

Technical datasheet

PLA/PHA

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Colorfabb developed its own unique PLA blend for 3D printing, namely PLA/PHA. The added PHA makes our grade of PLA tougher and less brittle than generic PLA grades in the market. PHA (polyhydroxyalkanoate) is like PLA a bio-polyester, so our unique blend is still 100% biodegradable. It has proven to be an extremely reliable filament for prototyping and investment casting. Besides its nature color, the material is also available in a huge variety of colors, take a look in our PLA/PHA portfolio.

TYPICAL MATERIAL PROPERTIES

Physical properties	Unit	Value	Method
Density	g/cm ³	1,24	ISO 1183
Modulus of elasticity	MPa	2960	ISO 527
Tensile strength	MPa	61,5	ISO 527
Tensile strain at tensile strength	%	5,3	ISO 527
Tensile stress at break	MPa	38	ISO 527
Tensile strain at break	%	10,5	ISO 527
Flexural modulus	MPa	3295	ISO 178
Flexural strain at break	%	NB	ISO 178
Flexural stress at 3.5% strain	MPa	88,8	ISO 178
Notched impact strength (Charpy), RT	kJ/m ²	2,8	ISO 179-1/1 eA
Impact strength (Charpy), RT	kJ/m ²	30,8	ISO 179-1/1 eU
Melting temperature	°C	>155	ISO 3146-C

FILAMENT SPECIFICATION

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

Netto filament weight 750 grams / 2200 grams

GUIDELINE FOR PRINT SETTINGS

Advised 3D printing temperature	195 – 220 °C
Advised bed temperature	50 – 60 °C
Bed surface / modification	Our PLA/PHA performs well on both heated and non-heated build platforms. For those users printing on a cold build platform we advise applying masking tape to the build area. The rough surface of the tape will provide enough adhesion for the first layer to stick and print almost without any warping.
Active cooling fan	0 – 100 %
Advised 3D printing speed	40 – 100 mm/sec

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.