

NOVADURAN® 5820G40H

Polybutylene Terephthalate Alloy

Mitsubishi Engineering-Plastics Corp

Message:

NOVADURAN® 5820G40H is a Polybutylene Terephthalate Alloy (PBT Alloy) material filled with 40% glass fiber. It is available in Asia Pacific, Europe, or North America for injection molding.

Important attributes of NOVADURAN® 5820G40H are:

High Strength

Warp Resistant

General Information			
Filler / Reinforcement	Glass Fiber,40% Filler by Weight		
Features	High Strength		
	Low Warpage		
Forms	Pellets		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Density	1.58	g/cm ³	ISO 1183
Molding Shrinkage			
Across Flow : 2.00 mm	0.90	%	
Flow : 2.00 mm	0.30	%	
Water Absorption (Saturation, 23°C)	0.070	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	12500	MPa	ISO 527-2
Tensile Stress (Break)	160	MPa	ISO 527-2
Tensile Strain (Break)	2.0	%	ISO 527-2
Flexural Modulus	11500	MPa	ISO 178
Flexural Stress	240	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (23°C)	9.0	kJ/m ²	ISO 179
Charpy Unnotched Impact Strength (23°C)	50	kJ/m ²	ISO 179
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, Unannealed	> 220	°C	ISO 75-2/B
1.8 MPa, Unannealed	208	°C	ISO 75-2/A
Melting Temperature	224	°C	ISO 11357-3
CLTE			ISO 11359-2
Flow : -30 to 50°C	2.0E-5	cm/cm/°C	
Flow : -30 to 120°C	2.0E-5	cm/cm/°C	
Flow : 50 to 120°C	1.0E-5	cm/cm/°C	

Transverse : -30 to 50°C	6.0E-5	cm/cm/°C	
Transverse : -30 to 120°C	8.0E-5	cm/cm/°C	
Transverse : 50 to 120°C	1.0E-4	cm/cm/°C	
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	9.0E+15	ohms	IEC 60093
Volume Resistivity	6.0E+16	ohms·cm	IEC 60093
Electric Strength			IEC 60243-1
1.00 mm	32	kV/mm	
2.00 mm	26	kV/mm	
Relative Permittivity (1 MHz)	3.30		IEC 60250
Dissipation Factor (1 MHz)	0.017		IEC 60250
Injection	Nominal Value	Unit	
Drying Temperature	120	°C	
Drying Time	5.0 to 8.0	hr	
Rear Temperature	240	°C	
Middle Temperature	245	°C	
Front Temperature	255	°C	
Nozzle Temperature	255	°C	
Mold Temperature	80.0 to 100	°C	
Injection Pressure	20.0 to 150	MPa	
Screw Speed	80 to 120	rpm	

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