SUNLU

Silk PLA+

Product features:
Silky smooth surface and glossy color
Multiple colors

Main applications:
Ornaments, toys, ornaments, handcrafts

Points for attention:

Properties	Test Method	Test Condition	S.I. Units	Typical Values
Mechanical				
Tensile Strength (X-Y)	ISO527/2	50mm/min	MPa	60.6
Young's Modulus (X-Y)	ISO527/2	1mm/min	MPa	2760
Elongation at break (X-Y)	ISO527/2	50mm/min	%	6.3
Flexural Strength (X-Y)	ISO178	2mm/min	MPa	65
Flexural Modulus (X-Y)	ISO178	2mm/min	MPa	1895
IZOD Impact Notched (X-Y)	ISO180	23℃	KJ/m^2	4.2
IZOD Impact Notched (Z-X)	ISO180	23℃	KJ/m^2	/
Shore hardness	ISO868	23℃	HD	80
Thermal				
Heat Deflection (HDT)	ISO75	0.45MPa	℃	53
Glass Transition(Tg)	ISO11357-3	10℃/min	℃	60.9
Melting Point	ISO11357-3	10℃/min	℃	164
@5%Decomposition Temp.	ISO11358	20℃/min	℃	≥364
Vicat Softening Temp.	ISO306	5kg,50℃/h	℃	54
Mold Shrinkage	ISO294	23℃	%	0.1-0.3
Coefficient of Thermal Exp.	ISO11359-2		μm (m·℃)	$101*10^{-6}$
Others				
Melt Flow Rate	ISO1133	190℃/2.16kg	g/10min	9.0
Density	ISO1183	23℃	g/cm^3	1.25
Volume Resistivity	IEC60093	-	ohm-cm	2.90E+15
Dielectric Constant	IEC60250	1kHz		1.51
Flammability	UL94	1.5mm	Class	HB

Chemical resistance	
Item	Class
Weak Acid (pH 3-6)	Good
Strong Acid (pH<3)	Poor
Weak Bases (pH 8-10)	Good
Strong Bases (pH >10)	Poor
Deionized Water	Good
Alcohol	Fair
Ketone	Poor
Petroleum Fuels	Good

Ester	Good

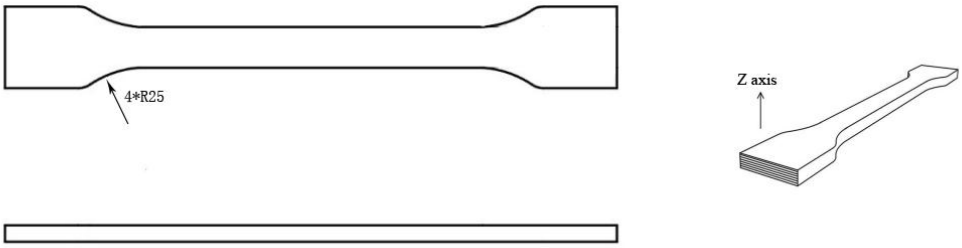
Class: Excellent, Good, Fair, Poor

Recommended Printing Parameters

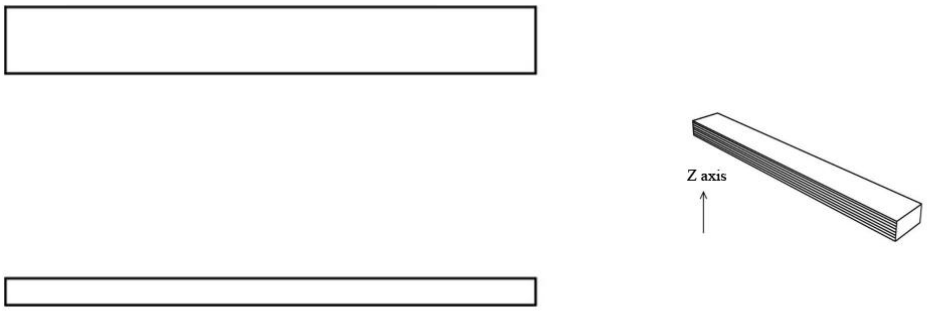
Parameters	Range	
Nozzle Print Temp.	Temperature ℃	Speed mm/s
	205-215	50-100
	215-235	100-200
Print Platform Temp.	50-70℃	
Print Platform Material	Normal	
Print Platform Treatment	No processing required	
Cool Fan	On☑/Off☐	
Raft Distance	0.4-0.6mm	
Retraction Distance	0.8-1.2mm	
Retraction Speed	30-40mm/s	
Room Temp.	Normal temperature	
Support Material	PVA	
Drying Temp.	50℃	

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

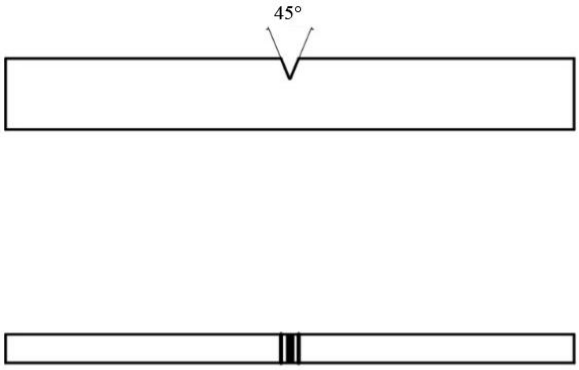
TENSILE TESTING SPECIMEN



FLEXURAL TESTING SPECIMEN



IMPACT TESTING SPECIMEN



Note:

[1] Test the spline printing speed__45__mm/s,print temperature__210__℃,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.

Note: Due to variations in usage conditions and applicable laws by location and time, customers are responsible for determining whether the products and product information in this document are suitable for their use. Customers should ensure that their workspaces and handling methods comply with applicable laws and other government regulations. Sunlu assumes no responsibility or liability for the information in this document and does not provide any warranties. All implied warranties of merchantability or fitness for a particular purpose under this document are hereby expressly excluded.