Mitsubishi Engineering-Plastics Corp.

NOVADURAN™ 5810G15

Mitsubishi Engineering-Plastics Corp - Polybutylene Terephthalate + PS

General Information

Product Description		
PBT alloy GF-reinforced / HB (0.75mm) equivalent per in-house testing, Low warpage & Low density, GF 15%		
General		
Filler / Reinforcement	• Glass Fiber, 15% Filler by Weight	
Features	• Low Density	• Low Warpage
Uses	• Automotive Applications • Automotive Electronics	• Electrical/Electronic Applications • General Purpose

ASTM & ISO Properties [1]

Physical	**Nominal Value**	**Unit**	**Test Method**
Density	1.29	g/cm³	ISO 1183
Melt Volume-Flow Rate (MVR) (250°C/5.0 kg)	35	cm³/10min	ISO 1133
Molding Shrinkage			Internal Method
Across Flow : 2.00 mm	0.70	%	
Flow : 2.00 mm	0.50	%	
Water Absorption (Saturation, 23°C)	0.080	%	ISO 62
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus	5500	MPa	ISO 527-1/1
Tensile Stress (Break)	90.0	MPa	ISO 527-2/5
Tensile Strain (Break)	2.5	%	ISO 527-2/5
Flexural Modulus [2]	5300	MPa	ISO 178
Flexural Stress [2]	135	MPa	ISO 178
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength (23°C)	9.0	kJ/m²	ISO 179
Charpy Unnotched Impact Strength (23°C)	50	kJ/m²	ISO 179
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load (0.45 MPa, Annealed)	210	°C	ISO 75-2/B
Melting Temperature	224	°C	ISO 11357-3
CLTE			ISO 11359-2
Flow : -30 to 35°C	3.0E-5	cm/cm/°C	
Flow : -30 to 120°C	3.0E-5	cm/cm/°C	
Flow : 35 to 120°C	3.0E-5	cm/cm/°C	
Transverse : -30 to 35°C	9.0E-5	cm/cm/°C	
Transverse : -30 to 120°C	1.1E-4	cm/cm/°C	
Transverse : 35 to 120°C	1.2E-4	cm/cm/°C	
Electrical	**Nominal Value**	**Unit**	**Test Method**
Surface Resistivity	1.0E+16	ohms	IEC 60093
Volume Resistivity	2.0E+17	ohms·cm	IEC 60093
Electric Strength (2.00 mm)	20	kV/mm	IEC 60243-1

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Electrical	Nominal Value	Unit	Test Method
Dielectric Constant (1 MHz)	3.20		IEC 60250
Dissipation Factor (1 MHz)	0.017		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