

# 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	ISO 1183	g/cm <sup>3</sup>	1.31
Melt Flow Rate	235°C,2.16kg	ISO 1133	g/10min	4
Mechanical Properties				
Tensile Strength	50mm/min	ISO 527-1	MPa	140
Elongation @ Break	50mm/min	ISO 527-1	%	8
Flexural Strength	2mm/min	ISO 178	MPa	220
Flexural Modulus	2mm/min	ISO 178	MPa	6400
Impact Strength, Notched	2.75J	ISO 179-1	kJ/m <sup>2</sup>	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	ISO 527-1	MPa	93
Tensile Modulus( X-Y)	50mm/min	ISO 527-1	MPa	4500
Tensile Strength(Z)	50mm/min	ISO 527-1	MPa	25
Tensile Modulus (Z)	50mm/min	ISO 527-1	MPa	1900
Flexural Strength	2mm/min	ISO 178	MPa	142
Flexural Modulus	2mm/min	ISO 178	MPa	4700
Impact Strength, Notched	2.75J	ISO 179-1	kJ/m2	22
Thermal Property				
Heat Deflection Temperature	0.45MPa	ISO 75-1	°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.

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