

NOVADURAN™ 5010TR X5

Mitsubishi Engineering-Plastics Corp - Polybutylene Terephthalate

General Information

Product Description

Un-reinforced / HB, Excellent impact strength

General

Features	• Good Impact Resistance	
Uses	• Automotive Applications	• Electrical/Electronic Applications
	• Automotive Electronics	• General Purpose

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density	1.26	g/cm ³	ISO 1183
Melt Volume-Flow Rate (MVR) (250°C/2.16 kg)	14	cm ³ /10min	ISO 1133
Molding Shrinkage			Internal Method
Across Flow : 2.00 mm	1.8	%	
Flow : 2.00 mm	2.0	%	
Water Absorption (Saturation, 23°C)	0.10	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	2340	MPa	ISO 527-1/1
Tensile Stress (Yield)	47.0	MPa	ISO 527-2/50
Tensile Strain			ISO 527-2/50
Yield	3.1	%	
Break	140	%	
Flexural Modulus ²	2200	MPa	ISO 178
Flexural Stress ²	70.0	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (23°C)	10	kJ/m ²	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	155	°C	ISO 75-2/B
1.8 MPa, Annealed	65.0	°C	ISO 75-2/A
Melting Temperature	224	°C	ISO 11357-3
CLTE			ISO 11359-2
Flow : -30 to 35°C	9.0E-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	9.5E-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)	75.0	°C	UL 746B

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Thermal	Nominal Value	Unit	Test Method
RTI Imp (0.75 mm)	75.0	°C	UL 746B
RTI Str (0.75 mm)	75.0	°C	UL 746B
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	5.0E+15	ohms	IEC 60093
Volume Resistivity	1.0E+16	ohms·cm	IEC 60093
Electric Strength			IEC 60243-1
1.00 mm	23	kV/mm	
2.00 mm	17	kV/mm	
Dielectric Constant (1 MHz)	3.40		IEC 60250
Dissipation Factor (1 MHz)	0.027		IEC 60250
Flammability	Nominal Value	Unit	Test Method
Flame Rating (0.75 mm)	HB		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	235	°C
Middle Temperature	240	°C
Front Temperature	250	°C
Nozzle Temperature	245	°C
Mold Temperature	60 to 80	°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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