

RTP 1085 HEC

Polybutylene Terephthalate

RTP Company

Message:

Nickel-Coated Carbon Fiber - Electrically Conductive - EMI/RFI Shielding - (Preliminary Data Sheet)

General Information			
Filler / Reinforcement	Nickel-plated carbon fiber, 30% filler by weight		
Features	Conductivity		
	Electromagnetic shielding (EMI)		
	Radio frequency shielding (RFI)		
RoHS Compliance	Contact manufacturer		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.48	g/cm ³	ASTM D792
Molding Shrinkage - Flow (3.20 mm)	0.10 - 0.20	%	ASTM D955
Moisture Content	0.030	%	
Static Decay		sec	FTMS 101C 4046.1
Primary Additive	30	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	15200	MPa	ASTM D638
Tensile Strength	138	MPa	ASTM D638
Tensile Elongation (Yield)	1.0 - 3.0	%	ASTM D638
Flexural Modulus	13800	MPa	ASTM D790
Flexural Strength	193	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (3.20 mm)	53	J/m	ASTM D256
Unnotched Izod Impact (3.20 mm)	430	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+4	ohms	ASTM D257
--	< 1.0E+3	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.)	HB		UL 94
Injection	Nominal Value	Unit	

Drying Temperature	121	°C
Drying Time	4.0	hr
Dew Point	-28.9	°C
Processing (Melt) Temp	249 - 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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