

Generic PEI - Carbon Fiber

Polyether Imide

Generic

Message:

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This information is provided for comparative purposes only.

General Information			
Filler / Reinforcement	Carbon fiber reinforced material		
Physical	Nominal Value	Unit	Test Method
Specific Gravity			
--	1.30 - 1.48	g/cm ³	ASTM D792
23°C	1.34 - 1.50	g/cm ³	ISO 1183
Molding Shrinkage			
Flow: 23°C	2.0E-3 - 0.25	%	ASTM D955
Transverse flow: 23°C	0.39 - 0.41	%	ASTM D955
23°C	0.096 - 0.41	%	ISO 294-4
Water Absorption			
23°C, 24 hr	0.11 - 0.20	%	ASTM D570
Equilibrium, 23°C, 50% RH	0.20 - 0.29	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
23°C	7860 - 31200	MPa	ASTM D638
23°C	11700 - 35700	MPa	ISO 527-2
Tensile Strength			
Fracture, 23°C	130 - 273	MPa	ASTM D638
Fracture, 23°C	157 - 248	MPa	ISO 527-2
23°C	137 - 236	MPa	ASTM D638
Tensile Elongation			
Yield, 23°C	1.5 - 5.1	%	ASTM D638
Yield, 23°C	0.95 - 2.0	%	ISO 527-2
Fracture, 23°C	0.94 - 5.1	%	ASTM D638
Fracture, 23°C	0.90 - 2.1	%	ISO 527-2
Flexural Modulus			
23°C	5960 - 26600	MPa	ASTM D790
23°C	12000 - 30600	MPa	ISO 178
Flexural Strength			
23°C	193 - 295	MPa	ASTM D790
23°C	206 - 390	MPa	ISO 178
Fracture, 23°C	193 - 278	MPa	ASTM D790

Coefficient of Friction	0.39 - 0.52		ASTM D1894
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact			
23°C	42 - 70	J/m	ASTM D256
23°C	5.3 - 7.1	kJ/m ²	ISO 180
Unnotched Izod Impact			
23°C	270 - 660	J/m	ASTM D256
23°C	18 - 45	kJ/m ²	ISO 180
Instrumented Dart Impact (23°C)	6.21 - 10.5	J	ASTM D3763
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, not annealed	210 - 214	°C	ASTM D648
1.8 MPa, not annealed	207 - 214	°C	ASTM D648
1.8 MPa, not annealed	200 - 214	°C	ISO 75-2/A
Linear thermal expansion coefficient			
Flow	2.7E-6 - 1.9E-5	cm/cm/°C	ASTM E831
Flow	3.0E-6 - 2.7E-5	cm/cm/°C	ISO 11359-2
Lateral	2.6E-5 - 4.0E-5	cm/cm/°C	ASTM E831
Lateral	2.6E-5 - 6.0E-5	cm/cm/°C	ISO 11359-2
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	4.5E+2 - 1.3E+10	ohms	ASTM D257
Volume Resistivity (23°C)	1.0E+2 - 1.3E+10	ohms·cm	ASTM D257
Injection	Nominal Value	Unit	
Drying Temperature	120 - 150	°C	
Drying Time	3.9 - 5.1	hr	
Dew Point	-28.9	°C	
Rear Temperature	340 - 390	°C	
Middle Temperature	359 - 390	°C	
Front Temperature	370 - 390	°C	
Nozzle Temperature	363 - 399	°C	
Processing (Melt) Temp	363 - 391	°C	
Mold Temperature	135 - 173	°C	
Injection Pressure	103 - 104	MPa	
Back Pressure	0.515 - 0.517	MPa	
Screw Speed	55 - 80	rpm	
Vent Depth	0.051 - 0.057	mm	
Injection instructions			

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