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

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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.

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