

# eABS-CF

## Technical Data Sheet

Adding carbon fiber reinforced materials to ABS and modifying, it strengthens the rigidity and toughness of ABS. eABS-CF has excellent impact resistance and chemical corrosion resistance, and it has good performance in some scenarios with high strength demand such as tooling fixtures.

Material Status	Mass Production			
Characteristics	<ul style="list-style-type: none"> <li>• High strength</li> <li>• Wear resistance</li> <li>• Impact resistance</li> </ul>	<ul style="list-style-type: none"> <li>• Chemical resistance</li> </ul>		
Applications	<ul style="list-style-type: none"> <li>• Aerospace</li> </ul>	<ul style="list-style-type: none"> <li>• Automotive</li> </ul>	<ul style="list-style-type: none"> <li>• Industrial applications</li> </ul>	
Form	<ul style="list-style-type: none"> <li>• Filament</li> </ul>			
Processing method	<ul style="list-style-type: none"> <li>• 3D Print, FDM Print</li> </ul>			

	testing method	Typical value	
<b>Physical Properties</b>			
Density	GB/T 1033	1.06	g/cm <sup>3</sup>
Melt Flow Index	GB/T 3682	14.2	(220°C/10KG)
<b>Mechanical Properties</b>			
Tensile Strength	GB/T 1040	17.68	MPa
Elongation at Break	GB/T 1040	4.18	%
Flexural Strength	GB/T 9341	55.14	MPa
Flexural Modulus	GB/T 9341	2357.8	MPa
IZOD Impact Strength	GB/T 1843	2.37	kJ/m <sup>2</sup>
<b>Thermal Properties</b>			
Heat distortion Temperature	GB/T 1634	94.9°C	(0.45Mpa)
Continuous Service Temperature	IEC 60216	N/A	
Maximum (short term) Use Temperature		N/A	
<b>Electrical Properties</b>			
Insulation Resistance	DIN IEC 60167	N/A	
Surface Resistance	DIN IEC 60093	N/A	

Wuhan University Building A403-I,A901,No.6 Yuexing 2 Road,Nanshan District,Shenzhen,Guangdong

China

Tel +86 755 86581960

fax +86 755 26031982

Email: bright@brightcn.net

www.esun3d.com

### Recommended printing parameters

Extruder Temperature	240 - 280°C
Build Platform Temperature	90°C
Fan Speed	10%
Printing Speed	40-300mm/s

Based on Bambu P1S 0.4 mm nozzle and Orcaslicer1.7.0 Beta. Printing conditions may vary with different

### nozzle diameters Drying Recommendations

N/A

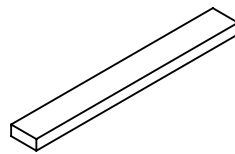
### Precautions:

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.

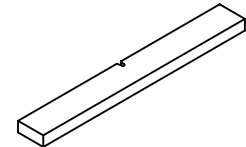
### Mechanical Properties



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 filament are obtained based on the injection molding spline test.

### Print test condition:

Extruder Temperature	275°C
Build Platform Temperature	90°C
Outline/Perimeter Shells	2
Top/Bottom Layers	3
Infill Percentage	100%
Fan speed	10%
Maximum volumetric flow rate	4mm <sup>3</sup> /s

Based on Bambu P1S 0.4 mm nozzle and Orcaslicer2.1.0 Beta.

### Notice

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