HP ULTRA PLA Filament Technical Data Sheet

Version 1.0

1. Product introduction

HP ULTRA PLA is a high quality and reliable 3D printer filament jointly developed and launched by Creality and BASF.It has good printing and mechanical properties, excellent diameter accuracy and low water absorption. It doesn't create bubbles during printing and can minimize warping, nozzle clogging and oozing. The neat winding process during production helps reducing filament tangles and jamming, thereby increasing the stability while printing large-sized parts. The quality and process stability of its raw materials results in good dimensional stability, strength, and toughness of the printed parts.

2. Physical Performance Parameters

Items	Testing Criteria	Parameters
Density	ASTM D792 (ISO 1183, GB/T 1033)	1.24 ±0.1 (g/cm3 at 21.5˚C)
Glass transition temperature	DSC, 10 °C/min	61 (°C)
Vicat Softening temperature	ASTM D1525 (ISO 306 GB/T 1633)	64 ±0.4(˚C)
Melt index	190°C, 2.16 kg	5-8(g/10 min)

3. Mechanical Performance Parameters

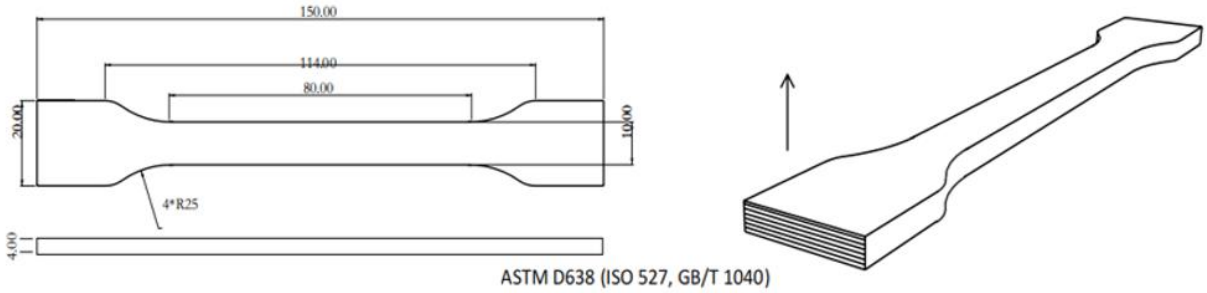
Items	Testing Criteria	Parameters
Tensile strength (X-Y)	ISO 527, GB/T 1040	32 (MPa)
Tensile strength（X-Z）	ISO 527, GB/T 1040	20.5(MPa)
Flexural modulus （X-Y）	ISO 527, GB/T 1040	2440（Mpa）
Flexural modulus （X-Z）	ISO 527, GB/T 1040	2074（Mpa）
Elongation at break（X-Y）	ISO 527, GB/T 1040	7.3 (%)
Elongation at break（X-Z）	ISO 527, GB/T 1040	1.2 (%)
Charpy impact strength（X-Y）	ISO 179, GB/T 1043	23.2(kJ/m^2)
Charpy impact strength（X-Z）	ISO 179, GB/T 1043	7.8(kJ/m^2)

Printing parameters and styles of printing conditions:

Print Conditions	Parameters
Nozzle Temperature	200℃
Hot Bed Temperature	50℃
Printing Speed	60mm/s
Infill	100%

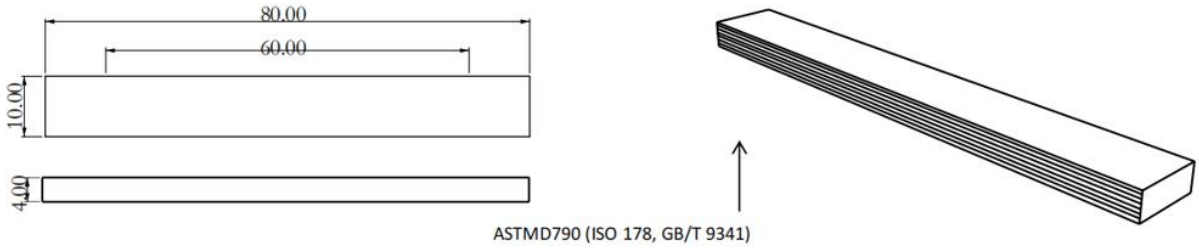
HP ULTRA PLA Filament Technical Data Sheet

Version 1.0



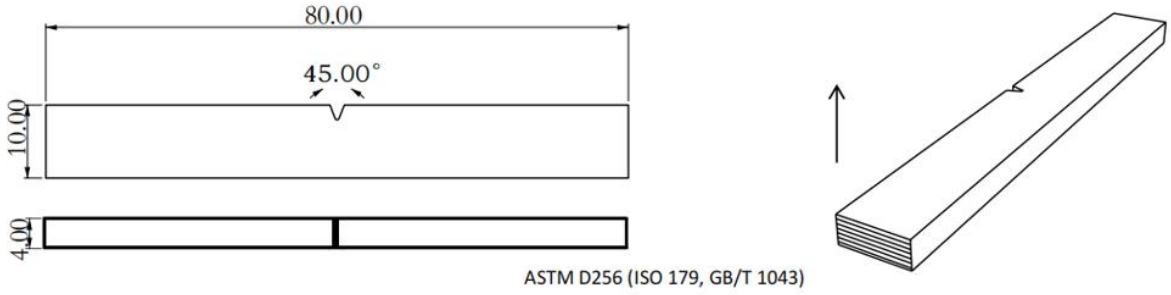
ASTM D638 (ISO 527, GB/T 1040)

1



ASTMD790 (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
200-220℃	60-80℃	0-50℃	40-80mm/s	3-8mm

5. Compatible Models

HP ULTRA PLA wildly used in FDM 3D printers on the market.

6. Storage Condition

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.