

# Hyper-ABS Filament Technical Data Sheet

Version 1.0

## 1. Product introduction

Hyper ABS has excellent fluidity, making 3D printing faster and more efficient. Its impact strength is nearly doubled compared to ordinary PLA. It can also be used in environments with higher temperature requirements. At the same time, Hyper ABS improves its performance during printing by improving its formula and process. It releases fewer volatiles, protects your health, and supports open printing.

## 2. Physical Performance Parameters

Items	Testing Criteria	Parameters
Density	ASTM D792 (ISO 1183, GB/T 1033)	1.04 (g/cm <sup>3</sup> at 21.5°C)
Glass transition temperature	DSC, 10°C/min	81 (°C)
Vicat Softening temperature	ASTM D1525 (ISO 306 GB/T 1633)	84.6 (°C)
Melt index	190°C, 2.16kg	3-5 (g/10min)

## 3. Mechanical Performance Parameters

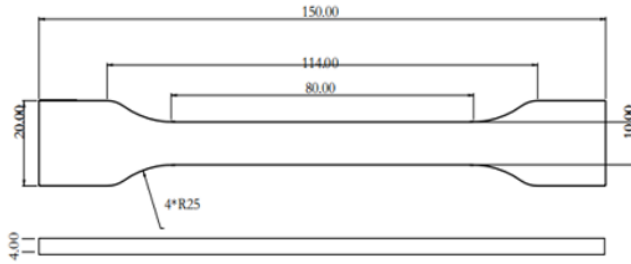
Items	Testing Criteria	Parameters
Tensile strength (X-Y)	ISO 527, GB/T 1040	27.0± 1.2 (MPa)
Tensile modulus (X-Y)	ISO 527, GB/T 1040	2020± 45 (Mpa)
Elongation at break (X-Y)	ISO 527, GB/T 1040	7.63 ± 3.3 (%)
Bending strength (X-Y)	ISO 178, GB/T 9341	92.38 (MPa)
Bending modulus (X-Y)	ISO 179, GB/T 1043	2035 ± 50 (MPa)
Charpy impact strength (Z)	ISO 179, GB/T 1043	13.2± 1 (kJ/m <sup>2</sup> )

Printing parameters and styles of printing conditions:

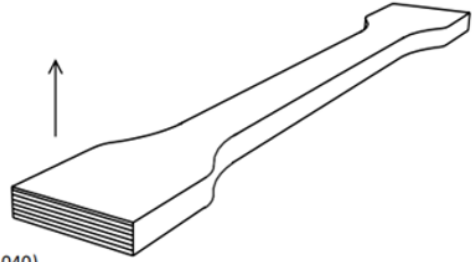
Print Conditions	Parameters
Nozzle Temperature	240 - 300°C
Hot Bed Temperature	70 - 90°C
Printing Speed	30 - 300mm/s
Infill	0%

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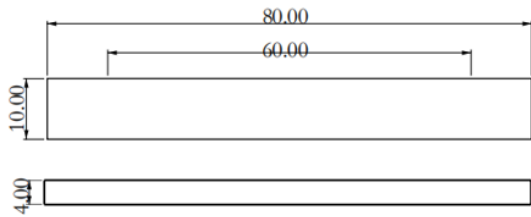
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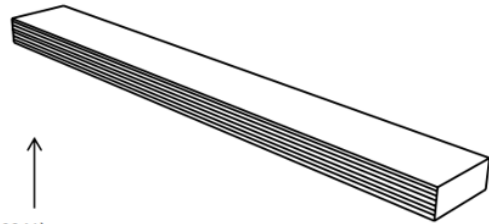
ASTM D638 (ISO 527, GB/T 1040)



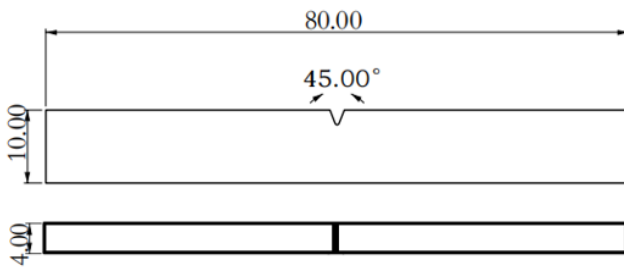
**\*1\***



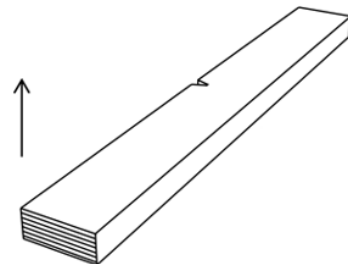
ASTM D790 (ISO 178, GB/T 9341)



**\*2\***



ASTM D256 (ISO 179, GB/T 1043)



**\*3\***

### 4. Recommended printing conditions

Print Temperature	Hotbed Temperature	Ambient Temperature	Print Speed	Pumping Distance
240 - 300°C	70 - 90°C	0-50°C	30 - 300mm/s	0.5 – 3mm

### 5. Compatible Models

Hyper ABS is 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 designs, environmental conditions, printing conditions, etc.