 5 MPa
Elongation at Break	ASTM D638 / ISO527	4 ± 0.8 %
Young's Modulus	ASTM D638 / ISO527	1417 ± 347 MPa
Flexural Strength	ASTM D792 / ISO178	92 ± 8 MPa
Flexural Modulus	ASTM D792 / ISO178	3463 ± 223MPa
Izod Impact, Notched (X-Y, 45 °C)	ASTM D790 / ISO180	19 ± 2 KJ/mm <sup>2</sup>



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