

NOVADURAN™ 5010GPN33

Mitsubishi Engineering-Plastics Corp - Polybutylene Terephthalate

General Information

Product Description

Filler-reinforced / Flame Retardant, Tracking resistant

General

Filler / Reinforcement	• Filler, 33% Filler by Weight		
Features	• Flame Retardant	• Low Warpage	• Tracking Resistant
Uses	• Automotive Applications • Automotive Electronics	• Electrical/Electronic Applications • General Purpose	

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density	1.64	g/cm ³	ISO 1183
Melt Volume-Flow Rate (MVR) (250°C/5.0 kg)	6.0	cm ³ /10min	ISO 1133
Molding Shrinkage			Internal Method
Across Flow : 2.00 mm	1.0	%	
Flow : 2.00 mm	0.60	%	
Water Absorption (Saturation, 23°C)	0.070	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	7200	MPa	ISO 527-1/1
Tensile Stress (Break)	75.0	MPa	ISO 527-2/5
Tensile Strain (Break)	2.0	%	ISO 527-2/5
Flexural Modulus ²	7000	MPa	ISO 178
Flexural Stress ²	110	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (23°C)	6.0	kJ/m ²	ISO 179
Charpy Unnotched Impact Strength (23°C)	39	kJ/m ²	ISO 179
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, Annealed	210	°C	ISO 75-2/B
1.8 MPa, Annealed	174	°C	ISO 75-2/A
Melting Temperature	224	°C	ISO 11357-3
CLTE			ISO 11359-2
Flow : -30 to 35°C	2.4E-5	cm/cm/°C	
Flow : -30 to 120°C	2.5E-5	cm/cm/°C	
Flow : 35 to 120°C	2.6E-5	cm/cm/°C	
Transverse : -30 to 35°C	6.3E-5	cm/cm/°C	
Transverse : -30 to 120°C	9.9E-5	cm/cm/°C	
Transverse : 35 to 120°C	1.3E-4	cm/cm/°C	
RTI Elec (0.38 mm)	75.0	°C	UL 746B
RTI Imp (0.38 mm)	75.0	°C	UL 746B
RTI Str (0.38 mm)	75.0	°C	UL 746B



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Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	4.0E+15	ohms	IEC 60093
Volume Resistivity	1.0E+17	ohms·cm	IEC 60093
Electric Strength (1.00 mm)	25	kV/mm	IEC 60243-1
Dielectric Constant (1 MHz)	3.90		IEC 60250
Dissipation Factor (1 MHz)	0.016		IEC 60250
Comparative Tracking Index (CTI)	PLC 0		UL 746A
Flammability	Nominal Value	Unit	Test Method
Flame Rating (0.38 mm)	V-0		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 150	rpm	

