

RTP 399 X 134920 A

Polycarbonate
RTP Company

Message:
Stainless Steel Fiber - Electrically Conductive - EMI/RFI Shielding - Flame Retardant - Halogen Free - (Preliminary Data Sheet)

General Information			
Filler / Reinforcement	Stainless steel fiber		
Features	Conductivity		
	Electromagnetic shielding (EMI)		
	Radio frequency shielding (RFI)		
	Halogen-free		
RoHS Compliance	Contact manufacturer		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.31	g/cm ³	ASTM D792
Molding Shrinkage - Flow (3.20 mm)	0.30 - 0.70	%	ASTM D955
Moisture Content	0.020	%	
Static Decay		sec	FTMS 101C 4046.1
Primary Additive	10	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	2760	MPa	ASTM D638
Tensile Strength	62.1	MPa	ASTM D638
Tensile Elongation (Yield)	5.0 - 10	%	ASTM D638
Flexural Modulus	2760	MPa	ASTM D790
Flexural Strength	82.7	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (3.20 mm)	110	J/m	ASTM D256
Unnotched Izod Impact (3.20 mm)	No Break		ASTM D4812
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (1.8 MPa, Unannealed)	116	°C	ASTM D648
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity			
--	< 1.0E+5	ohms	ASTM D257
--	< 1.0E+4	ohms	ESD STM11.11
Volume Resistivity	< 10	ohms · cm	ASTM D257
Flammability	Nominal Value	Unit	Test Method
Flame Rating (1.50 mm, ** Values per RTP Company testing.)	V-0		UL 94

Injection	Nominal Value	Unit
Drying Temperature	121	°C
Drying Time	4.0	hr
Dew Point	-28.9	°C
Processing (Melt) Temp	271 - 299	°C
Mold Temperature	65.6 - 104	°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.

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