

# PA6-CF

广东三绿

<b>Product features:</b> Contains 20% carbon fiber; High strength; High toughness; Heat deformation temperature of 209°C.	<b>Main applications:</b> 2024.04.02 Structural parts, functional parts
	<b>Points for attention:</b> 受控文件 Keep the printing process dry

Properties	Test Method	Test Condition	S.I. Units	Typical Values
<b>Mechanical</b>				
Tensile Strength (X-Y)	ISO527/2	50mm/min	MPa	170
Young' s Modulus (X-Y)	ISO527/2	1mm/min	MPa	/
Elongation at break (X-Y)	ISO527/2	50mm/min	%	10
Flexural Strength (X-Y)	ISO178	2mm/min	MPa	245
Flexural Modulus (X-Y)	ISO178	2mm/min	MPa	11000
IZOD Impact Notched (X-Y)	ISO180	23°C	KJ/m <sup>2</sup>	9.7
IZOD Impact Notched (Z-X)	ISO180	23°C	KJ/m <sup>2</sup>	3.8
Shore hardness	ISO868	23°C	HD	84
<b>Thermal</b>				
Heat Deflection (HDT)	ISO75	0.45MPa	°C	209
Glass Transition(Tg)	ISO11357-3	10°C/min	°C	65
Melting Point	ISO11357-3	10°C/min	°C	225
@5%Decomposition Temp.	ISO11358	20°C/min	°C	≥330
Vicat Softening Temp.	ISO306	5kg,50°C/h	°C	/
Mold Shrinkage	ISO294	23°C	%	/
Coefficient of Thermal Exp.	ISO11359-2		μm (m·°C)	/
<b>Others</b>				
Melt Flow Rate	ISO1133	190°C/2.16kg	g/10min	15
Density	ISO1183	23°C	g/cm <sup>3</sup>	1.2
Volume Resistivity	IEC60093	-	ohm-cm	1.05*10 <sup>12</sup>
Dielectric Constant	IEC60250	1kHz		3.4
Flammability	UL94	1.5mm	Class	HB
<b>Chemical resistance</b>				
<b>Item</b>				<b>Class</b>
Weak Acid (pH 3-6)				Good
Strong Acid (pH<3)				Poor
Weak Bases (pH 8-10)				Excellent
Strong Bases (pH >10)				Good
Deionized Water				Excellent
Alcohol				Fair
Ketone				Fair
Petroleum Fuels				Excellent

Ester	Excellent
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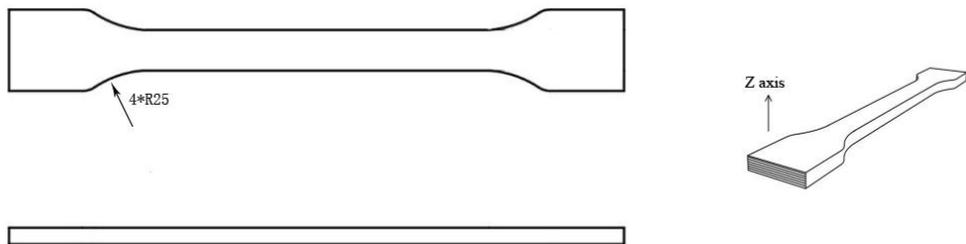
**Class: Excellent, Good, Fair, Poor**

**Recommended Printing Parameters**

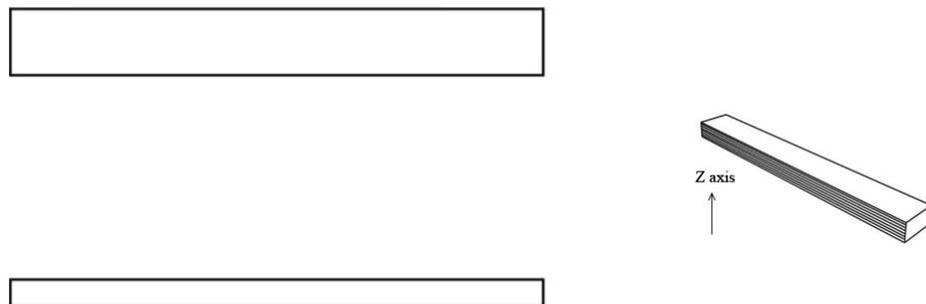
Parameters	Range	
	Temperature °C	Speed mm/s
Nozzle Print Temp.	270-290	50-100
Print Platform Temp.	50-70°C	
Print Platform Material	Normal	
Print Platform Treatment	GLUE	
Cool Fan	On☑/Off☐	
Raft Distance	0.3-0.5mm	
Retraction Distance	0.8-1mm	
Retraction Speed	30mm/s	
Room Temp.	常温	
Support Material	PVA	
Drying Temp.	80-110°C	

The above values are for the reference of the printer only, and the above process can be adjusted appropriately according to different models, different models and product requirements

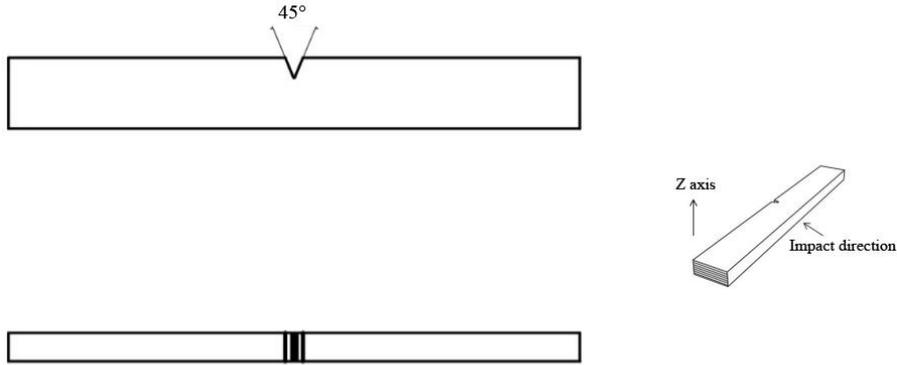
**TENSILE TESTING SPECIMEN**



**FLEXURAL TESTING SPECIMEN**



**IMPACT TESTING SPECIMEN**



**Note:**

[1] Test the spline printing speed 45 mm/s, print temperature 270 °C, Fill 100%, the cabling mode is 90 degrees

[2] Typical value refers to the laboratory average data, only for use as a reference, not as the standard of the product, different printers have different printing.

Safety and Handling Precautions

A Material Safety Data Sheet (SDS) for this product is available from your local Sunlu office.

The SDS provides customers with information on material handling, safety and disposal, as well as the requirements of applicable local health and safety regulations. The following are general precautions and apply only to the resins supplied. The various additives and processing aids used in plastics moulding and other materials used in secondary processes have their own safety requirements and must be understood separately.

This product has extremely low toxicity, and under normal conditions of use, there are no particular issues with inhalation, eye contact, or skin contact. However, care must be taken when handling, storing, using or disposing of these resins. Workplace should be kept clean to avoid dust accumulation. Contact with molten resins during processing operations should be minimized. Plastic resin products generate dust and gases during the manufacturing process. Dust generated during operations such as sawing, filing and sanding of printed parts may irritate the eyes and upper respiratory tract. In dusty manufacturing environments, it is recommended that operators use respirators or masks approved by the appropriate authorities.

The print processing area should be well ventilated as required by proper operating procedures. When plastics are processed above the melting temperature, fumes containing decomposing substances are released and may be irritating. In most cases, good general ventilation equipment is sufficient. Local extract ventilation should be used when necessary. When there is a risk of eye injury from airborne particles during work, protective goggles should be worn. If necessary, wear insulated gloves for protection when handling the resin. The product may yellow under the action of ultraviolet light, so it should be stored away from direct sunlight.

Users are advised to investigate the final use of their product beforehand to ensure the correct use of Sunlu products. To prevent misuse or incorrect use of Sunlu products, it is advisable to contact the Sunlu R&D department or the marketing department.



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