EP076405NC002-TDS

COCOON ASA-Fir(FR)

It is a flame-retardant thermoplastic engineering material. The material fulfills flame retardancy according to UL 94 V-0 (@2.0mm), offering unique advantages in flame retardancy, water resistance, weatherability, UV resistance, and thermal stability. This material also boasts great impact strength and interlayer adhesion, making it ideal for applications such as automotive parts, industrial components, outdoor facilities and equipment, architectural decorative items, and large-scale sculptures.

Part 1 Injection-Molded Specimen Performance

Testing Items	Testing Conditions	Testing Methods	Units	Typical Values
Physical Properties				
Density	23°C	ISO 1183	g/cm3	1.17
Melt Flow Rate	220°C，10kg	ISO 1133	g/10min	20
Mechanical Properties				
Tensile Strength	5mm/min	ISO 527-1	MPa	42
Elongation @ Break	5mm/min	ISO 527-1	%	15
Flexural Strength	2mm/min	ISO 178	MPa	64
Flexural Modulus	2mm/min	ISO 178	MPa	2200
Impact Strength, Notched	1J	ISO 179-1	kJ/m2	8
Flame-retardant Property				
Flame Class Rating	2.0mm	UL94	/	V0

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	42
Tensile Modulus(X-Y)	50mm/min	GB/T 1040.2	MPa	2000
Tensile Strength(Z)	50mm/min	GB/T 1040.2	MPa	20
Tensile Modulus(Z)	50mm/min	GB/T 1040.2	MPa	1600
Flexural Strength	2mm/min	GB/T 9341	MPa	64
Flexural Modulus	2mm/min	GB/T 9341	MPa	2000
Impact Strength, Notched	2.75J	GB/T 1843	kJ/m2	18
Thermal Property				
Heat Deflection Temperature	0.45MPa	GB/T 1634	℃	99

Note: All specimens are printed under the following conditions: nozzle temperature = 260°C, printing speed = 130 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	240-280°C
Build Plate Temp.	80-100°C
Build Plate Material	Glass、PEI、Steel Spring Build Plate
Bottom Layer Printing Temp.	250-260°C
Enclosed-chamber Printing	yes
Print Speed	60-200mm/s
Drying recommendations	80 °C in a hot air dryer for 4hours