

NOVADURAN® 5010GN1-15AM

Polybutylene Terephthalate

Mitsubishi Engineering-Plastics Corp

Message:

NOVADURAN® 5010GN1-15AM is a Polybutylene Terephthalate (PBT) material filled with 15% glass fiber. It is available in Asia Pacific, Europe, or North America for injection molding.

Important attributes of NOVADURAN® 5010GN1-15AM are:

Flame Rated

Flame Retardant

General Information			
UL YellowCard	E53664-243533		
Filler / Reinforcement	Glass Fiber, 15% Filler by Weight		
Additive	Flame Retardant		
Features	Flame Retardant		
Forms	Pellets		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Density	1.54	g/cm ³	ISO 1183
Molding Shrinkage			
Across Flow : 2.00 mm	1.2	%	
Flow : 2.00 mm	0.40	%	
Water Absorption (Saturation, 23°C)	0.070	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	6700	MPa	ISO 527-2
Tensile Stress (Break)	110	MPa	ISO 527-2
Tensile Strain (Break)	3.0	%	ISO 527-2
Flexural Modulus	6200	MPa	ISO 178
Flexural Stress	170	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)	25	kJ/m ²	ISO 179
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, Unannealed	217	°C	ISO 75-2/B
1.8 MPa, Unannealed	197	°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	1.0E-5	cm/cm/°C	
Flow : 50 to 120°C	1.0E-5	cm/cm/°C	

Transverse : -30 to 50°C	9.0E-5	cm/cm/°C	
Transverse : -30 to 120°C	1.1E-4	cm/cm/°C	
Transverse : 50 to 120°C	1.3E-4	cm/cm/°C	
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	9.0E+15	ohms	IEC 60093
Volume Resistivity	2.0E+17	ohms·cm	IEC 60093
Electric Strength (1.00 mm)	23	kV/mm	IEC 60243-1
Relative Permittivity (1 MHz)	3.70		IEC 60250
Dissipation Factor (1 MHz)	0.017		IEC 60250
Comparative Tracking Index (CTI)	PLC 3		UL 746
Flammability	Nominal Value	Unit	Test Method
Flame Rating (0.710 mm)	V-0		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	255	°C	
Nozzle Temperature	250	°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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