

Technical datasheet

colorFabb PLA High Speed PRO

colorFabb

Date of issue: November 1st, 2024
Version: v1.0

Description

colorFabb's PLA High Speed PRO filament delivers unmatched all-round performance with fast, efficient prints and enhanced toughness, making it the most versatile filament in our lineup to date.

With seamless compatibility with most 3D printers, it integrates effortlessly using existing high-speed profiles.

Whether you're exploring new filaments or upgrading from other colorFabb materials, this filament is designed to exceed expectations in both speed and strength.

Typical Properties

Mechanical Properties – 3D Printed

	Method	Value	Unit
Youngs Modulus	Tensile, ISO 527-1A	2630	MPa
Tensile Strength	Tensile, ISO 527-1A	43.7	MPa
Elongation at break	Tensile, ISO 527-1A	5.7	%
Flexural Modulus	Flexural, ISO 178	2290	MPa
Flexural Strength	Flexural, ISO 178	71.0	MPa
Impact Strength	Charpy Notch, ISO 179	27.9	kJ/m ²

Mechanical Properties – Injection Molded

	Method	Value	Unit
Youngs Modulus	Tensile, ISO 527-1A	T.B.D.	MPa
Tensile Strength	Tensile, ISO 527-1A	T.B.D.	MPa
Elongation at break	Tensile, ISO 527-1A	T.B.D.	%
Flexural Modulus	Flexural, ISO 178	T.B.D.	MPa
Flexural Strength	Flexural, ISO 178	T.B.D.	MPa
Charpy Impact Strength	Charpy Notch, ISO 179	T.B.D.	kJ/m ²
Density	ISO 1183	1.24	g/cm ³

Thermal Properties*

	Method	Value	Unit
Glass Transition Temp.	DSC, ISO 11357	60	°C
Melting Temp.	DSC, ISO 11357	165	°C
Decomposition Temp.	TGA, ISO 11358	N/A	°C
Heat Deflection Temp.	HDT-B, ISO 75	57	°C
Melt Flow Index	MFI, (210°C/2.16 kg), ISO 1133-A	23	g/10min
Melt Flow Index	MFI, (190°C/1.16 kg), ISO 1133-A	10	g/10 min

*These results are obtained from the information provided by the supplier of the raw material

colorFabb B.V.
Bremweg 7
5951 DK Belfeld
The Netherlands

T +31 (0)77 – 4664015
F +31 (0)77 – 3971414
E sales@colorfabb.com
I colorfabb.com

KvK nr: 53498607
VAT nr: NL850902770B01
IBAN:
NL54RABO0151849188
BIC: RABONL2U

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Filament Specifications

	Unit	
Diameter	mm	1.75
Max. roundness deviation	mm	± 0.05
Net. Filament weight	g	1000

Guideline for print settings

	Unit	
Nozzle Temp.	°C	215-225
Bed Temp.	°C	50-60
Bed / surface modification	-	-
Active cooling fan	%	100
Advised volumetric print speed	mm ³ /s	12-21

Notes

The reported properties are an average of a batch of 3D specimens.

The specimens have been printed in XY plane, using 0.2 mm layer height, 100% infill, 0,4 mm nozzle, 220°C nozzle temperature and 60°C bed temperature.

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.

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