

ElectriPlast® EP-CF/PBT

Polybutylene Terephthalate

Integral Technologies, Inc.

Message:

ElectriPlast® EP-CF/PBT is a polybutene terephthalate (PBT) product, which contains nickel-plated carbon fiber. It can be processed by injection molding and is available in North America. The main characteristics are: flame retardant/rated flame.

General Information			
Filler / Reinforcement	Nickel plated carbon fiber		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.40	g/cm ³	ASTM D792
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	3720	MPa	ASTM D638
Tensile Strength (Break)	80.0	MPa	ASTM D638
Tensile Elongation (Break)	0.78	%	ASTM D638
Flexural Modulus	8710	MPa	ASTM D790
Flexural Strength	114	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (23°C)	59	J/m	ASTM D256
Unnotched Izod Impact (23°C)	160	J/m	ASTM D256
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (1.8 MPa, Unannealed)	216	°C	ASTM D648
CLTE - Flow	2.8E-5	cm/cm/°C	ASTM D696
Thermal Conductivity	2.7	W/m/K	ASTM D5470
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	30	ohms	ESD STM11.11
Volume Resistivity	7.5E+2	ohms · cm	ASTM D257
Static Decay	10	msec	Internal method
Surface Resistance	300	ohms	ESD STM11.11
Flammability	Nominal Value	Unit	Test Method
Burning Rate	27	mm/min	UL 94
Flame Rating ¹	HB		UL 94
Injection	Nominal Value	Unit	
Drying Temperature	104	°C	
Drying Time	6.0	hr	
Rear Temperature	232	°C	
Middle Temperature	238	°C	
Front Temperature	243	°C	
Nozzle Temperature	243	°C	

Back Pressure	5.52	MPa
Screw Speed	100	rpm
Injection instructions		
Injection Speed: 2 in/sec1st Stage (injection): 2000 psiDecomposition: 0.5 inch		
NOTE		
1.	27 mm/min	

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