

NOVADURAN™ 5010GN6-20

Mitsubishi Engineering-Plastics Corp - Polybutylene Terephthalate

General Information			
Product Description			
GF-reinforced / Low Gas emission, Flame Retardant, Electrical properties, GF 20%			
General			
Filler / Reinforcement	• Glass Fiber, 20% Filler by Weight		
Features	• Flame Retardant	• Low to No Outgassing	• Tracking Resistant
Uses	• Automotive Applications • Automotive Electronics	• Electrical/Electronic Applications • General Purpose	
ASTM & ISO Properties ¹			
Physical	Nominal Value	Unit	Test Method
Density	1.57	g/cm³	ISO 1183
Melt Volume-Flow Rate (MVR) (250°C/5.0 kg)	25	cm³/10min	ISO 1133
Molding Shrinkage			Internal Method
Across Flow : 2.00 mm	1.4	%	
Flow : 2.00 mm	0.60	%	
Water Absorption (Saturation, 23°C)	0.070	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	7600	MPa	ISO 527-1/1
Tensile Stress (Break)	120	MPa	ISO 527-2/5
Tensile Strain (Break)	2.6	%	ISO 527-2/5
Flexural Modulus ²	7500	MPa	ISO 178
Flexural Stress ²	180	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (23°C)	8.0	kJ/m²	ISO 179
Charpy Unnotched Impact Strength (23°C)	35	kJ/m²	ISO 179
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, Annealed	216	°C	ISO 75-2/B
1.8 MPa, Annealed	195	°C	ISO 75-2/A
Melting Temperature	224	°C	ISO 11357-3
CLTE			ISO 11359-2
Flow : -30 to 35°C	3.0E-5	cm/cm/°C	
Flow : -30 to 120°C	3.0E-5	cm/cm/°C	
Flow : 35 to 120°C	3.0E-5	cm/cm/°C	
Transverse : -30 to 35°C	8.0E-5	cm/cm/°C	
Transverse : -30 to 120°C	1.2E-4	cm/cm/°C	
Transverse : 35 to 120°C	1.5E-4	cm/cm/°C	
RTI Elec (0.75 mm)	130	°C	UL 746B
RTI Imp (0.75 mm)	130	°C	UL 746B

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Thermal	Nominal Value	Unit	Test Method
RTI Str (0.75 mm)	140	°C	UL 746B
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	1.0E+15	ohms	IEC 60093
Volume Resistivity	1.0E+16	ohms·cm	IEC 60093
Dielectric Constant (1 MHz)	3.70		IEC 60250
Dissipation Factor (1 MHz)	0.016		IEC 60250
Comparative Tracking Index (CTI)	PLC 2		UL 746A
Flammability	Nominal Value	Unit	Test Method
Flame Rating (0.75 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

Notes

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

² 2.0 mm/min

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