

EP063106BK001-TDS

COCOON ABS-Birch(CF)

It is an ABS chopped carbon fiber composite material that achieves a precise balance in mechanical properties, printability, and surface quality. It features high strength, high rigidity, and the ability to suppress warping. Printed products are robust and durable with a matte, clean finish. Its excellent mechanical properties and outstanding surface quality make it suitable for 3D printing applications that require both strength and stiffness, such as tooling fixtures, manufacturing jigs, casings, and structural components.

Part 1 Injection-Molded Specimen Performance

Testing Items	Testing Conditions	Testing Methods	Units	Typical Values
Physical Properties				
Density	23°C	ISO 1183	g/cm ³	1.06
Melt Volume Rate	220°C, 10kg	ISO 1133	g/10min	20
Mechanical Properties				
Tensile Strength	5mm/min	ISO 527-1	MPa	55
Elongation @ Break	5mm/min	ISO 527-1	%	5
Flexural Strength	2mm/min	ISO 178	MPa	80
Flexural Modulus	2mm/min	ISO 178	MPa	4000
Impact Strength, Notched	2.75J	ISO 179-1	kJ/m ²	8

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	ISO 527-1	MPa	55
Tensile Strength(Z)	50mm/min	ISO 527-1	MPa	27
Flexural Strength	2mm/min	ISO 178	MPa	78
Flexural Modulus	2mm/min	ISO 178	MPa	4250
Impact Strength, Notched	2.75J	ISO 179-1	kJ/m ²	5
Thermal Property				
Heat Deflection Temperature	0.45MPa	ISO 75-1	°C	95

Note: All specimens are printed under the following conditions: nozzle temperature = 280°C, printing speed = 150 mm/s, build plate temperature=95°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	270-290°C
Build Plate Temp.	90-100°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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