

PLA-HF

Technical Data Sheet

PLA-HF is a high-speed printing material that is easy to print, has excellent forming effects, a smooth surface, and neat layering. Strength, stiffness, toughness balance, low ash content, very suitable for conventional and high-speed printing, can be used for conceptual modeling and rapid prototyping.

Basic Information

Characteristics	• Good toughness	• Smooth surface and neat layer lines
	• High-speed printing	• Easy to print
	• High forming accuracy	• Hard to break
Applications	• Prototyping	• Decoration
	• Cosplay	• Other mechanical parts
Forming Method	• Filament	
Processing Method	• 3D Printing	

Physical Properties

Physical Properties	Testing Method	Data
Density	GB/T 1033	1.24g/cm ³
Melt Flow Index	GB/T 3682	5.37(190°C/2.16kg)

Thermal Properties

Thermal Properties	Testing Method	Data
Heat Distortion Temperature	GB/T 1634	52.45°C(0.45Mpa)
Glass Transition Temperature		N/A
Continuous Service Temperature	IEC 60216	N/A
Maximum(short term)Use Temperature		N/A

Electrical Properties

Electrical Properties	Testing Method	Data
Insulation Resistance	DINIEC 60167	N/A

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Surface Resistance

DINIEC 60093

N/A

Mechanical Properties**Testing Method****Data**

Tensile Strength (X-Y)

GB/T 1040

64.28Mpa

Tensile Strength (Z)

GB/T 1040

33.9MPa

Elongation at Break (X-Y)

GB/T 1040

5.19%

Elongation at Break (Z)

GB/T 1040

2.8%

Flexural Strength (X-Y)

GB/T 9341

100MPa

Flexural Strength (Z)

GB/T 9341

65.3Mpa

Flexural Modulus (X-Y)

GB/T 9341

3403.33MPa

Flexural Modulus (Z)

GB/T 9341

3152.18Mpa

IZOD Impact Strength (X-Y)

GB/T 1843

5.33KJ/m²

IZOD Impact Strength (Z)

GB/T 1843

2.02KJ/m²**Chemical Properties****Data**

Acid and Alkali Resistance

NO

Grease Resistance

N/A

UV Resistance

NO

Water Repellency

N/A

Recommended Printing Parameters**Data**

Drying Preparation

50°C, 8~12h

Nozzle Size

0.2,0.4,0.6,0.8mm

Nozzle Temperature

210-230°C

Build Platform Type

纹理PEI打印板

Build Platform Temperature

45~65°C

Fan Speed

100%

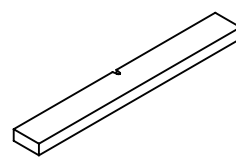
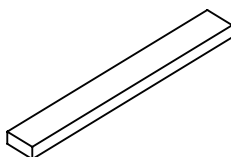
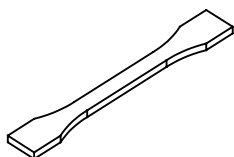
Printing Speed

< 900mm/s,The performance varies depending on the differences between machines

Printing Tips

When slicing, it is best to turn on the Z seam alignment and starting point alignment functions, turn off the Z-axis lift and exit, avoid passing through the shell when idling, optimize the slicing printing path, and appropriately reduce the printing speed to achieve the best printing effect.

Test Conditions of Mechanical Properties



Tensile testing specimen GB/T 1040 Flexural testing specimen GB/T 9341 Impact testing specimen GB/T 1843

The performance of the filament is evaluated based on standard samples printed by eSUN, while the actual printing performance is influenced by various factors such as printer type, printing parameters, and print environment.

Printing Test Conditions

Extruder Temperature	220°C
Build Platform Temperature	65°C
Outer Layer Number	2
Top/Bottom Layer Number	3
Infill Density	100%
Fan Speed	100%

*Based on Bambu P1S 0.4mm nozzle and Orcaslicer 2.1.0 Beta.

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