

PLA

Everfil™ | Filament 3D

TECHNICAL SPECIFICATION

DESCRIPTION

Everfil™ PLA (polylactic acid) is a biodegradable and environmentally friendly printing filament derived from renewable sources such as corn starch or sugar cane. It is one of the most popular filaments on the 3D printing market due to its ease of printing, low melting point, and ability to produce smooth and accurate prints.

TYPICAL APPLICATIONS

- Education & Hobby – PLA is the perfect choice for beginners, learners, and hobbyists.
- Prototyping - filament often chosen by designers and engineers for creating prototypes and models.
- Decorations & Gadgets - is an excellent choice for printing decorative items, jewellery, toys or other gadgets.
- Tools & Accessories - can be used to print simple tools, handles, enclosures and other practical items.
- Educational models - is often chosen for the production of anatomical, geographical, or scientific models.

TECHNICAL PARAMETERS

DIAMETER (mm)	Ø 1,75	Ø 2,85
Diameter tolerance (mm)	+/-0,02	+/-0,03
Diameter tolerance (mm)	+/-0,015	+/-0,02

PRODUCT PARAMETERS

PHYSICAL PARAMETERS

PARAMETER		NOMINAL VALUE	UNIT	TEST METHOD
PHYSICAL:				
Density		1,24	g/cm ³	ISO -1183
Mould shrinkage	3,2 mm, flow	0,5-0,7	%	
MECHANICAL PROPERTIES				
Tensile Yield Strength		60	MPa	ASTMD882
Tensile Strength at Break		53	MPa	ASTMD882
Tensile Modulus		3.6	MPa	ASTMD882
Tensile Elongation		6	%	ASTMD882
Notched Izod Impact		16	J/m	ASTMD256
Flexural Strength		83	MPa	ASTMD790
Flexural Modulus		3.8	MPa	ASTMD790
Heat Distortion Temperature	0,45 MPa	55	°C	ASTME2092
IMPACT				
Isolt impact, notched	23 °C	633	J/m	ASTM D256

Isolt impact, notched	-30 °C	50	J/m	ASTM D256
Charpy impact, notched	23 °C	23	kJ/m ²	ISO 179/2C

RECOMMENDED PRINTING PARAMETERS

PARAMETER	NOMINAL VALUE	UNIT
Nozzle temperature	190-220	°C
Table temperature	50-70	°C
Print speed	50-100	mm/s
Layer thickness	0.1-0.3	mm
Table grip	Blue Painter's Tape lub BuildTak	-
Cooling	Włączone (50-100%)	-
Filling	20-30	%
Support material	Nie jest wymagany	-
Retraction speed	40-60	mm/s
Retraction value	1-3	mm
Heat chamber	Nie wymagana	-

The above data is illustrative, as it depends on the type of 3D printing equipment owned, the geometry of the specific print, and environmental conditions.

PACKAGING

The filament is produced on a spool weighing 1.0 kg, 2.5 kg and 5.0 kg. The spool is vacuum-packed in a bag made of high moisture barrier foil and secured with a cardboard box. An additional advantage is the possibility of multiple openings of the 1.0 kg spool bag.

WEIGHT	netto/brutto [kg]
1,0 kg spool	1,00 / 1,42
2,5 kg spool	2,50 / 3,30
5,0 kg spool	5,00 / 5,90
DIMENSION of SPOOL	Ø external/ height/ hole [mm]
1,0 kg spool	200 / 68 / 52
2,5 kg spool	300 / 100 / 52
5,0 kg spool	350 / 100 / 52

STORAGE

PLA filament does not cope well with moisture and we therefore recommend storing the coils in a cool, dry environment in vacuum-sealed packaging with moisture absorbers.

MANUFACTURER

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