

Generic PBT+PET - Glass Fiber

Polybutylene Terephthalate + PET

Generic

Message:

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General Information			
Filler / Reinforcement	Glass fiber reinforced material		
Physical	Nominal Value	Unit	Test Method
Specific Gravity			
--	1.40 - 1.73	g/cm ³	ASTM D792
23°C	1.42 - 1.68	g/cm ³	ISO 1183
Apparent Density	0.70 - 0.80	g/cm ³	ISO 60
Melt Mass-Flow Rate (MFR) (265°C/2.16 kg)	17 - 22	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (260°C/2.16 kg)	12.9 - 18.1	cm ³ /10min	ISO 1133
Molding Shrinkage			
Flow: 23°C	0.34 - 1.3	%	ASTM D955
Transverse flow: 23°C	0.74 - 0.82	%	ASTM D955
23°C	0.20 - 1.1	%	ISO 294-4
Water Absorption			
23°C, 24 hr	0.050 - 0.31	%	ISO 62
Saturated, 23°C	0.30 - 0.40	%	ISO 62
Equilibrium, 23°C, 50% RH	0.055 - 0.21	%	ISO 62
Viscosity Number (Reduced Viscosity) (23°C)	80.0 - 95.0	ml/g	ISO 1628
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (23°C)	110 - 120		ASTM D785
Ball Indentation Hardness	110 - 252	MPa	ISO 2039-1
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
23°C	5000 - 10800	MPa	ASTM D638
23°C	5790 - 16700	MPa	ISO 527-2
Tensile Strength			
Yield, 23°C	89.3 - 141	MPa	ASTM D638
Yield, 23°C	87.5 - 175	MPa	ISO 527-2
Fracture, 23°C	50.0 - 141	MPa	ASTM D638
Fracture, 23°C	97.5 - 160	MPa	ISO 527-2
Tensile Elongation			

Yield, 23°C	1.0 - 3.0	%	ASTM D638
Yield, 23°C	1.0 - 4.5	%	ISO 527-2
Fracture, 23°C	1.7 - 3.9	%	ASTM D638
Fracture, 23°C	1.5 - 3.2	%	ISO 527-2
Tensile Creep Modulus			ISO 899-1
1 hr	11900	MPa	ISO 899-1
1000 hr	10600	MPa	ISO 899-1
Flexural Modulus			
23°C	4460 - 13900	MPa	ASTM D790
23°C	5060 - 18100	MPa	ISO 178
Flexural Strength			
23°C	89.2 - 208	MPa	ASTM D790
23°C	162 - 260	MPa	ISO 178
Yield, 23°C	163 - 173	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (23°C)	4.9 - 10	kJ/m ²	ISO 179
Charpy Unnotched Impact Strength (23°C)	24 - 70	kJ/m ²	ISO 179
Notched Izod Impact			
23°C	34 - 100	J/m	ASTM D256
23°C	8.9 - 10	kJ/m ²	ISO 180
Unnotched Izod Impact			
23°C	270 - 830	J/m	ASTM D256
23°C	25 - 61	kJ/m ²	ISO 180
Instrumented Dart Impact (23°C)	6.00 - 8.00	J	ASTM D3763
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, not annealed	199 - 221	°C	ASTM D648
0.45 MPa, not annealed	214 - 225	°C	ISO 75-2/B
1.8 MPa, not annealed	158 - 211	°C	ASTM D648
1.8 MPa, not annealed	172 - 210	°C	ISO 75-2/A
Vicat Softening Temperature			
--	185 - 221	°C	ASTM D1525
--	200 - 215	°C	ISO 306
Melting Temperature	237 - 240	°C	ISO 11357-3
Linear thermal expansion coefficient			
Flow	2.1E-5 - 4.5E-5	cm/cm/°C	ASTM E831
Flow	1.9E-5 - 5.1E-5	cm/cm/°C	ISO 11359-2
Lateral	5.4E-5 - 8.0E-5	cm/cm/°C	ASTM E831
Lateral	5.9E-5 - 1.1E-4	cm/cm/°C	ISO 11359-2
Thermal Conductivity (23°C)	0.25 - 0.27	W/m/K	ISO 8302
RTI Elec	75.0 - 140	°C	UL 746
RTI Imp	75.0 - 125	°C	UL 746

RTI	75.0 - 140	°C	UL 746
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	1.0E+14 - 1.1E+15	ohms	IEC 60093
Volume Resistivity (23°C)	1.0E+12 - 1.0E+16	ohms·cm	IEC 60093
Dielectric Strength			
23°C	19 - 24	kV/mm	ASTM D149
23°C	15 - 34	kV/mm	IEC 60243-1
Relative Permittivity (23°C)	3.76		IEC 60250
Dissipation Factor (23°C)	8.0E-4 - 0.017		IEC 60250
Comparative Tracking Index	219 - 303	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Burning Rate	0.0 - 100	mm/min	ISO 3795
Glow Wire Flammability Index	650 - 960	°C	IEC 60695-2-12
Glow Wire Ignition Temperature	642 - 960	°C	IEC 60695-2-13
Oxygen Index	21	%	ISO 4589-2
Injection	Nominal Value	Unit	
Drying Temperature	119 - 130	°C	
Drying Time	2.9 - 6.0	hr	
Suggested Max Moisture	0.020 - 0.025	%	
Suggested Shot Size	50 - 60	%	
Hopper Temperature	50.0 - 85.0	°C	
Rear Temperature	230 - 261	°C	
Middle Temperature	242 - 273	°C	
Front Temperature	257 - 271	°C	
Nozzle Temperature	265 - 270	°C	
Processing (Melt) Temp	260 - 273	°C	
Mold Temperature	78.2 - 91.4	°C	
Injection Pressure	79.3 - 81.6	MPa	
Holding Pressure	2.00 - 80.0	MPa	
Back Pressure	0.258 - 60.0	MPa	
Screw Speed	59 - 125	rpm	
Injection instructions			

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