

NOVADURAN™ 5020

Mitsubishi Engineering-Plastics Corp - Polybutylene Terephthalate

General Information

Product Description

Un-reinforced / HB (0.8mm) equivalent per in-house testing, Extrusion, Standard

General

Features	General Purpose
Uses	- Automotive Applications - Automotive Electronics - Electrical/Electronic Applications - General Purpose

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density	1.31	g/cm ³	ISO 1183
Melt Volume-Flow Rate (MVR) (250°C/2.16 kg)	10	cm ³ /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)	51.0	MPa	ISO 527-2/50
Tensile Strain			ISO 527-2/50
Yield	4.0	%	
Break	> 200	%	
Flexural Modulus ²	2300	MPa	ISO 178
Flexural Stress ²	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
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	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	

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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	
Dielectric Constant (1 MHz)	3.20		IEC 60250
Dissipation Factor (1 MHz)	0.020		IEC 60250

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

Notes

¹ Typical properties: these are not to be construed as specifications.

² 2.0 mm/min

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