

NOVADURAN® 5710G30S2

Polybutylene Terephthalate Alloy

Mitsubishi Engineering-Plastics Corp

Technical Data

Product Description

NOVADURAN® 5710G30S2 is a Polybutylene Terephthalate Alloy (PBT Alloy) material filled with 30% glass fiber. It is available in Asia Pacific, Europe, or North America for injection molding.

Important attributes of NOVADURAN® 5710G30S2 are:

- Good Aesthetics
- Warp Resistant

General

Filler / Reinforcement	• Glass Fiber, 30% Filler by Weight
Features	• Good Surface Finish • Low Warpage
Forms	• Pellets
Processing Method	• Injection Molding

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	1.51 g/cm ³	1.51 g/cm ³	ISO 1183
Molding Shrinkage			
Across Flow : 0.0787 in (2.00 mm)	0.80 %	0.80 %	
Flow : 0.0787 in (2.00 mm)	0.40 %	0.40 %	
Water Absorption (Saturation, 73°F (23°C))	0.070 %	0.070 %	

Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Modulus	1.52E+6 psi	10500 MPa	ISO 527-2
Tensile Stress (Break)	18900 psi	130 MPa	ISO 527-2
Tensile Strain (Break)	2.0 %	2.0 %	ISO 527-2
Flexural Modulus	1.31E+6 psi	9000 MPa	ISO 178
Flexural Stress	27600 psi	190 MPa	ISO 178

Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Charpy Notched Impact Strength (73°F (23°C))	4.3 ft-lb/in ²	9.0 kJ/m ²	ISO 179
Charpy Unnotched Impact Strength 73°F (23°C)	25 ft-lb/in ²	52 kJ/m ²	ISO 179

Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Heat Deflection Temperature			
66 psi (0.45 MPa), Unannealed	428 °F	220 °C	ISO 75-2/B
264 psi (1.8 MPa), Unannealed	381 °F	194 °C	ISO 75-2/A
CLTE			ISO 11359-2
Flow : -22 to 122°F (-30 to 50°C)	1.1E-5 in/in/°F	2.0E-5 cm/cm/°C	
Flow : -22 to 248°F (-30 to 120°C)	5.6E-6 in/in/°F	1.0E-5 cm/cm/°C	
Flow : 122 to 248°F (50 to 120°C)	5.6E-6 in/in/°F	1.0E-5 cm/cm/°C	
Transverse : -22 to 122°F (-30 to 50°C)	3.9E-5 in/in/°F	7.0E-5 cm/cm/°C	
Transverse : -22 to 248°F (-30 to 120°C)	5.6E-5 in/in/°F	1.0E-4 cm/cm/°C	
Transverse : 122 to 248°F (50 to 120°C)	7.2E-5 in/in/°F	1.3E-4 cm/cm/°C	

Electrical	Nominal Value (English)	Nominal Value (SI)	Test Method
Surface Resistivity	5.0E+15 ohms	5.0E+15 ohms	IEC 60093
Volume Resistivity	9.0E+16 ohms·cm	9.0E+16 ohms·cm	IEC 60093
Electric Strength			IEC 60243-1
0.0394 in (1.00 mm)	710 V/mil	28 kV/mm	
0.0787 in (2.00 mm)	610 V/mil	24 kV/mm	

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Electrical	Nominal Value (English)	Nominal Value (SI)	Test Method
Relative Permittivity (1 MHz)	3.40	3.40	IEC 60250
Dissipation Factor (1 MHz)	0.020	0.020	IEC 60250
Injection	Nominal Value (English)	Nominal Value (SI)	
Drying Temperature	248 °F	120 °C	
Drying Time	5.0 to 8.0 hr	5.0 to 8.0 hr	
Rear Temperature	464 °F	240 °C	
Middle Temperature	473 °F	245 °C	
Front Temperature	491 °F	255 °C	
Nozzle Temperature	491 °F	255 °C	
Mold Temperature	176 to 212 °F	80.0 to 100 °C	
Injection Pressure	2900 to 21800 psi	20.0 to 150 MPa	
Screw Speed	80 to 120 rpm	80 to 120 rpm	

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