

EP062206NC001-TDS

COCOON ABS-Birch(GF)

COCOON ABS-Birch (GF) is a glass fiber-reinforced ABS material that supports printing in an open environment. It offers a well-balanced combination of strength, rigidity, and warp resistance. With a heat resistance up to 82°C and a printing speed up to 200mm/s. It combines great mechanical properties, thermal stability, and printing efficiency. It is suitable for 3D printing applications that require certain levels of strength, rigidity, and heat resistance, such as jigs and fixtures, manufacturing tools, housings, and structural components.

Part 1 Injection-Molded Specimen Performance

Testing Items	Testing Conditions	Testing Methods	Units	Typical Values
Physical Properties				
Density	23°C	GB/T 1033	g/cm ³	1.11
Melt Volume Rate	220°C, 10kg	GB/T 3682	g/10min	30
Mechanical Properties				
Tensile Strength	5mm/min	GB/T 1040.2	MPa	45
Elongation @ Break	5mm/min	GB/T 1040.2	%	3
Flexural Strength	2mm/min	GB/T 9341	MPa	70
Flexural Modulus	2mm/min	GB/T 9341	MPa	3300
Izod Impact Strength	2.75J	GB/T 1843	kJ/m ²	6
Thermal Property				
HDT	0.45MPa	GB/T 1634	°C	82

Note: The typical physical properties are not intended for use as sales specifications.

Part 2 Printed Specimen Performance

Testing Items	Testing Conditions	Testing Methods	Units	Typical Values
Mechanical Properties				
Tensile Strength(X-Y)	50mm/min	GB/T 1040.2	MPa	36
Tensile Modulus(X-Y)	50mm/min	GB/T 1040.2	MPa	2650
Tensile Strength(Z)	50mm/min	GB/T 1040.2	MPa	20
Tensile Modulus(Z)	50mm/min	GB/T 1040.2	MPa	1600
Elongation @ Break	50mm/min	GB/T 1040.2	%	3
Flexural Strength	2mm/min	GB/T 9341	MPa	55
Flexural Modulus	2mm/min	GB/T 9341	MPa	2700
Impact Strength, Notched	2.75J	GB/T 1843	kJ/m2	6

Note: All specimens are printed under the following conditions: nozzle temperature = 270°C, printing speed = 150 mm/s, build plate temperature=90°C infill = 100%, nozzle diameter = 0.4mm.



Printing Path Direction of Specimen (Z)



Printing Path Direction of Specimen (X-Y)

Part 3 Printing Guidelines

Parameters	Settings
Nozzle Temperature	240-280°C, recommended 270°C
Build Plate Temp.	90°C
Build Plate Material	Glass、PEI、 Steel Spring Build Plate
Bottom Layer Printing Temp.	/
Enclosed-chamber Printing	Support open printing / Enclosed printing provides better results
Print Speed	100-200mm/s

Drying recommendations

60 °C in a hot air dryer for 4hours

Disclaimer:

The values provided in this data sheet are for reference and comparison purposes only. They should not be used for design specifications or quality control. Actual values may vary depending on printing conditions. The ultimate performance of printed parts depends not only on the material but also on the part design, environmental conditions, and printing conditions. The product specifications are subject to change without notice.

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