

RTP EMI 661

Acrylonitrile Butadiene Styrene
RTP Company

Message:

Stainless Steel Fiber - Electrically Conductive - EMI/RFI/ESD Protection

General Information			
Filler / Reinforcement	Stainless steel fiber, 10% filler by weight		
Features	Conductivity		
	Electromagnetic shielding (EMI)		
	Electrostatic discharge protection		
	Radio frequency shielding (RFI)		
RoHS Compliance	Contact manufacturer		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.15	g/cm ³	ASTM D792
Molding Shrinkage - Flow (3.20 mm)	0.40 - 0.60	%	ASTM D955
Moisture Content	0.10	%	
Static Decay ¹		sec	FTMS 101C 4046.1
Primary Additive	10	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	2760	MPa	ASTM D638
Tensile Strength	40.0	MPa	ASTM D638
Tensile Elongation (Yield)	3.0 - 7.0	%	ASTM D638
Flexural Modulus	2760	MPa	ASTM D790
Flexural Strength	72.4	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (3.20 mm)	64	J/m	ASTM D256
Unnotched Izod Impact (3.20 mm)	270	J/m	ASTM D4812
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity			
--	< 1.0E+4	ohms	ASTM D257
--	< 1.0E+3	ohms	ESD STM11.11
Volume Resistivity	< 1.0	ohms · cm	ASTM D257
Injection	Nominal Value	Unit	
Drying Temperature	82.2	°C	
Drying Time	2.0	hr	
Dew Point	-17.8	°C	
Processing (Melt) Temp	227 - 249	°C	

Mold Temperature	65.6 - 82.2	°C
Injection Pressure	68.9 - 103	MPa
Injection instructions		
Use a reverse barrel profile. Remove hopper magnets. Allow 4 - 5 shots to properly disperse the conductive fibers. The surface finish should have a silver streaking appearance, not clumps. Use a reverse barrel profile. To maximize fiber length, the following injection barrel, screw, and tip designs should be followed. L/D ratio 16/1 - 22/1, Compression ratio 2:1, Flight depth 0.200 in (5 mm) minimum, in feed section, Screw diameter 0.65 - 0.75 in. Remove hopper magnets. Desiccant Type Dryer Required.		
NOTE		

1. MIL-PRF-81705D, 5kV to 50 V, 12% RH

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