

EP083206BK001-TDS

COCOON PETG-Birch(CF)

COCOON PETG-Birch (CF) is a PETG chopped carbon fiber composite filament that effectively reduces nozzle clogging, offers high strength and modulus, and is easy to print. The printed products have a glossy surface with hidden layer lines, and are resistant to yellowing, chemical corrosion, durable, environmentally friendly, and odorless. It supports open printing and achieves a precise balance of mechanical properties, printing performance, and surface quality. It is suitable for applications requiring high load-bearing capacity and rigidity, such as tooling fixtures, precision instrument 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	1.31
Melt Volume Rate	230°C, 2.16kg	GB/T 3682	g/10min	5
Mechanical Properties				
Tensile Strength	5mm/min	GB/T 1040.2	MPa	70
Elongation @ Break	5mm/min	GB/T 1040.2	%	5
Flexural Strength	2mm/min	GB/T 9341	MPa	110
Flexural Modulus	2mm/min	GB/T 9341	MPa	4800
Izod Impact Strength	1J	GB/T 1843	kJ/m ²	4

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	69
Tensile Modulus(X-Y)	50mm/min	GB/T 1040.2	MPa	4200
Tensile Strength(Z)	50mm/min	GB/T 1040.2	MPa	35
Tensile Modulus(Z)	50mm/min	GB/T 1040.2	MPa	1800
Flexural Strength	2mm/min	GB/T 9341	MPa	98
Flexural Modulus	2mm/min	GB/T 9341	MPa	4950
Impact Strength, Notched	2.75J	GB/T 1843	kJ/m ²	5
Thermal Property				
HDT	0.45MPa	GB/T 1634	°C	71

Note: All specimens are printed under the following conditions: nozzle temperature = 255°C, printing speed = 200 mm/s, build plate temperature=75°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	240-270°C
Build Plate Temp.	70°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	100-300mm/s
Drying recommendations	60-70 °C in a hot air dryer for 4-8hours

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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