

RTP 1083 HEC FR

Polybutylene Terephthalate

RTP Company

Message:

Electrically Conductive - EMI/RFI Shielding - Nickel-Coated Carbon Fiber - Flame Retardant

General Information			
Filler / Reinforcement	Nickel plated carbon fiber, 20% filler by weight		
Features	Conductivity		
	Electromagnetic shielding (EMI)		
	Radio frequency shielding (RFI)		
	Flame retardancy		
RoHS Compliance	Contact manufacturer		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.58	g/cm ³	ASTM D792
Molding Shrinkage - Flow (3.20 mm)	0.10 - 0.20	%	ASTM D955
Moisture Content	0.020	%	
Static Decay		sec	FTMS 101C 4046.1
Primary Additive	20	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	12400	MPa	ASTM D638
Tensile Strength	124	MPa	ASTM D638
Tensile Elongation (Yield)	1.0 - 2.0	%	ASTM D638
Flexural Modulus	11000	MPa	ASTM D790
Flexural Strength	172	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (3.20 mm)	43	J/m	ASTM D256
Unnotched Izod Impact (3.20 mm)	380	J/m	ASTM D4812
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (1.8 MPa, Unannealed)	204	°C	ASTM D648
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity			
--	< 1.0E+3	ohms	ASTM D257
--	< 1.0E+2	ohms	ESD STM11.11
Volume Resistivity	< 0.10	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	238 - 271	°C
Mold Temperature	79.4 - 107	°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. Remove hopper magnets. Desiccant Type Dryer Required.

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