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/cm3	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/m2	N

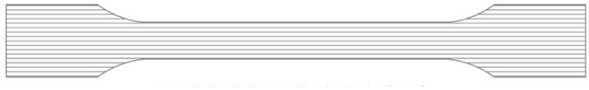
Note: The typical physical properties are not intended for use as sales specifications.

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