EP084101NC001-TDS

COCOON PETG-Vine

COCOON PETG-Vine is a toughened and modified PETG material specifically designed for 3D printing. It offers an excellent balance of strength and toughness, superior impact resistance, good flowability, excellent chemical resistance, and ease of printability. Parts made with COCOON PETG-Vine are strong, tough, highly impact-resistant, and exhibit low notch sensitivity. They are durable, waterproof, chemical-resistant, and have a great surface gloss. This material boasts a high printing success rate, and the printing process is environmentally friendly, safe, and odorless. It is ideal for 3D printing applications requiring high strength, toughness, and impact resistance, as well as those needing to withstand dynamic loads. Examples include prototype models, industrial molds, and production auxiliary tools.

Part 1 Injection-Molded Specimen Performance

Testing Items	Testing Conditions	Testing Methods	Units	Typical Values
Physical Properties				
Density	23°C	ISO 1183	g/cm3	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/m2	4
Impact Strength, Unnotched	4J	ISO 179-1	kJ/m2	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	51
Tensile Modulus(X-Y)	50mm/min	ISO 527-1	MPa	1750
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	1700
Impact Strength, Notched	2.75J	ISO 179-1	kJ/m2	3
Impact Strength, Unnotched	5.5J	ISO 179-1	kJ/m2	N
Thermal Property				
Heat Deflection Temperature	0.45MPa	ISO 75-1	°C	63

Note: All specimens are printed under the following conditions: nozzle temperature = 245°C, printing speed = 140 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	230-260°C
Build Plate Temp.	60-70°C
Build Plate Material	Glass、PEI、Steel Spring Build Plate
Bottom Layer Printing Temp.	/
Enclosed-chamber Printing	/
Print Speed	80-200mm/s
Drying recommendations	50-60 °C in a hot air dryer for 2-4hours