

Generic PBT - Glass Bead

Polybutylene Terephthalate

Generic

Message:

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General Information			
Filler / Reinforcement	Glass beads		
Physical	Nominal Value	Unit	Test Method
Specific Gravity			
--	1.37 - 2.08	g/cm ³	ASTM D792
23°C	1.42 - 1.63	g/cm ³	ISO 1183
Melt Volume-Flow Rate (MVR) (250°C/2.16 kg)	9.68 - 22.0	cm ³ /10min	ISO 1133
Molding Shrinkage			
Flow: 23°C	0.25 - 2.0	%	ASTM D955
23°C	0.35 - 2.4	%	ISO 294-4
Water Absorption			
23°C, 24 hr	0.058 - 0.076	%	ASTM D570
23°C, 24 hr	0.050 - 0.10	%	ISO 62
Saturated, 23°C	0.25 - 0.50	%	ISO 62
Equilibrium, 23°C, 50% RH	0.050 - 0.39	%	ISO 62
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (23°C)	117 - 120		ASTM D785
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
23°C	3000 - 15900	MPa	ASTM D638
23°C	3280 - 10100	MPa	ISO 527-2
Tensile Strength			
Yield, 23°C	37.2 - 58.7	MPa	ASTM D638
Yield, 23°C	37.0 - 61.2	MPa	ISO 527-2
Fracture, 23°C	36.5 - 67.0	MPa	ASTM D638
Fracture, 23°C	34.9 - 110	MPa	ISO 527-2
23°C	44.8 - 124	MPa	ASTM D638
Tensile Strain			
Yield, 23°C	2.3 - 5.0	%	ISO 527-2
Fracture, 23°C	2.0 - 6.1	%	ASTM D638
Fracture, 23°C	1.8 - 82	%	ISO 527-2
Flexural Modulus			
23°C	2730 - 7000	MPa	ASTM D790

23°C	2290 - 7840	MPa	ISO 178
Flexural Strength			
23°C	68.9 - 172	MPa	ASTM D790
23°C	50.0 - 100	MPa	ISO 178
Yield, 23°C	74.5 - 214	MPa	ASTM D790
Coefficient of Friction	0.15 - 0.66		ASTM D1894
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (23°C)	1.9 - 7.2	kJ/m ²	ISO 179
Charpy Unnotched Impact Strength (23°C)	20 - 51	kJ/m ²	ISO 179
Notched Izod Impact			
23°C	27 - 56	J/m	ASTM D256
23°C	3.2 - 7.2	kJ/m ²	ISO 180
Unnotched Izod Impact			
23°C	230 - 640	J/m	ASTM D256
23°C	17 - 55	kJ/m ²	ISO 180
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, not annealed	179 - 219	°C	ASTM D648
0.45 MPa, not annealed	169 - 218	°C	ISO 75-2/B
1.8 MPa, not annealed	60.0 - 213	°C	ASTM D648
1.8 MPa, not annealed	65.0 - 205	°C	ISO 75-2/A
Vicat Softening Temperature	185 - 215	°C	ISO 306
Melting Temperature	223 - 225	°C	ISO 11357-3
Linear thermal expansion coefficient			
Flow	2.2E-5 - 8.8E-5	cm/cm/°C	ASTM D696
Flow	6.2E-5 - 1.1E-4	cm/cm/°C	ISO 11359-2
Lateral	4.3E-5 - 1.0E-4	cm/cm/°C	ISO 11359-2
Thermal Conductivity (23°C)	0.16 - 0.20	W/m/K	ASTM C177
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	1.0E+3 - 1.5E+15	ohms	IEC 60093
Volume Resistivity			
23°C	9.8E+15 - 1.0E+16	ohms · cm	ASTM D257
23°C	1.0E+13 - 2.5E+16	ohms · cm	IEC 60093
Dielectric Strength			
23°C	20	kV/mm	ASTM D149
23°C	20 - 25	kV/mm	IEC 60243-1
Dielectric Constant			
23°C	2.60 - 4.60		ASTM D150
23°C	4.06		IEC 60250
Dissipation Factor			
23°C	9.0E-3 - 0.015		ASTM D150
23°C	8.8E-3 - 0.019		IEC 60250

Arc Resistance	120 - 140	sec	ASTM D495
Comparative Tracking Index	215 - 405	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Glow Wire Ignition Temperature	650 - 751	°C	IEC 60695-2-13
Injection	Nominal Value	Unit	
Drying Temperature	80.0 - 130	°C	
Drying Time	2.9 - 4.1	hr	
Suggested Max Moisture	0.020 - 0.050	%	
Rear Temperature	227 - 258	°C	
Middle Temperature	249 - 270	°C	
Front Temperature	251 - 266	°C	
Nozzle Temperature	257 - 265	°C	
Processing (Melt) Temp	250 - 265	°C	
Mold Temperature	79.3 - 90.6	°C	
Injection Pressure	79.6 - 86.4	MPa	
Holding Pressure	2.00 - 80.0	MPa	
Back Pressure	0.258 - 60.0	MPa	
Screw Speed	45 - 125	rpm	
Injection instructions			

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