

Generic PBT - Mineral

Polybutylene Terephthalate

Generic

Message:

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General Information			
Filler / Reinforcement	Mineral filler		
Physical	Nominal Value	Unit	Test Method
Specific Gravity			
--	1.40 - 1.82	g/cm ³	ASTM D792
23°C	1.41 - 1.81	g/cm ³	ISO 1183
Molding Shrinkage			
Flow: 23°C	0.37 - 1.8	%	ASTM D955
Transverse flow: 23°C	0.69 - 1.5	%	ASTM D955
23°C	0.69 - 1.8	%	ISO 294-4
Water Absorption			
23°C, 24 hr	0.060 - 0.090	%	ASTM D570
Saturated, 23°C	0.070 - 0.51	%	ISO 62
Equilibrium, 23°C, 50% RH	0.070 - 0.20	%	ISO 62
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (23°C)	112 - 119		ASTM D785
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
23°C	2900 - 4260	MPa	ASTM D638
23°C	2800 - 4350	MPa	ISO 527-2
Tensile Strength			
Yield, 23°C	48.2 - 58.4	MPa	ASTM D638
Fracture, 23°C	46.9 - 56.4	MPa	ASTM D638
Fracture, 23°C	45.0 - 60.0	MPa	ISO 527-2
23°C	46.9 - 50.1	MPa	ASTM D638
Tensile Elongation			
Fracture, 23°C	1.5 - 5.4	%	ASTM D638
Fracture, 23°C	1.8 - 4.2	%	ISO 527-2
Flexural Modulus			
23°C	2930 - 10400	MPa	ASTM D790
23°C	3000 - 4460	MPa	ISO 178
Flexural Strength			
23°C	88.6 - 177	MPa	ASTM D790

23°C	83.1 - 121	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (23°C)	2.0 - 7.0	kJ/m ²	ISO 179
Charpy Unnotched Impact Strength (23°C)	36 - 47	kJ/m ²	ISO 179
Notched Izod Impact			
23°C	22 - 95	J/m	ASTM D256
23°C	3.0 - 4.5	kJ/m ²	ISO 180
Unnotched Izod Impact (23°C)	290 - 1600	J/m	ASTM D256
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, not annealed	160 - 220	°C	ASTM D648
0.45 MPa, not annealed	120 - 223	°C	ISO 75-2/B
1.8 MPa, not annealed	69.0 - 210	°C	ASTM D648
1.8 MPa, not annealed	64.8 - 198	°C	ISO 75-2/A
Vicat Softening Temperature	175 - 216	°C	ISO 306
Linear thermal expansion coefficient			ISO 11359-2
Flow	2.9E-5 - 1.1E-4	cm/cm/°C	ISO 11359-2
Lateral	6.8E-5 - 1.1E-4	cm/cm/°C	ISO 11359-2
RTI Elec	75.0 - 105	°C	UL 746
RTI Imp	75.0 - 106	°C	UL 746
RTI	75.0 - 106	°C	UL 746
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity (23°C)	4.0E+14 - 2.5E+16	ohms·cm	ASTM D257
Dielectric Strength (23°C)	19 - 25	kV/mm	ASTM D149
Dielectric Constant			
23°C	2.90 - 3.80		ASTM D150
23°C	3.55		IEC 60250
Dissipation Factor			
23°C	2.0E-3 - 0.020		ASTM D150
23°C	1.2E-3 - 0.015		IEC 60250
Injection	Nominal Value	Unit	
Drying Temperature	100 - 140	°C	
Drying Time	2.0 - 5.0	hr	
Suggested Max Moisture	0.020 - 0.050	%	
Rear Temperature	230 - 267	°C	
Middle Temperature	240 - 267	°C	
Front Temperature	245 - 267	°C	
Nozzle Temperature	250 - 263	°C	
Processing (Melt) Temp	250 - 268	°C	
Mold Temperature	60.0 - 85.0	°C	
Injection Pressure	81.4 - 87.9	MPa	
Back Pressure	0.507 - 0.531	MPa	

Screw Speed	65 - 125	rpm
Injection instructions		

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