

# Technical data

## sheet PLA

### Description

PLA (Polylactic Acid) is a biodegradable, sustainable and food safe polymer made from organic sources.

It is the most common used filament in FFF 3D printers for its ease of use and awide range of applications, especially those not mechanically or thermally demanding. Definitely a good starting point to learn about the 3D Printing manufacturing process.

### Properties

- Detailed and glossy surface quality
- Good tensile strength
- Rigid, fragile behaviour
- Good UV resistance
- Withstand operating temperatures up to 50 °C.
- Odor-free, ideal for educational and office environments
- Compatible with PVA supports
- Low humidity resistance

### Recomendations

Plastics absorb moisture from the air. For long periods of time without printing, it is recommended to keep the PLA spools in a box or airtight container with desiccant to keep them dry.

PLA emits low levels of gasses and particles when printed. We recommend printing it in a well-ventilated area to ensure a healthy environment.

### Filament specifications

Diameter	Ø 2.85 mm
Max roundness deviation	≥ 95%
Net filament weight	750 g
Specific gravity (ISO 1183)	1,24 g/cm³

### Mechanical properties

	Typical value	Test method
MFR 210°C/2,16 kg	9,56 gr/10 min	ISO 1133
Tensile strength at yield	70 Mpa	ISO 527
Strain at yield	5 %	ISO 527
Strain at break	20 %	ISO 527
Tensile Modulus	3120 MPa	ISO 527
Impact strength-Charpy method 23°C	3,4 kJ/m²	ISO 179
Moisture absorption	1968 ppm	ISO 62

### Thermal properties

	Typical value	Test method
Melting temp.	115±35°C	ISO 11357
Vicat softening temp.	60 °C	ISO 306
Glass transition temp.	57 °C	ISO 11357

### Printing settings

Extruder temperature	190 °C - 220 °C
Bed temperature	65 °C
Speed	10-70 mm/s
Retraction speed	40 mm/s
Retraction distance	4 mm
Cooling fan	Yes
Minimum layer height	0.05 mm