Mitsubishi Engineering-Plastics Corp.

NOVADURAN™ 5010R5 L

Mitsubishi Engineering-Plastics Corp - Polybutylene Terephthalate

General Information

Product Description		
Un-reinforced / HB, Good flow		
General		
Features	• Good Flow	
Uses	• Automotive Applications • Automotive Electronics	• Electrical/Electronic Applications • General Purpose

ASTM & ISO Properties [1]

Physical	Nominal Value	Unit	Test Method
Density	1.31	g/cm³	ISO 1183
Melt Volume-Flow Rate (MVR) (250°C/2.16 kg)	26	cm³/10min	ISO 1133
Molding Shrinkage			Internal Method
Across Flow : 2.00 mm	1.8	%	
Flow : 2.00 mm	1.9	%	
Water Absorption (Saturation, 23°C)	0.10	%	ISO 62
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus	2550	MPa	ISO 527-1/1
Tensile Stress (Yield)	55.0	MPa	ISO 527-2/50
Tensile Strain			ISO 527-2/50
Yield	4.4	%	
Break	170	%	
Flexural Modulus [2]	2300	MPa	ISO 178
Flexural Stress [2]	80.0	MPa	ISO 178
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength (23°C)	6.0	kJ/m²	ISO 179
Charpy Unnotched Impact Strength (23°C)	No Break		ISO 179
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load			
0.45 MPa, Annealed	165	°C	ISO 75-2/B
1.8 MPa, Annealed	67.0	°C	ISO 75-2/A
Melting Temperature	224	°C	ISO 11357-3
CLTE			ISO 11359-2
Flow : -30 to 35°C	8.0E-5	cm/cm/°C	
Flow : -30 to 120°C	1.2E-4	cm/cm/°C	
Flow : 35 to 120°C	1.4E-4	cm/cm/°C	
Transverse : -30 to 35°C	8.8E-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 (0.8 mm)	130	°C	UL 746B

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Thermal	Nominal Value	Unit	Test Method
RTI Imp (0.8 mm)	75.0	°C	UL 746B
RTI Str (0.8 mm)	140	°C	UL 746B
Electrical	**Nominal Value**	**Unit**	**Test Method**
Surface Resistivity	3.0E+15	ohms	IEC 60093
Volume Resistivity	4.0E+16	ohms·cm	IEC 60093
Electric Strength			IEC 60243-1
1.00 mm	22	kV/mm	
2.00 mm	17	kV/mm	
Dielectric Constant (1 MHz)	3.30		IEC 60250
Dissipation Factor (1 MHz)	0.022		IEC 60250
Comparative Tracking Index (CTI)	PLC 0		UL 746A
Flammability	**Nominal Value**	**Unit**	**Test Method**
Flame Rating			UL 94
0.8 mm	HB		
1.6 mm	HB		
3.2 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 to 260	°C
Middle Temperature	240 to 260	°C
Front Temperature	240 to 260	°C
Nozzle Temperature	260	°C
Mold Temperature	60 to 100	°C
Injection Pressure	20.0 to 150	MPa
Injection Rate	Moderate-Fast	
Screw Speed	80 to 150	rpm