

NOVADURAN™ 5820G40 H

Mitsubishi Engineering-Plastics Corp - Polybutylene Terephthalate + SAN

General Information

Product Description

PBT alloy GF-reinforced / HB (0.75mm) equivalent per in-house testing, Low warpage & Low density, Mechanical strength, GF 40%

General

Filler / Reinforcement	• Glass Fiber, 40% 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	1.58	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	0.90	%	
Flow : 2.00 mm	0.30	%	
Water Absorption (Saturation, 23°C)	0.070	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	12500	MPa	ISO 527-1/1
Tensile Stress (Break)	160	MPa	ISO 527-2/5
Tensile Strain (Break)	2.1	%	ISO 527-2/5
Flexural Modulus ²	11500	MPa	ISO 178
Flexural Stress ²	240	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (23°C)	8.8	kJ/m ²	ISO 179
Charpy Unnotched Impact Strength (23°C)	50	kJ/m ²	ISO 179
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, Annealed	> 220	°C	ISO 75-2/B
1.8 MPa, Annealed	208	°C	ISO 75-2/A
Melting Temperature	224	°C	ISO 11357-3
CLTE			ISO 11359-2
Flow : -30 to 35°C	1.0E-5	cm/cm/°C	
Flow : -30 to 120°C	1.0E-5	cm/cm/°C	
Flow : 35 to 120°C	1.0E-5	cm/cm/°C	
Transverse : -30 to 35°C	7.0E-5	cm/cm/°C	
Transverse : -30 to 120°C	1.0E-4	cm/cm/°C	
Transverse : 35 to 120°C	1.3E-4	cm/cm/°C	



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Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	9.0E+15	ohms	IEC 60093
Volume Resistivity	6.0E+16	ohms·cm	IEC 60093
Electric Strength			IEC 60243-1
1.00 mm	32	kV/mm	
2.00 mm	26	kV/mm	
Dielectric Constant (1 MHz)	3.30		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

