

ABS+

Technical Data Sheet

Based on the modification of ABS material, it has higher mechanical properties, lower odor and lower shrinkage rate than conventional ABS materials. With high toughness and high impact resistance, ABS+ can be used to print sturdy and durable parts; low VOC volatile content, low odor during printing, comfortable printing without pressure; low shrinkage, not easy to warp and crack during printing.

Material Status	Mass Production		
Characteristics	<ul style="list-style-type: none"> • Heat resistance • Sturdy and durable • High toughness 	<ul style="list-style-type: none"> • Low odor • Low shrinkage • High impact resistance 	<ul style="list-style-type: none"> • Excellent printability
Applications	<ul style="list-style-type: none"> • Machinery • Mould • Electric products 	<ul style="list-style-type: none"> • Toy • Automobile 	
Form	<ul style="list-style-type: none"> • Filament 		
Processing method	<ul style="list-style-type: none"> • 3D Print, FDM Print 		

	testing method	Typical value	
Physical Properties			
Density	GB/T 1033	1.06	g/cm ³
Melt Flow Index	GB/T 3682	15	(220°C/10kg)
Mechanical Properties			
Tensile Strength	GB/T 1040	40	MPa
Elongation at Break	GB/T 1040	30	%
Flexural Strength	GB/T 9341	68	MPa
Flexural Modulus	GB/T 9341	1203	MPa
IZOD Impact Strength	GB/T 1843	42	kJ/m ²
Thermal Properties			
Heat distortion Temperature	GB/T 1634	73	°C
Continuous Service Temperature	IEC 60216	N/A	
Maximum (short term) Use Temperature		N/A	
Electrical Properties			
Insulation Resistance	DIN IEC 60167	N/A	
Surface Resistance	DIN IEC 60093	N/A	

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Recommended printing parameters

Extruder Temperature	230- 270°C
Build Platform Temperature	95-110°C
Fan Speed	100%
Printing Speed	40 - 100mm/s

Based on 0.4 mm nozzle and Simplify 3D v.4.1.2. Printing conditions may vary with different nozzle diameters

Drying Recommendations

N/A

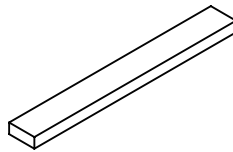
Precautions:

1. The shrinkage rate of ABS+ material is large, so you should pay attention to heat preservation when printing, and print in a printer with a closed chamber.
2. The cooling of ABS+ is slightly worse. You can turn on a fan to improve the printing effect, or reduce the drape angle structure in the model; or try to reduce the speed to print.

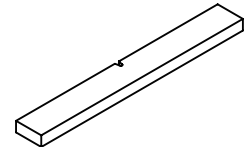
Mechanical Properties



Tensile testing specimen GB/T 1040



Flexural testing specimen GB/T 9341



Impact testing specimen GB/T 1043

The physical properties, mechanical properties, thermal properties, and electrical properties of the line are obtained based on the injection molding spline test.

Print test condition:

Extruder Temperature	230-270°C
Build Platform Temperature	95°C
Outline/Perimeter Shells	4
Top/Bottom Layers	4
Infill Percentage	20%
Fan speed	0%
Printing speed	40mm/s

Based on 0.4 mm nozzle and Simplify 3D v.4.1.2.

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