

Technical Data Sheet

ASA-GF10 Filament

ASA-GF10 is a 3D printing filament made from an ASA substrate containing 10% glass fiber. ASA-GF10 exhibits good dimensional stability, flexural strength, and rigidity, as well as excellent weather resistance and temperature resistance.

Main features:

Dimensionally stable / High rigidity / Weather resistant

Main Specifications:

Physical Properties	Test Means		
Density	ISO 1183	g/cm ³	1.17~1.18
MFR(220°C/5Kg)	ISO 1133	g/10min	9~15
Moisture Absorption (23°C/24h)	ISO 62	%	<0.5
Mechanical Properties			
Tensile strength (X-Y)	ISO 527	Mpa	40.8~41.3
Elongation at break (X-Y)	ISO 527	%	5.3~5.8
Flexural Strength (X-Y)	ISO 178	Mpa	72.5~74.1
Flexural Strength (X-Z)			27.2~31.7
Flexural Modulus (X-Y)	ISO178	Mpa	3359~3368
Flexural Modulus (X-Z)			1359~1590
Notched impact strength (X-Y)	ISO180	KJ/m ²	6.3~6.9
Notched impact strength (X-Z)			2.5~3.2
Thermodynamic Properties			
HDT@ 0.455 MPa(66 psi)	ISO75	°C	88
Continuous Use Temperature	IEC 60216	°C	85

Test Sample Printing Conditions:

3D Printer	G3U (Flashforge)
Nozzle Diameter	0.4mm
Nozzle Temperature	250 °C
Printing Speed	200mm/s
Infill	100%
Infill way	concentric
Standard Printed Sample	See blew attachment

Recommended Printing Parameters:

Parameters	
Nozzle Temperature	240~260°C(recommend 250°C)
Bed Temperature	100~120°C(recommend 110°C)
Bed Materials	Tempered glass, BuildTak, Carbon fiber board
Nozzle Diameter	φ 0.4/0.6mm(recommend φ 0.4mm)
Nozzle and gear material	High strength steel
Model Cooling Fan	0~20%
Layer	0.12~0.3mm
Printing Speed	40~250mm/s(faster speed needs high temperature)
Idle Speed	60~350mm/s
Printing Environmental Temperature	Room temperature~60°C
Retraction Distance	0.5~2mm
Retraction Speed	30~50mm/s

Note:

To prevent moisture absorption and contamination, the packaging of the filament should remain sealed and intact before use. For the same reason, some used filament should be resealed before storage.

Because of the added glass fiber, ASA-GF10 filament are prone to moisture absorption and should be dried before use. It is recommended to dry the filament in an 80°C hot air oven for at least 5 hours to ensure the success rate and quality of the printed model.

After printing, it is recommended to dry the model in an oven at 80°C for 1-3 hours to improve its strength.

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Attachment: Test sample dimensions and printing direction

