Mitsubishi Engineering-Plastics Corp.

NOVADURAN™ 5010GN1-30TX2

Mitsubishi Engineering-Plastics Corp - Polybutylene Terephthalate

General Information

Product Description		
GF-reinforced / V-0 (1.5mm) equivalent per in-house testing, Thermal shock resistant, GF 30%		
General		
Filler / Reinforcement	• Glass Fiber, 30% Filler by Weight	
Features	• Flame Retardant	• Thermal Shock Resistant
Uses	• Automotive Applications • Automotive Electronics	• Electrical/Electronic Applications • General Purpose

ASTM & ISO Properties [1]

Physical	Nominal Value	Unit	Test Method
Density	1.60	g/cm³	ISO 1183
Melt Volume-Flow Rate (MVR) (250°C/5.0 kg)	24	cm³/10min	ISO 1133
Molding Shrinkage			Internal Method
Across Flow : 2.00 mm	0.90	%	
Flow : 2.00 mm	0.30	%	
Water Absorption (Saturation, 23°C)	0.070	%	ISO 62
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus	10800	MPa	ISO 527-1/1
Tensile Stress (Break)	125	MPa	ISO 527-2/5
Tensile Strain (Break)	2.5	%	ISO 527-2/5
Flexural Modulus [2]	8930	MPa	ISO 178
Flexural Stress [2]	192	MPa	ISO 178
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength (23°C)	11	kJ/m²	ISO 179
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load			
0.45 MPa, Annealed	210	°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	2.0E-5	cm/cm/°C	
Flow : -30 to 120°C	2.0E-5	cm/cm/°C	
Flow : 35 to 120°C	2.0E-5	cm/cm/°C	
Transverse : -30 to 35°C	8.0E-5	cm/cm/°C	
Transverse : -30 to 120°C	1.1E-4	cm/cm/°C	
Transverse : 35 to 120°C	1.5E-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 (1.00 mm)	24	kV/mm	IEC 60243-1
Dielectric Constant (1 MHz)	3.90		IEC 60250
Dissipation Factor (1 MHz)	0.014		IEC 60250
Comparative Tracking Index (CTI)	PLC 3		UL 746A

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