

# Technical datasheet

## LW-PLA

color**Fabb**

Date of issue: October 27, 2022  
Version: v1.0

ColorFabb LW-PLA is a high quality expanding PLA 3D printing filament. The first filament of its kind using an active foaming technology to achieve light weight, low density PLA parts. At around 230C this material will start foaming, increasing its volume by nearly 3 times. Users can decrease material flow by 65% to achieve light weight parts, or use the expanding properties to effectively reduce print time by using big layer heights or single extra thick perimeters.

### TYPICAL MATERIAL PROPERTIES – 3D Printed

Physical properties	Unit	Value @	Value @	Method
		200°C; 100%	250°C; 45%	
		Flow	Flow	
Tensile modulus	MPa	3333,76	864,25	ISO 527
Yield strength	MPa	43,07	N/A	ISO 527
Yield strain	%	1,68	N/A	ISO 527
Tensile strength	MPa	43,07	10,83	ISO 527
Tensile strain at tensile strength	%	1,68	12,00	ISO 527
Tensile stress at break	MPa	38,74	10,73	ISO 527
Tensile strain at break	%	8,08	12,78	ISO 527
Charpy unnotched impact strength	kJ/m2	-	5,46	ISO 179-1/1 eU
Charpy notched impact strength	kJ/m2	-	3,67	ISO 179-1/1 eU
Heat Deflection Temperature (HDT)	°C	-	-	ISO 75

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**TYPICAL MATERIAL PROPERTIES – Injection molded**

Physical properties	Unit	Value	Method
Density	g/cm <sup>3</sup>	0.40 - 1,24	-
Glass Transition Temperature	°C	55 - 60	DSC

**FILAMENT SPECIFICATION**

Nominal diameter:	Diameter tolerance	Ovality
1,75 mm	± 0,05	≥ 95%
2,85 mm	± 0,10	≥ 95%

**Netto filament weight** 750g

**GUIDELINE FOR PRINT SETTINGS**

Nozzle temperature	195 - 260°C
Bed temperature	50 - 60°C
Bed surface / modification	
Active cooling fan	
Print speed	40 - 100 mm/s

**Disclaimer**

The product- and technical information provided in this datasheet is correct to the best of our knowledge. The information given is provided as a guidance for good use, handling and processing and is not to be considered as a quality specification. The information only relates to the specific product and the material properties.