

NOVADURAN® 5010R5

Polybutylene Terephthalate

Mitsubishi Engineering-Plastics Corp

Message:

NOVADURAN® 5010R5 is a Polybutylene Terephthalate (PBT) material. It is available in Asia Pacific, Europe, or North America for injection molding.

Primary attribute of NOVADURAN® 5010R5: Flame Rated.

Typical application of NOVADURAN® 5010R5: Automotive

General Information			
UL YellowCard	E53664-243521		
Forms	Pellets		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Density	1.31	g/cm ³	ISO 1183
Molding Shrinkage			
Across Flow : 2.00 mm	1.8	%	
Flow : 2.00 mm	1.9	%	
Water Absorption (Saturation, 23°C)	0.10	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	2550	MPa	ISO 527-2
Tensile Stress (Yield)	55.0	MPa	ISO 527-2
Tensile Strain (Yield)	4.0	%	ISO 527-2
Nominal Tensile Strain at Break	170	%	ISO 527-2
Flexural Modulus	2300	MPa	ISO 178
Flexural Stress	80.0	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (23°C)	6.0	kJ/m ²	ISO 179
Charpy Unnotched Impact Strength (23°C)	No Break		ISO 179
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, Unannealed	165	°C	ISO 75-2/B
1.8 MPa, Unannealed	67.0	°C	ISO 75-2/A
Melting Temperature	224	°C	ISO 11357-3
CLTE			ISO 11359-2
Flow : -30 to 50°C	9.0E-5	cm/cm/°C	
Flow : -30 to 120°C	1.2E-4	cm/cm/°C	
Flow : 50 to 120°C	1.5E-4	cm/cm/°C	
Transverse : -30 to 50°C	9.0E-5	cm/cm/°C	
Transverse : -30 to 120°C	1.2E-4	cm/cm/°C	
Transverse : 50 to 120°C	1.5E-4	cm/cm/°C	
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	
Relative Permittivity (1 MHz)	3.30		IEC 60250
Dissipation Factor (1 MHz)	0.022		IEC 60250
Comparative Tracking Index (CTI)	PLC 0		UL 746
Flammability	Nominal Value	Unit	Test Method
Flame Rating (0.830 mm)	HB		UL 94
Injection	Nominal Value	Unit	
Drying Temperature	120	°C	
Drying Time	5.0 to 8.0	hr	
Rear Temperature	235	°C	
Middle Temperature	240	°C	
Front Temperature	250	°C	
Nozzle Temperature	245	°C	
Mold Temperature	60.0 to 80.0	°C	
Injection Pressure	20.0 to 150	MPa	
Screw Speed	80 to 150	rpm	

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