Technical datasheet

LW-ASA

colorFabb

Date of issue: October 27 , 2022
Version: v1.0

ColorFabb LW-ASA is a high quality expanding ASA 3D printing filament. The active foaming technology can be used to achieve light weight, low density ASA parts. At around 230ºC this material will start foaming, increasing its volume by nearly 2,5 times. Users can decrease material flow by 60% to achieve light weight parts, or use the expanding properties to effectively reduce print time by using big layer heights or single extra thick perimeters.
Like regular ASA the LW-ASA features inherent UV stability and high temperature resistance of 96ºC.

TYPICAL MATERIAL PROPERTIES – 3D Printed (45% flow)			
Physical properties	**Unit**	**Value**	**Method**
Tensile modulus	MPa	688,04	ISO 527
Yield strength	MPa	N/A	ISO 527
Yield strain	%	N/A	ISO 527
Tensile strength	MPa	8,91	ISO 527
Tensile strain at tensile strength	%	3,22	ISO 527
Tensile stress at break	MPa	8,90	ISO 527
Tensile strain at break	%	3,17	ISO 527
Flexural modulus	MPa	-	ISO 178
Flexural strain at standard deflection	MPa	-	ISO 178
Flexural strength	MPa	-	ISO 178
Flexural strain at flexural strength	%	-	ISO 178
Flexural stress at break	MPa	-	ISO 178
Flexural strain at break	%	-	ISO 178
Charpy unnotched impact strength	kJ/m2	3,39	ISO 179-1/1 eU
Charpy notched impact strength	kJ/m2	2,42	ISO 179-1/1 eU
Heat Deflection Temperature (HDT)	ºC	-	ISO 75

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TYPICAL MATERIAL PROPERTIES – Injection molded

Physical properties	Unit	Value	Method
Density	g/cm3	0.40 - 1,07	

FILAMENT SPECIFICATION

Nominal diameter:	Diameter tolerance	Ovality
1,75 mm	± 0,05	≥ 95%
2,85 mm	± 0,10	≥ 95%

Netto filament weight 750g

GUIDELINE FOR PRINT SETTINGS

Nozzle temperature	240 - 260ºC
Bed temperature	90 - 100ºC
Bed surface / modification	-
Active cooling fan	0-50%*
Print speed	30-50 mm/s

**To reduce warping we would advice to use the least amount of cooling possible. Also for best mechanical performance try printing with the least amount of cooling needed, for optimal layer adhesion.*

Notes

The reported properties are an average of a batch of 3D printed specimens. The specimens have been printed in XY plane, using 0.15mm layerheight, 100% infill, 0.4mm nozzle, 260 °C nozzle temperature and 100 °C bed temperature.

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