

NOVADURAN™ 5010GN6-15M8X

Mitsubishi Engineering-Plastics Corp - Polybutylene Terephthalate

General Information

Product Description

GF-reinforced / 5VA Flame Retardant (0.30 mm V-0); Low gas emission, Electrical properties, GF 15%

General

Filler / Reinforcement	• Glass Fiber, 15% 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/cm ³	ISO 1183
Melt Volume-Flow Rate (MVR) (250°C/5.0 kg)	26	cm ³ /10min	ISO 1133
Molding Shrinkage			Internal Method
Across Flow : 2.00 mm	1.7	%	
Flow : 2.00 mm	0.80	%	
Water Absorption (Saturation, 23°C)	0.070	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	6800	MPa	ISO 527-1/1
Tensile Stress (Break)	105	MPa	ISO 527-2/5
Tensile Strain (Break)	3.0	%	ISO 527-2/5
Flexural Modulus ²	6500	MPa	ISO 178
Flexural Stress ²	165	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (23°C)	6.8	kJ/m ²	ISO 179
Charpy Unnotched Impact Strength (23°C)	30	kJ/m ²	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	198	°C	ISO 75-2/A
Melting Temperature	224	°C	ISO 11357-3
CLTE			ISO 11359-2
Flow : -30 to 35°C	3.2E-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	8.2E-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 (0.30 mm)	130	°C	UL 746B
RTI Imp (0.30 mm)	130	°C	UL 746B

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Thermal	Nominal Value	Unit	Test Method
RTI Str (0.30 mm)	140	°C	UL 746B
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	4.0E+16	ohms	IEC 60093
Volume Resistivity	3.0E+16	ohms·cm	IEC 60093
Electric Strength (1.00 mm)	23	kV/mm	IEC 60243-1
Dielectric Constant (1 MHz)	3.70		IEC 60250
Dissipation Factor (1 MHz)	0.017		IEC 60250
Comparative Tracking Index (CTI)	PLC 2		UL 746A
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
0.30 mm		V-0	
1.5 mm		V-0	
		5VA	

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