

DP023106BK001-TDS

COCOON PLA-Birch(CF)

It is a premium PLA carbon fiber composite material known for its high rigidity, refined texture, and ease of printing. It produces parts with an impressive texture characterized by a sand-like smooth surface, discreetly hidden layer lines, and a matte, pristine finish. It is outstanding for printing projects that demand both functionality and aesthetic appeal. It provides exceptional printing performance along with superior mechanical strength. It is particularly well-suited for producing items that feature pronounced surface effects, such as device enclosures, functional artistic creations, and prototypes for industrial product designs.

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	1.25
Melt Volume Rate	190°C,2.16kg	GB/T 3682	g/10min	4
Mechanical Properties				
Tensile Strength	5mm/min	GB/T 1040.2	MPa	65
Elongation @ Break	5mm/min	GB/T 1040.2	%	5
Flexural Strength	2mm/min	GB/T 9341	MPa	100
Flexural Modulus	2mm/min	GB/T 9341	MPa	4200
Izod Impact Strength	1J	GB/T 1843	kJ/m ²	5

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	62
Tensile Strength(Z)	50mm/min	GB/T 1040.2	MPa	35
Flexural Strength	2mm/min	GB/T 9341	MPa	93
Impact Strength, Notched	2.75J	GB/T 1843	kJ/m ²	4.8

Note: All specimens are printed under the following conditions: nozzle temperature = 220°C, printing speed = 130 mm/s, build plate temperature=60°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	200-230°C
Build Plate Temp.	50-65°C
Build Plate Material	Glass、PEI、 Steel Spring Build Plate
Bottom Layer Printing Temp.	200-230°C
Enclosed-chamber Printing	/
Print Speed	60-200mm/s
Drying recommendations	40-50 °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.

Each user is responsible for determining the safety, legality, technical suitability, and disposal/recycling of the intended use. Unless otherwise stated, POLYFUL makes no warranties of any kind, express or implied, regarding the suitability of its materials for any use or application. POLYFUL shall not be liable for any damages, injuries, or losses caused by the use of POLYFUL materials in any application.