

NOVADURAN™ 5010G45

Mitsubishi Engineering-Plastics Corp - Polybutylene Terephthalate

General Information

Product Description

GF-Reinforced / HB, Standard, GF 45%

General

Filler / Reinforcement	• Glass Fiber, 45% 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	1.67	g/cm ³	ISO 1183
Melt Volume-Flow Rate (MVR) (250°C/5.0 kg)	15	cm ³ /10min	ISO 1133
Molding Shrinkage			Internal Method
Across Flow : 2.00 mm	0.90	%	
Flow : 2.00 mm	0.40	%	
Water Absorption (Saturation, 23°C)	0.060	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	15000	MPa	ISO 527-1/1
Tensile Stress (Break)	165	MPa	ISO 527-2/5
Tensile Strain (Break)	2.0	%	ISO 527-2/5
Flexural Modulus ²	14500	MPa	ISO 178
Flexural Stress ²	260	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (23°C)	14	kJ/m ²	ISO 179
Charpy Unnotched Impact Strength (23°C)	60	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	209	°C	ISO 75-2/A
Melting Temperature	224	°C	ISO 11357-3
CLTE			ISO 11359-2
Flow : -30 to 35°C	1.5E-5	cm/cm/°C	
Flow : -30 to 120°C	1.5E-5	cm/cm/°C	
Flow : 35 to 120°C	1.0E-5	cm/cm/°C	
Transverse : -30 to 35°C	6.8E-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	
RTI Elec (0.75 mm)	75.0	°C	UL 746B
RTI Imp (0.75 mm)	75.0	°C	UL 746B

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Thermal	Nominal Value	Unit	Test Method
RTI Str (0.75 mm)	75.0	°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	28	kV/mm	
2.00 mm	25	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
0.75 mm	HB		
1.5 mm	HB		
3.0 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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