

EP052506NC001-TDS

COCOON PA-Birch(GF)

It is an enhanced PA6 material, with relatively improved tensile strength, suitable for 3D printing of industrial parts that require high strength and good wear resistance. Components printed with this material have good heat resistance and impact resistance.

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 Flow Rate	235°C, 2.16kg	GB/T 3682	g/10min	4
Mechanical Properties				
Tensile Strength	50mm/min	GB/T 1040.2	MPa	140
Elongation @ Break	50mm/min	GB/T 1040.2	%	8
Flexural Strength	2mm/min	GB/T 9341	MPa	220
Flexural Modulus	2mm/min	GB/T 9341	MPa	6400
Izod Impact Strength	2.75J	GB/T 1843	kJ/m ²	16

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	93
Tensile Modulus(X-Y)	50mm/min	GB/T 1040.2	MPa	4500
Tensile Strength(Z)	50mm/min	GB/T 1040.2	MPa	25
Tensile Modulus (Z)	50mm/min	GB/T 1040.2	MPa	1900
Flexural Strength	2mm/min	GB/T 9341	MPa	142
Flexural Modulus	2mm/min	GB/T 9341	MPa	4700
Impact Strength, Notched	2.75J	GB/T 1843	kJ/m ²	22
Thermal Property				
HDT	0.45MPa	GB/T 1634	°C	180

Note: All specimens are printed under the following conditions: nozzle temperature = 290°C, printing speed = 60 mm/s, build plate temperature=100°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	280-300°C
Build Plate Temp.	100°C
Build Plate Material	Glass、PEI、Steel Spring Build Plate
Bottom Layer Printing Temp.	280°C
Enclosed-chamber Printing	yes
Print Speed	40-70mm/s
Drying recommendations	100-120 °C in a hot air dryer for 6-8hours

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.