

Date of issue: December 12th, 2023
Version: v2.0

Description

colorFabb PLA Silk is a special effect filament with a silk-like appearance. The smooth, reflective surface catches the light, is easy to print and has invisible layer lines.

Typical Properties

Mechanical Properties – 3D Printed

	Method	Value	Unit
Youngs Modulus	Tensile, ISO 527-1A	3100	MPa
Tensile Strength	Tensile, ISO 527-1A	62	MPa
Elongation at break	Tensile, ISO 527-1A	3,7	%
Flexural Modulus	Flexural, ISO 178	2950	MPa
Flexural Strength	Flexural, ISO 178	100	MPa
Impact Strength	Charpy Notch, ISO 179	3	kJ/m ²

Mechanical Properties – Injection Molded*

	Method	Value	Unit
Youngs Modulus	Tensile, ISO 527-1A	N/A	MPa
Tensile Strength	Tensile, ISO 527-1A	N/A	MPa
Elongation at break	Tensile, ISO 527-1A	N/A	%
Flexural Modulus	Flexural, ISO 178	N/A	MPa
Flexural Strength	Flexural, ISO 178	N/A	MPa
Charpy Impact Strength	Charpy Notch, ISO 179	N/A	kJ/m ²
Density	ISO 1183	1,24	g/cm ³

Thermal Properties*

	Method	Value	Unit
Glass Transition Temp.	DSC, ISO 11357	50-60	°C
Melting Temp.	DSC, ISO 11357	N/A	°C
Decomposition Temp.	TGA, ISO 11358	N/A	°C
Heat Deflection Temp.	HDT-B, ISO 75	N/A	°C
Melt Flow Index	MFI, (210°C/2.16 kg), ISO 1133-A	N/A	g/10min
Melt Flow Index	MFI, (190°C/1.16 kg), ISO 1133-A	N/A	g/10 min

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

Technical datasheet

PLA Silk

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Filament Specifications

	Unit		
Diameter	mm	1.75	2.85
Max. roundness deviation	mm	± 0.05	± 0.1
Net. Filament weight	g	750	750

Guideline for print settings

	Unit	
Nozzle Temp.	°C	225-235
Bed Temp.	°C	55-65
Bed / surface modification	-	-
Active cooling fan	%	100
Print Speed	mm/s	50-60

Notes

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

The specimens have been printed in XY plane, using 0,15 mm layer height, 100% infill, 0,4 mm nozzle, 230 °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.