

DP024402NC001-TDS

COCOON PLA-Cactus(HT)

This product is an eco-friendly PLA material with high heat resistance. It significantly surpasses standard PLA in temperature endurance, long-term heat-resistant temperature of the printed parts can reach 70°C without needing annealing. This material boasts low warpage and shrinkage, ensuring high dimensional stability and superior bending properties. It is biodegradable under suitable conditions. The stable printing performance makes it easy to shape, and its distinctive matte texture makes it an excellent substitute for regular PLA. It is ideal for models, luminous signs/ characters, and other projects that demand environmental heat resilience.

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	1.4
Melt Volume Rate	190°C,2.16kg	ISO 1133	g/10min	12
Mechanical Properties				
Tensile Strength	5mm/min	ISO 527-1	MPa	45
Elongation @ Break	5mm/min	ISO 527-1	%	30
Flexural Strength	2mm/min	ISO 178	MPa	70
Flexural Modulus	2mm/min	ISO 178	MPa	2700
Impact Strength, Notched	1J	ISO 179-1	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	45
Tensile Strength(Z)	50mm/min	GB/T 1040.2	MPa	23
Flexural Strength	2mm/min	GB/T 9341	MPa	71
Impact Strength, Notched	2.75J	GB/T 1843	kJ/m ²	5

Note: All specimens are printed under the following conditions: nozzle temperature = 240°C, printing speed = 130 mm/s, build plate temperature=65°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	220-260°C
Build Plate Temp.	65°C
Build Plate Material	Glass、PEI、 Steel Spring Build Plate
Bottom Layer Printing Temp.	220-260°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.