Technical datasheet
colorFabb_XT

colorFabb

Date of issue: September 1 , 2023
Version: v2.0

Description

colorFabb_XT is produced with Eastman Amphora AM1800, and has a unique formulation for 3D printing that features excellent properties, including; high strength and high toughness, odor neutral processing, and high temperature resistance. The raw materials are known to be styrene free, BPA free, and compliant to both FDA and EU food safety regulations. This will allow the user to produce 3D printed, functional products in a say way.

Typical Properties

Mechanical Properties – 3D Printed

	Method	*Value*	*Unit*
Youngs Modulus	Tensile, ISO 527-1A	1850	MPa
Tensile Strength	Tensile, ISO 527-1A	55	MPa
Elongation at break	Tensile, ISO 527-1A	6.2	%
Flexural Modulus	Flexural, ISO 178	N/A	MPa
Flexural Strength	Flexural, ISO 178	N/A	MPa
Impact Strength	Charpy Notch, ISO 179	5.0	kJ/m^2

Mechanical Properties – Injection Molded*

	Method	*Value*	*Unit*
Youngs Modulus	Tensile, ASTM D638	1900	MPa
Tensile Strength	Tensile, ASTM D638	50	MPa
Elongation at break	Tensile, ASTM D638	110	%
Flexural Modulus	Flexural, ASTM D790	2100	MPa
Izod Impact Strength	Izod Notch, ASTM D256	95	J/m
Density	ISO 1183	1.3	g/cm^3

Thermal Properties*

	Method	*Value*	*Unit*
Glass Transition Temp.	DSC, ISO 11357	N/A	˚C
Melting Temp.	DSC, ISO 11357	N/A	˚C
Decomposition Temp.	TGA, ISO 11358	N/A	˚C
Heat Deflection Temp. HDT	@0.455 MPA, ASTM D648	70	˚C
	@1.82 MPA, ASTM D648	62	˚C
Melt Flow Index	MFI, ISO 1133-A	N/A	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	750/2200	750/2200

Guideline for print settings

	Unit	
Nozzle Temp.	˚C	240-260
Bed Temp.	˚C	60-70
Bed / surface modification	-	-
Active cooling fan	%	50
Print Speed	mm/s	40-70

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, 250 ˚C nozzle temperature and 70˚C bed temperature.

For best part strength, try to print with the least amount of fan cooling possible.
For better details and overhangs, increase fan speed.

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