

NOVADURAN™ 5010GX30HS

Mitsubishi Engineering-Plastics Corp - Polybutylene Terephthalate

General Information

Product Description

GF-reinforced(30%)/ HB equiv. per in-house testing, Low Warpage, Thermal Shock Resistant

General

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

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density	1.49	g/cm ³	ISO 1183
Melt Volume-Flow Rate (MVR) (250°C/5.0 kg)	33	cm ³ /10min	ISO 1133
Molding Shrinkage			Internal Method
Across Flow : 2.00 mm	0.70	%	
Flow : 2.00 mm	0.40	%	
Water Absorption (Saturation, 23°C)	0.070	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	8500	MPa	ISO 527-1/1
Tensile Stress (Break)	135	MPa	ISO 527-2/5
Tensile Strain (Break)	4.0	%	ISO 527-2/5
Flexural Modulus ²	7500	MPa	ISO 178
Flexural Stress ²	200	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (23°C)	18	kJ/m ²	ISO 179
Charpy Unnotched Impact Strength (23°C)	100	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	200	°C	ISO 75-2/A
Melting Temperature	224	°C	ISO 11357-3
CLTE			ISO 11359-2
Flow : -30 to 35°C	2.5E-5	cm/cm/°C	
Flow : -30 to 120°C	1.8E-5	cm/cm/°C	
Flow : 35 to 120°C	1.2E-5	cm/cm/°C	
Transverse : -30 to 35°C	8.1E-5	cm/cm/°C	
Transverse : -30 to 120°C	1.1E-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	1.0E+15	ohms	IEC 60093
Volume Resistivity	1.0E+16	ohms·cm	IEC 60093
Electric Strength			IEC 60243-1
1.00 mm	36	kV/mm	
2.00 mm	30	kV/mm	
Dielectric Constant (1 MHz)	3.40		IEC 60250
Dissipation Factor (1 MHz)	0.016		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 150	rpm

Notes

¹ Typical properties: these are not to be construed as specifications.

² 2.0 mm/min

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