EP052509NC001-TDS

COCOON PA-Especial(ESD)

COCOON PA-Especial(ESD) is an antistatic modified nylon material with excellent static resistance performance, its volume resistivity up to $10^8\Omega$, with high strength, high toughness, and long-term heat resistance. It also has good processing performance and is easy to print. When used in long-term high-temperature working environments, it maintains good mechanical properties and dimensional stability, and is suitable for industrial parts with anti-static protection requirements, such as shielding casings of electronic equipment and turnover boxes for precision electronic components.

Part 1 Injection-Molded Specimen Performance

Testing Items	Testing Conditions	Testing Methods	Units	Typical Values
Physical Properties				
Density	23°C	GB/T 1033	g/cm3	1.32
Melt Volume Rate	235°C,2.16kg	GB/T 3682	g/10min	5
Mechanical Properties				
Tensile Strength	5mm/min	GB/T 1040.2	MPa	110
Elongation @ Break	5mm/min	GB/T 1040.2	%	6
Flexural Strength	2mm/min	GB/T 9341	MPa	160
Flexural Modulus	2mm/min	GB/T 9341	MPa	5000
Izod Impact Strength	2.75J	GB/T 1843	kJ/m2	20
Thermal Property				
HDT	1.8MPa	GB/T 1634	°C	180

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	53
Tensile Strength(Z)	50mm/min	GB/T 1040.2	MPa	23
Flexural Strength	2mm/min	GB/T 9341	MPa	51
Impact Strength, Notched	2.75J	GB/T 1843	kJ/m2	35
Electrical Properties				
Volume Resistivity	25°C, 50%RH	GB/T 31838.2-2019	Ω	10^8

Note: All specimens are printed under the following conditions: nozzle temperature = 280°C, printing speed = 60 mm/s, build plate temperature=90°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	260-290°C
Build Plate Temp.	80-100°C
Build Plate Material	Glass、PEI、Steel Spring Build Plate
Bottom Layer Printing Temp.	280-300°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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