Mitsubishi Engineering-Plastics Corp.

NOVADURAN™ 5308F20

Mitsubishi Engineering-Plastics Corp - Polybutylene Terephthalate + PET

General Information

Product Description		
PBT alloy Filler-reinforced / HB (0.75mm) equivalent per in-house testing, Filler 20% / Low Warpage		
General		
Filler / Reinforcement	• Filler, 20% Filler by Weight	
Features	• Low Warpage	
Uses	• Automotive Applications • Automotive Electronics	• Electrical/Electronic Applications • General Purpose

ASTM & ISO Properties [1]

Physical	Nominal Value	Unit	Test Method
Density	1.49	g/cm³	ISO 1183
Melt Volume-Flow Rate (MVR) (265°C/2.16 kg)	55	cm³/10min	ISO 1133
Molding Shrinkage			Internal Method
Across Flow : 2.00 mm	1.6	%	
Flow : 2.00 mm	1.4	%	
Water Absorption (Saturation, 23°C)	0.10	%	ISO 62
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus	5200	MPa	ISO 527-1/1
Tensile Stress (Break)	58.0	MPa	ISO 527-2/5
Tensile Strain (Break)	2.3	%	ISO 527-2/5
Flexural Modulus [2]	5000	MPa	ISO 178
Flexural Stress [2]	100	MPa	ISO 178
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength (23°C)	2.0	kJ/m²	ISO 179
Charpy Unnotched Impact Strength (23°C)	25	kJ/m²	ISO 179
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load			
0.45 MPa, Annealed	195	°C	ISO 75-2/B
1.8 MPa, Annealed	115	°C	ISO 75-2/A
CLTE			ISO 11359-2
Flow : -30 to 35°C	4.6E-5	cm/cm/°C	
Flow : -30 to 120°C	6.3E-5	cm/cm/°C	
Flow : 35 to 120°C	7.7E-5	cm/cm/°C	
Transverse : -30 to 35°C	6.0E-5	cm/cm/°C	
Transverse : -30 to 120°C	8.0E-5	cm/cm/°C	
Transverse : 35 to 120°C	9.5E-5	cm/cm/°C	
Electrical	**Nominal Value**	**Unit**	**Test Method**
Surface Resistivity	3.0E+15	ohms	IEC 60093
Volume Resistivity	3.0E+16	ohms·cm	IEC 60093

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Electrical	Nominal Value	Unit	Test Method
Dielectric Constant (1 MHz)	3.30		IEC 60250
Dissipation Factor (1 MHz)	0.014		IEC 60250

Processing Information

Injection	Nominal Value	Unit
Drying Temperature - Hot Air Dryer	120	°C
Drying Time - Hot Air Dryer	5.0 to 8.0	hr
Rear Temperature	250 to 270	°C
Middle Temperature	250 to 270	°C
Front Temperature	250 to 270	°C
Nozzle Temperature	270	°C
Mold Temperature	60 to 100	°C
Injection Pressure	20.0 to 150	MPa
Injection Rate	Moderate-Fast	
Screw Speed	80 to 120	rpm

Notes

[1] Typical properties: these are not to be construed as specifications.

[2] 2.0 mm/min