

Hyper-PLA+ Filament Technical Data Sheet

Version 1.0

1. Product introduction

HYPER PLA CF is filled with 4% carbon fiber material, which has the advantages of high-speed printing and high strength. The carbon fiber texture gives the work a unique and modern appearance, making it visually distinctive. It can withstand more severe physical conditions, thus providing a wider range of application possibilities, ranging from artistic creation to industrial applications. Our materials are designed with ease of handling after printing in mind. The support structure is strong to ensure the stability of the printing process, and it is easy to remove, ensuring the exquisiteness and smoothness of the finished product.

2. Physical Performance Parameters

Items	Testing Criteria	Parameters
Density	ASTM D792 (ISO 1183, GB/T 1033)	1.21 ±0.1 (g/cm ³ at 21.5°C)
Glass transition temperature	DSC, 10 °C/min	N/A
Vicat Softening temperature	ASTM D1525 (ISO 306 GB/T 1633)	53 (°C)
Melt index	190°C, 2.16 kg	5.37 (g/10 min)

3. Mechanical Performance Parameters

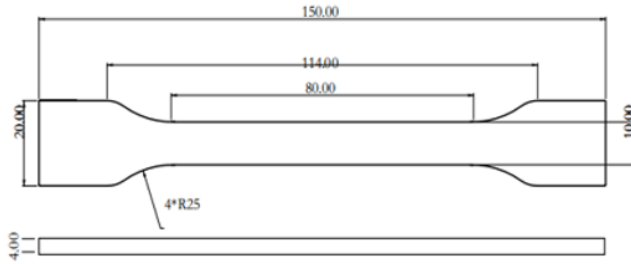
Items	Testing Criteria	Parameters
Tensile strength (X-Y)	ISO 527, GB/T 1040	39 (MPa)
Tensile modulus (X-Y)	ISO 527, GB/T 1040	N/A
Elongation at break (X-Y)	ISO 527, GB/T 1040	4.27 (%)
Bending strength (X-Y)	ISO 178, GB/T 9341	103 (MPa)
Bending modulus (X-Y)	ISO 179, GB/T 1043	5003 (MPa)
Charpy impact strength (Z)	ISO 179, GB/T 1043	5.08 (kJ/m ²)

Printing parameters and styles of printing conditions:

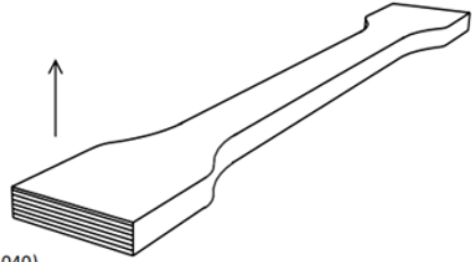
Print Conditions	Parameters
Nozzle Temperature	190 - 230 °C
Hot Bed Temperature	45-60 °C
Printing Speed	50-300mm/s
Infill	100%

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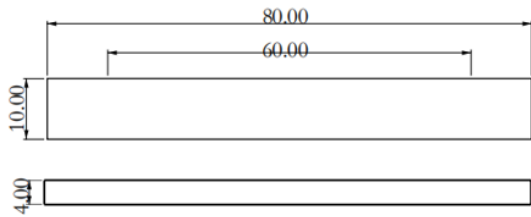
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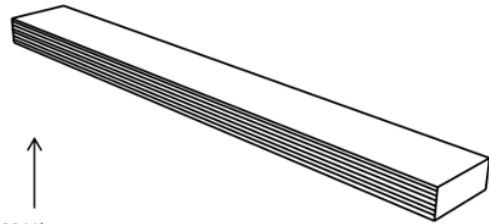
ASTM D638 (ISO 527, GB/T 1040)



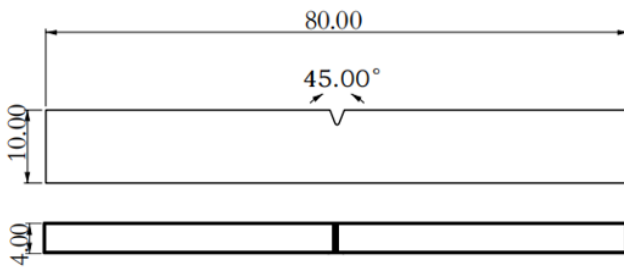
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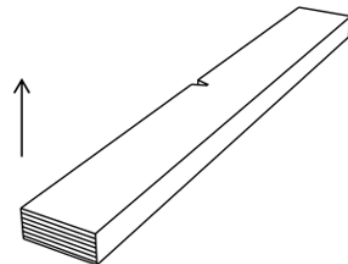
ASTM D790 (ISO 178, GB/T 9341)



2



ASTM D256 (ISO 179, GB/T 1043)



3

4. Recommended printing conditions

Print Temperature	Hotbed Temperature	Ambient Temperature	Print Speed	Pumping Distance
190-230°C	45-60°C	0-50°C	50-300mm/s	1-5mm

5. Compatible Models

Ender-PLA+ widely used in FDM 3D printers on the market.

6. Storage Condition

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Please place this product in a dry and ventilated environment, not in an environment of high temperature, sunny or humid conditions. If it is not used up within a short time after opening, it is recommended to use it with a dry box when using it again.

7. Disclaimer

The values given in this data sheet are for reference and comparison only. Actual values may vary with printing conditions, and the end-use performance of printed models depends on model design, environmental conditions, printing conditions, etc.