

EP084101NC001-TDS

COCOON PETG-Vine

COCOON PETG-Vine is a toughened and modified PETG material specifically designed for 3D printing. It features a balanced combination of toughness, excellent impact resistance, good flowability, outstanding chemical resistance, and easy printability. Parts printed with this material exhibit high toughness, durability, excellent waterproof and chemical resistance, and a glossy surface finish, while the printing process is environmentally friendly, safe, and odorless. This material is ideal for 3D printing applications that require strength, toughness, and impact resistance, such as creative aesthetic models, electronic product housings, industrial components and tools, as well as medical and laboratory instruments.

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	1.27
Melt Volume Rate	230°C, 2.16kg	ISO 1133	g/10min	14
Mechanical Properties				
Tensile Strength	5mm/min	ISO 527-1	MPa	40
Elongation @ Break	5mm/min	ISO 527-1	%	20
Flexural Strength	2mm/min	ISO 178	MPa	65
Flexural Modulus	2mm/min	ISO 178	MPa	2200
Impact Strength, Notched	1J	ISO 179-1	kJ/m ²	4
Impact Strength, Unnotched	4J	ISO 179-1	kJ/m ²	N

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	52
Tensile Modulus(X-Y)	50mm/min	ISO 527-1	MPa	1700
Tensile Strength(Z)	50mm/min	ISO 178	MPa	35
Tensile Modulus(Z)	50mm/min	ISO 178	MPa	1500
Flexural Strength	2mm/min	ISO 178	MPa	65
Flexural Modulus	2mm/min	ISO 178	MPa	1750
Impact Strength, Unnotched	5.5J	ISO 179-1	kJ/m ²	N
Thermal Property				
Heat Deflection Temperature	0.45MPa	ISO 75-1	°C	63

Note: All specimens are printed under the following conditions: nozzle temperature = 255°C, printing speed = 140 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	255°C
Build Plate Temp.	75°C
Build Plate Material	Glass、PEI、 Steel Spring Build Plate
Bottom Layer Printing Temp.	250°C
Enclosed-chamber Printing	/
Print Speed	80-200mm/s
Drying recommendations	60 °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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