ABS+

Technical Data Sheet

ABS+ is strengthened and upgraded on the basic of ABS,which not only continues its advantages of high strength and impact resistance,but also has lower odor and lower shrinkagr,and is not easy to warp and crack when printing,helping you esaily create high-precision,high-quality 3D works.

Basic Information

Characteristics	• Low warpage • Low odor • Strong interlayer bonding strength	• High heat resisance
Applications	• Industrial parts • Mechanical teaching aids	• Architectural decoration
Forming Method	• Filament	
Processing Method	• 3D Printing	

Physical Properties	Testing Method	Data
Density	GB/T 1033	1.06 g/cm3
Melt Flow Index	GB/T 3682	15 （220℃/10kg）

Thermal Properties	Testing Method	Data
Heat Distortion Temperature	GB/T 1634	73 ℃ (0.45Mpa)
Glass Transition Temperature		N/A
Continuous Service Temperature	IEC 60216	N/A
Maximum (short term) Use Temperature		N/A

Electrical Properties	Testing Method	Data
Insulation Resistance	DIN IEC 60167	N/A
Surface Resistance	DIN IEC 60093	N/A

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Mechanical Properties	Testing Method	Data
Tensile Strength (X-Y)	GB/T 1040	40.12 Mpa
Tensile Strength (Z)	GB/T 1040	14.94 MPa
Elongation at Break (X-Y)	GB/T 1040	5.54 %
Elongation at Break (Z)	GB/T 1040	2.12 %
Flexural Strength (X-Y)	GB/T 9341	59.5 MPa
Flexural Strength (Z)	GB/T 9341	21.4 Mpa
Flexural Modulus (X-Y)	GB/T 9341	1865.99 MPa
Flexural Modulus (Z)	GB/T 9341	1506.71 Mpa
IZOD Impact Strength (X-Y)	GB/T 1843	26.45 KJ/m²
IZOD Impact Strength (Z)	GB/T 1843	1.77KJ/m²

Chemical Properties	Data
Acid and Alkali Resistance	N/A
Grease Resistance	N/A
UV Resistance	N/A
Water Repellency	N/A

Recommended Printing Parameters	Data
Drying Preparation	60℃ > 8H
Nozzle Size	0.2,0.4,0.6,0.8mm
Nozzle Temperature	230-207℃
Build Platform Type	PEI
Build Platform Temperature	95-110℃
Fan Speed	0%
Printing Speed	< 200mm/s

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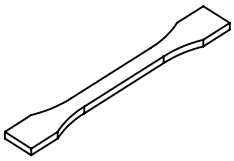
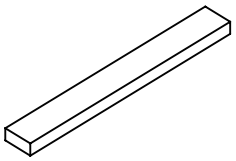
Printing Tips

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.

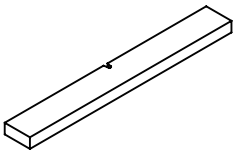
Test Conditions of Mechanical Properties



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	260℃
Build Platform Temperature	100℃
Outer Layer Number	2
Top/Bottom Layer Number	3
Infill Density	100%
Fan Speed	0%

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

Notice

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