

RTP EMI 2263

Polyetheretherketone

RTP Company

Message:

Stainless Steel Fiber - Electrically Conductive - EMI/RFI Shielding

General Information			
Filler / Reinforcement	Stainless steel fiber, 20% 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	1.37	g/cm ³	ASTM D792
Molding Shrinkage - Flow (3.20 mm)	0.80 - 1.4	%	ASTM D955
Moisture Content	0.10	%	
Static Decay		sec	FTMS 101C 4046.1
Primary Additive	20	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	4140	MPa	ASTM D638
Tensile Strength	95.8	MPa	ASTM D638
Tensile Elongation (Yield)	5.5	%	ASTM D638
Flexural Modulus	3450	MPa	ASTM D790
Flexural Strength	153	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)	300	J/m	ASTM D4812
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (1.8 MPa, Unannealed)	149	°C	ASTM D648
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity			
--	< 1.0E+6	ohms	ASTM D257
--	< 1.0E+5	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	149	°C
Drying Time	3.0	hr
Dew Point	-28.9	°C
Processing (Melt) Temp	349 - 399	°C
Mold Temperature	163 - 218	°C
Injection Pressure	82.7 - 124	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 - 0.8 in. Remove hopper magnets. Desiccant Type Dryer Required.

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Susheng Import & Export Trading Co., Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

