

Generic PBT - Carbon Fiber

Polybutylene Terephthalate

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			
--	1.35 - 1.51	g/cm ³	ASTM D792
23°C	1.34 - 1.53	g/cm ³	ISO 1183
Molding Shrinkage			
Flow: 23°C	0.081 - 0.51	%	ASTM D955
23°C	0.20 - 1.0	%	ISO 294-4
Water Absorption (23°C, 24 hr)	0.030 - 0.10	%	ASTM D570
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
23°C	6210 - 22300	MPa	ASTM D638
23°C	6000 - 24000	MPa	ISO 527-2
Tensile Stress			
Fracture, 23°C	110 - 150	MPa	ISO 527-2
23°C	82.7 - 159	MPa	ASTM D638
Tensile Elongation			
Yield, 23°C	1.5 - 3.0	%	ASTM D638
Yield, 23°C	0.80 - 2.9	%	ISO 527-2
Fracture, 23°C	1.0 - 2.0	%	ISO 527-2
Flexural Modulus			
23°C	5170 - 18100	MPa	ASTM D790
23°C	7630 - 17400	MPa	ISO 178
Flexural Strength			
23°C	124 - 255	MPa	ASTM D790
23°C	152 - 202	MPa	ISO 178
Coefficient of Friction	0.10 - 0.14		ASTM D1894
Impact	Nominal Value	Unit	Test Method
Charpy Unnotched Impact Strength (23°C)	20 - 40	kJ/m ²	ISO 179
Notched Izod Impact			
23°C	35 - 60	J/m	ASTM D256
23°C	4.5 - 7.2	kJ/m ²	ISO 180

Unnotched Izod Impact			
23°C	370 - 590	J/m	ASTM D256
23°C	24 - 46	kJ/m ²	ISO 180
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
1.8 MPa, not annealed	171 - 214	°C	ASTM D648
1.8 MPa, not annealed	201 - 215	°C	ISO 75-2/A
Continuous Use Temperature	130	°C	ASTM D794
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity			
--	3.5 - 2.5E+7	ohms	ASTM D257
--	10 - 2.5E+8	ohms	IEC 60093
Volume Resistivity (23°C)	5.0 - 1.3E+4	ohms·cm	ASTM D257
Insulation Resistance (23°C)	10 - 2.5E+8	ohms	IEC 60167
Injection	Nominal Value	Unit	
Drying Temperature	80.0 - 121	°C	
Drying Time	3.9 - 7.0	hr	
Rear Temperature	227 - 250	°C	
Middle Temperature	248 - 270	°C	
Front Temperature	259 - 266	°C	
Nozzle Temperature	257 - 258	°C	
Processing (Melt) Temp	241 - 255	°C	
Mold Temperature	79.4 - 107	°C	
Injection Pressure	86.2 - 86.6	MPa	
Back Pressure	0.258 - 0.517	MPa	
Screw Speed	45 - 55	rpm	
Injection instructions			

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Recommended distributors for this material

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



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