

NOVADURAN™ 5810G30

Mitsubishi Engineering-Plastics Corp - Polybutylene Terephthalate + PS

General Information

Product Description

PBT alloy GF-reinforced / HB, Low warpage & Low density, GF 30%

General

Filler / Reinforcement	• Glass Fiber, 30% Filler by Weight	
Features	• Low Density	• Low Warpage
Uses	• Automotive Applications • Automotive Electronics	• Electrical/Electronic Applications • General Purpose

ASTM & ISO Properties¹

Physical	Nominal Value	Unit	Test Method
Density	1.44	g/cm ³	ISO 1183
Melt Volume-Flow Rate (MVR) (250°C/5.0 kg)	30	cm ³ /10min	ISO 1133
Molding Shrinkage			Internal Method
Across Flow : 2.00 mm	0.60	%	
Flow : 2.00 mm	0.30	%	
Water Absorption (Saturation, 23°C)	0.080	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	9400	MPa	ISO 527-1/1
Tensile Stress (Break)	120	MPa	ISO 527-2/5
Tensile Strain (Break)	1.8	%	ISO 527-2/5
Flexural Modulus ²	9000	MPa	ISO 178
Flexural Stress ²	185	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (23°C)	10	kJ/m ²	ISO 179
Charpy Unnotched Impact Strength (23°C)	59	kJ/m ²	ISO 179
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, Annealed	217	°C	ISO 75-2/B
1.8 MPa, Annealed	185	°C	ISO 75-2/A
Melting Temperature	224	°C	ISO 11357-3
CLTE			ISO 11359-2
Flow : -30 to 35°C	2.0E-5	cm/cm/°C	
Flow : -30 to 120°C	2.0E-5	cm/cm/°C	
Flow : 35 to 120°C	2.0E-5	cm/cm/°C	
Transverse : -30 to 35°C	8.3E-5	cm/cm/°C	
Transverse : -30 to 120°C	1.0E-4	cm/cm/°C	
Transverse : 35 to 120°C	1.2E-4	cm/cm/°C	



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Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	7.0E+15	ohms	IEC 60093
Volume Resistivity	2.0E+17	ohms·cm	IEC 60093
Electric Strength			IEC 60243-1
1.00 mm	40	kV/mm	
2.00 mm	30	kV/mm	
Dielectric Constant (1 MHz)	3.20		IEC 60250
Dissipation Factor (1 MHz)	0.017		IEC 60250
Flammability	Nominal Value	Unit	Test Method
Flame Rating (0.75 mm)	HB		UL 94

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

