

NOVADURAN™ 5010G30

Mitsubishi Engineering-Plastics Corp - Polybutylene Terephthalate

General Information

Product Description

GF-Reinforced /HB, Standard, GF 30%

General

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

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density	1.53	g/cm ³	ISO 1183
Melt Volume-Flow Rate (MVR) (250°C/5.0 kg)	40	cm ³ /10min	ISO 1133
Molding Shrinkage			Internal Method
Across Flow : 2.00 mm	1.2	%	
Flow : 2.00 mm	0.40	%	
Water Absorption (Saturation, 23°C)	0.070	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	9500	MPa	ISO 527-1/1
Tensile Stress (Break)	140	MPa	ISO 527-2/5
Tensile Strain (Break)	3.0	%	ISO 527-2/5
Flexural Modulus ²	9000	MPa	ISO 178
Flexural Stress ²	215	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	> 220	°C	ISO 75-2/B
1.8 MPa, Annealed	207	°C	ISO 75-2/A
Melting Temperature	224	°C	ISO 11357-3
CLTE			ISO 11359-2
Flow : -30 to 35°C	2.3E-5	cm/cm/°C	
Flow : -30 to 120°C	1.8E-5	cm/cm/°C	
Flow : 35 to 120°C	2.0E-5	cm/cm/°C	
Transverse : -30 to 35°C	7.6E-5	cm/cm/°C	
Transverse : -30 to 120°C	1.1E-4	cm/cm/°C	
Transverse : 35 to 120°C	1.4E-4	cm/cm/°C	
RTI Elec (0.8 mm)	140	°C	UL 746B
RTI Imp (0.8 mm)	120	°C	UL 746B

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Thermal	Nominal Value	Unit	Test Method
RTI Str (0.8 mm)	140	°C	UL 746B
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	5.0E+16	ohms	IEC 60093
Volume Resistivity	2.0E+16	ohms·cm	IEC 60093
Electric Strength			IEC 60243-1
1.00 mm	27	kV/mm	
2.00 mm	24	kV/mm	
Dielectric Constant (1 MHz)	3.40		IEC 60250
Dissipation Factor (1 MHz)	0.016		IEC 60250
Comparative Tracking Index (CTI)	PLC 1		UL 746A
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
0.8 mm		HB	
1.5 mm		HB	
3.0 mm		HB	
6.0 mm		HB	

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	240	°C
Middle Temperature	245	°C
Front Temperature	255	°C
Nozzle Temperature	255	°C
Mold Temperature	80 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

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