

NOVADURAN® 5020

Polybutylene Terephthalate

Mitsubishi Engineering-Plastics Corp

Message:

NOVADURAN® 5020 is a Polybutylene Terephthalate (PBT) material. It is available in Asia Pacific, Europe, or North America for extrusion or injection molding.

General Information			
Forms	Pellets		
Processing Method	Extrusion		
	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)	51.0	MPa	ISO 527-2
Tensile Strain (Yield)	4.0	%	ISO 527-2
Nominal Tensile Strain at Break	> 200	%	ISO 527-2
Flexural Modulus	2300	MPa	ISO 178
Flexural Stress	76.0	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (23°C)	5.0	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	155	°C	ISO 75-2/B
1.8 MPa, Unannealed	65.0	°C	ISO 75-2/A
Melting Temperature	224	°C	ISO 11357-3
CLTE			ISO 11359-2
Flow : -30 to 50°C	1.0E-4	cm/cm/°C	
Flow : -30 to 120°C	1.4E-4	cm/cm/°C	
Flow : 50 to 120°C	1.7E-4	cm/cm/°C	
Transverse : -30 to 50°C	1.0E-4	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	1.0E+14	ohms	IEC 60093
Volume Resistivity	1.0E+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)	3.20		IEC 60250
Dissipation Factor (1 MHz)	0.020		IEC 60250
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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