

# Material Data Sheet

## Tough PLA



**MATERIAL  
4PRINT**

your filament experts

- Layer adhesion
- Weather resistance
- Easy to print
- Heat resistance
- Tensile strength
- Impact resistance



### Description

Tough PLA is made from a renewable biodegradable biopolymer. Compared to normal PLA, it offers higher heat resistance.

### Identification

Name	Tough PLA
Chemical Name	Poly(lactic Acid)
Usage	FDM 3D Printing
Manufacturer	Material 4 Print GmbH & Co. KG, Germany

### Properties\*

Test	Value	Method
Specific gravity	1,22 g/cm <sup>3</sup>	ASTM D792
Tensile modulus	2870 MPa	ASTM D638
Breaking stress	40.0 MPa	ASTM D638
Flexural modulus	2410 MPa	ASTM D790
Flexural strength	73.0 MPa	ASTM D790
Izod impact strength	160 J/m (230 J/m)**	ASTM D256
Heat distortion temperature	75.0 °C (85.0 °C)**	ASTM E2092
Glass transition temperature	55.0 - 60.0 °C	ASTM D3418

\* 3D printed part with 100% in-fill; \*\*annealed at 110°C for 15min

If you have any further questions about the product or problems in its use, please contact [info@material4print.de](mailto:info@material4print.de)



#### Certificate



Certification depends on colors in the final product. More info in the additional information sheet.

#### Storage

Store at room temperature, out of direct heat and sunlight and in a dry place.

#### Print Settings

Nozzle Temperature: 200-225 °C  
Bed Temperature: 0-60 °C

These data were taken from the raw material manufacturer.

12.04.2021

[www.material4print.de](http://www.material4print.de)

Contact: [info@material4print.de](mailto:info@material4print.de)