

Technical datasheet

PLA Chameleon Nebula

colorFabb

Date of issue: November 20th, 2023
Version: v1.0

Description

The colorFabb Chameleon Nebula is a PLA based filament that is easy to print and produces a smooth finish. The unique color combination is ideal for the production of special figurines, ornaments and even jewelry with a special touch.

Typical Properties

Mechanical Properties – 3D Printed

	Method	Value		Unit
		XY	Z	
Youngs Modulus	Tensile, ISO 527-1A	3300	3350	MPa
Tensile Strength	Tensile, ISO 527-1A	70	71	MPa
Elongation at break	Tensile, ISO 527-1A	3,5	3,5	%
Flexural Modulus	Flexural, ISO 178	2400	2200	MPa
Flexural Strength	Flexural, ISO 178	97	85	MPa
Impact Strength	Charpy Notch, ISO 179	4.0	N/A	kJ/m ²

Mechanical Properties – Injection Molded*

	Method	Value	Unit
Youngs Modulus	Tensile, ISO 527-1A	3500	MPa
Tensile Strength	Tensile, ISO 527-1A	45	MPa
Elongation at break	Tensile, ISO 527-1A	≤5.0	%
Flexural Strength	Flexural, ISO 178	N/A	MPa
Charpy Impact Strength	Charpy Notch, ISO 179	≤5.0	kJ/m ²
Density	ISO 1183	1,2	g/cm ³

Thermal Properties

	Method	Value	Unit
Glass Transition Temp.	DSC, ISO 11357	55-60	°C
Melting Temp.	DSC, ISO 11357	150-160	°C
Decomposition Temp.	TGA, ISO 11358	N/A	°C
Heat Deflection Temp.	HDT-B, ISO 75	60	°C
Melt Flow Index	MFI, (210°C/2.16 kg), ISO 1133-A	6	g/10min
Melt Flow Index	MFI, (190°C/1.16 kg), ISO 1133-A	3	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	2.85
Max. roundness deviation	mm	± 0.05	± 0.1
Ovality	%	≥95	≥95
Net. Filament weight	g	750	750

Guideline for print settings

	Unit	
Nozzle Temp.	°C	195-220
Bed Temp.	°C	50-60
Bed / surface modification	-	Tape or Glue
Active cooling fan	%	100
Print Speed	mm/s	40-100

Notes

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

The specimens have been printed in XY and Z plane, using 0.15 mm layer height, 100% infill, 0,4 mm nozzle, 210 °C nozzle temperature, and 55°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.