

EP051009NC001-TDS

COCOON PA-Especial(ESD)

COCOON PA-Especial(ESD) is an anti-static modified nylon material based on PA12, with a volume resistivity of 10^6 - $10^7\Omega$, offering good anti-static performance that effectively prevents the generation and accumulation of static electricity. It is characterized by low density, high toughness, and high impact resistance, with a lower water absorption rate and better dimensional stability than other nylon materials. This material is specifically developed for industrial applications that require anti-static protection and is suitable for 3D printing electronic devices such as printed circuit boards, shielding enclosures, and precision electronic component storage boxes.

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	1.06
Melt Flow Rate	230°C, 2.16kg	ISO 1133	g/10min	5
Mechanical Properties				
Tensile Strength	5mm/min	ISO 527-1	MPa	30
Elongation @ Break	5mm/min	ISO 527-1	%	300
Flexural Strength	2mm/min	ISO 178	MPa	35
Flexural Modulus	2mm/min	ISO 178	MPa	800
Impact Strength, Notched	2.75J	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

Electrical Properties				
Volume Resistivity	25°C, 50%RH	IEC 62631-3-1:2016	Ω	10^6 - 10^7

Note: All specimens are printed under the following conditions: nozzle temperature = 270°C, printing speed = 55 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 2 Printing Guidelines

Parameters	Settings
Nozzle Temperature	250-290°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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