Technical Datasheet

PLA

Version: 1.0
Date: 04.08.2026

MATERIAL	MANUFACTURER
PLA	**Recycling Fabrik GmbH**
BRAND	**COUNTRY OF MANUFACTURE**
Recycling Fabrik	**Germany**

1. PRODUCT DESCRIPTION

Recycling Fabrik PLA is a high-quality 3D printing filament manufactured from recycled plastics. It is engineered to provide excellent printability, strong interlayer adhesion, and proper impact resistance. It's suitable for beginners and intermediate to pro consumer. The material combines ease of processing with durability, making it suitable for functional parts, prototypes, and end-use applications.

2. MATERIAL INFORMATION

- **Polymer:** Polylactide (PLA)
- **Feedstock:** Recycled post-consumer and post-industrial plastic
- **Additives:** Color masterbatch, stabilizers (if applicable)
- **Technology:** Recycling Fabrik industrial recycling system

3. MECHANICAL PROPERTIES

PROPERTY	VALUE	UNIT	STANDARD
Tensile Strength	55-60	MPa	ISO 527
Young's Modulus	2500-3000	MPa	ISO 527
Elongation at Break	2-3	%	ISO 527
Impact Strength	4-6	kJ/m²	ISO 180

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4. THERMAL PROPERTIES

PROPERTY	VALUE	UNIT	STANDARD
Glass Transition Temperature	~61	°C	DSC
Recommended Processing Temp.	190-245	°C	–

5. PRINTING PARAMETERS

- **Nozzle Temperature:** 190 – 245 °C
- **Bed Temperature:** 55 – 65 °C
- **Print Speed:** 100 – 200 mm/s
- **Cooling Fan:** 0 – 100 %
- **Nozzle Diameter:** ≥ 0.4 mm

Note: Settings may vary depending on printer, geometry, and color.

6. PHYSICAL PROPERTIES

PROPERTY	VALUE	UNIT	STANDARD
Density	~1,24	g/cm³	–
Diameter	1.75 mm ± 0.05	mm	–
Ovality	≤ 0.05	mm	–

7. OTHER INFORMATION

- **Surface finish:** glossy to semi-matte
- reliable Colors
- **Drying recommended:** 50 °C for 4–6 hours
- Good adhesion on PEI, glass, and coated build plates
- Store in a cool, dry, UV-protected environment
- **Recommended humidity:** < 50% RH
- Keep in packaging when not in use

8. SUSTAINABILITY

- Reduced carbon footprint compared to virgin materials
- Produced from recycled plastics in Germany
- Compatible with Recycling Fabrik circular system

9. DISCLAIMER

All data provided are typical values and do not constitute a specification. Users must verify suitability for their specific application.

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