

Technical Data Sheet

ASA-CF Filament

ASA-CF is an FFF 3D printing filament produced with an ASA modified material containing carbon fiber. It has excellent dimensional stability, flexural strength and rigidity, and has excellent weather resistance, temperature resistance and antistatic properties.

Main features:

Dimensionally stable/high stiffness/weather resistance

Main Specifications:

Physical Properties	Test Means		
Density	ISO 1183	g/cm ³	1.09~1.10
MFR(250°C/2.16Kg)	ISO 1133	g/10min	4~7
Moisture Absorption(23°C/24h)	ISO 62	%	<0.5
Mechanical Properties			
Tensile strength	ISO 527	Mpa	39~42
Elongation at break	ISO 527	%	15.5~17.5
Flexural Modulus	ISO 527	Mpa	850~900
Flexural Strength	ISO178	Mpa	80~82.5
Impact Strength	ISO180	KJ/m ²	10.5~12
Thermodynamic Properties			
HDT@ 0.455 MPa(66 psi)	ISO75	°C	88
Continuous Use Temperature	IEC 60216	°C	85

Test Sample Printing Conditions:

3D Printer	Prusa XL
Nozzle Diameter	0.4mm
Nozzle Temperature	270 °C
Printing Speed	50mm/s
Layer	1.2mm
Infill	100%
Standard Printed Sample	See blew attachment

Recommended Printing Parameters:

Parameters	
Nozzle Temperature	250~280°C (270°C recommended)
Bed Temperature	100~120°C (110°C recommended)
Bed Materials	Prusa textured powder coated print sheet
Nozzle Diameter	φ 0.4/0.6mm(φ 0.4mm recommended)
Nozzle and Feeding Gear Material	High Strength Steel
Model Cooling Fan	0~20%
Layer	0.12~0.3mm
Printing Speed	40~60mm/s(50mm/s recommended)
Idle Speed	60~120mm/s
Printing Environmental Temperature	Room Temperature to 60°C
Retraction Distance	1~2mm
Retraction Speed	30~50mm/s

Note:

To prevent moisture absorption and contamination, the packaging of filament should be kept airtight and undamaged until they are opened for use. For the same reason, some

used filament should be resealed before storage.

If filament deteriorates due to moisture absorption, they should be dried before use. It is recommended to dry the filament in a dryer at 80°C for at least 5 hours to ensure the success rate and quality of the printed model.

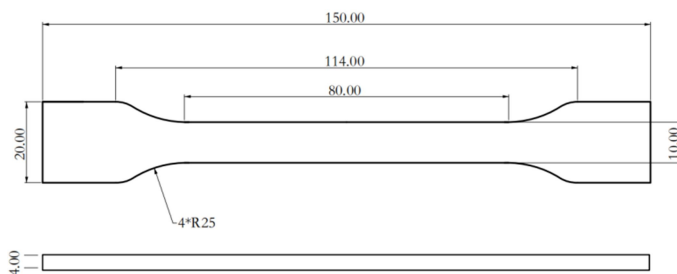
If using ASA-CF as its own support material, remove the support structure after the model has cooled. Otherwise, the support structure may be glued to the model and difficult to remove.

After the model is printed, it is recommended to dry it in a dryer at 80~100°C for 1~3 hours to increase the strength of the model.

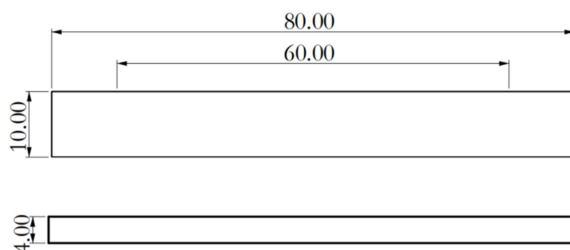
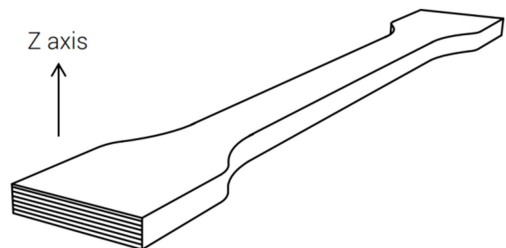
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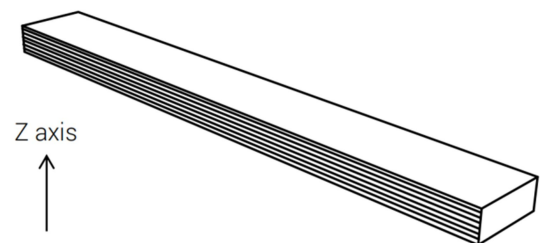
Attachment: Test sample dimensions and printing direction

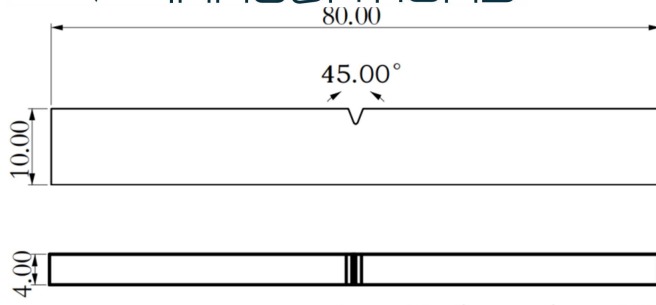


Tensile testing specimen; ASTM D638 (ISO 527, GB/T 1040)



Flexural testing specimen; ASTM D790 (ISO 178, GB/T 9341)





Impact testing specimen; ASTM D256 (ISO 179, GB/T 1043)

