

# EP014601NC001-TDS

## COCOON PP-Vine

Vine is a product series of JIANYU, which provides a "Toughed" solution for 3D printing filaments. Its strength, durability, impact-resistance, and high bending-resistance provide wider design space, making it suitable for printing prototypes of mechanical components with toughness and precision requirements.

### 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 <sup>3</sup>	1.1
Melt Flow Rate	230°C, 2.16kg	GB/T 3682	g/10min	6
Mechanical Properties				
Tensile Strength	50mm/min	GB/T 1040.2	MPa	16
Elongation @ Break	50mm/min	GB/T 1040.2	%	>300
Flexural Strength	2mm/min	GB/T 9341	MPa	23
Flexural Modulus	2mm/min	GB/T 9341	MPa	1100
Impact Strength, Notched	4J	GB/T 1843	kJ/m <sup>2</sup>	70
Thermal Property				
HDT	0.45MPa	GB/T 1634	°C	100

*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	16
Tensile Strength(Z)	50mm/min	GB/T 1040.2	MPa	9
Flexural Strength	2mm/min	GB/T 9341	MPa	24

Impact Strength, Notched	2.75J	GB/T 1843	kJ/m <sup>2</sup>	42
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*Note: All specimens are printed under the following conditions: nozzle temperature = 250°C, printing speed = 60 mm/s, the build plate is not heated, 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	250°C
Print Speed	40-80mm/s
Build Plate Temp.	n.a.
Build Plate Material	Specialized build plate from JIANYU
Bottom Layer Printing Temp.	250°C

#### 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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