

NORYL™ GFN2 resin

Polyphenylene Ether + PS

SABIC Innovative Plastics

Message:

NORYL GFN2 is a standard 20 % glass fibre reinforced material with a HDT/A of 130C according ISO 75. NORYL GFN2 can be used for all applications where a higher modulus is required. NORYL GFN2 is available in all colours.

General Information			
UL YellowCard	E45329-100092385		
Filler / Reinforcement	Glass fiber reinforced material, 20% filler by weight		
RoHS Compliance	RoHS compliance		
Appearance	Available colors		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Density	1.25	g/cm ³	ISO 1183
Melt Volume-Flow Rate (MVR) (280°C/10.0 kg)	15.0	cm ³ /10min	ISO 1133
Molding Shrinkage - Flow ¹	0.20 - 0.40	%	Internal method
Water Absorption			ISO 62
Saturated, 23°C	0.20	%	ISO 62
Equilibrium, 23°C, 50% RH	0.060	%	ISO 62
Hardness	Nominal Value	Unit	Test Method
Ball Indentation Hardness (H 358/30)	100	MPa	ISO 2039-1
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	6000	MPa	ISO 527-2/1
Tensile Stress			ISO 527-2/5
Yield	80.0	MPa	ISO 527-2/5
Fracture	80.0	MPa	ISO 527-2/5
Tensile Strain			ISO 527-2/5
Yield	2.5	%	ISO 527-2/5
Fracture	2.5	%	ISO 527-2/5
Flexural Modulus ²	4500	MPa	ISO 178
Flexural Stress	120	MPa	ISO 178
Taber Abrasion Resistance (1000 Cycles, 1000 g, CS-17 Wheel)	60.0	mg	Internal method
Impact	Nominal Value	Unit	Test Method
Charpy Unnotched Impact Strength ³			ISO 179/1eU
-30°C	25	kJ/m ²	ISO 179/1eU
23°C	25	kJ/m ²	ISO 179/1eU
Unnotched Izod Impact Strength ⁴			ISO 180/1U
-30°C	23	kJ/m ²	ISO 180/1U

23°C	23	kJ/m ²	ISO 180/1U
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature ⁵			
0.45 MPa, unannealed, 100 mm span	130	°C	ISO 75-2/Be
1.8 MPa, unannealed, 100 mm span	120	°C	ISO 75-2/Ae
Vicat Softening Temperature			
--	145	°C	ISO 306/A50
--	135	°C	ISO 306/B50
--	140	°C	ISO 306/B120
Ball Pressure Test (125°C)	Pass		IEC 60695-10-2
Linear thermal expansion coefficient			ISO 11359-2
Flow: 23 to 80°C	3.0E-5	cm/cm/°C	ISO 11359-2
Lateral: 23 to 80°C	7.0E-5	cm/cm/°C	ISO 11359-2
Thermal Conductivity	0.26	W/m/K	ISO 8302
RTI Elec	50.0	°C	UL 746
RTI Imp	50.0	°C	UL 746
RTI	50.0	°C	UL 746
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	> 1.0E+15	ohms	IEC 60093
Volume Resistivity	1.0E+15	ohms·cm	IEC 60093
Dielectric Strength (3.20 mm, in Oil)	18	kV/mm	IEC 60243-1
Relative Permittivity			IEC 60250
50 Hz	2.90		IEC 60250
60 Hz	2.90		IEC 60250
1 MHz	2.90		IEC 60250
Dissipation Factor			IEC 60250
50 Hz	8.0E-4		IEC 60250
60 Hz	8.0E-4		IEC 60250
1 MHz	3.0E-3		IEC 60250
Comparative Tracking Index	250	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Flame Rating (1.50 mm)	HB		UL 94
Glow Wire Flammability Index (3.20 mm)	750	°C	IEC 60695-2-12
Oxygen Index	26	%	ISO 4589-2
Injection	Nominal Value	Unit	
Drying Temperature	100 - 120	°C	
Drying Time	2.0 - 3.0	hr	
Hopper Temperature	60.0 - 80.0	°C	
Rear Temperature	240 - 260	°C	
Middle Temperature	260 - 280	°C	
Front Temperature	280 - 300	°C	
Nozzle Temperature	260 - 280	°C	

Processing (Melt) Temp	280 - 300	°C
Mold Temperature	80.0 - 120	°C
NOTE		
1.	Tensile Bar	
2.	2.0 mm/min	
3.	80*10*4 sp=62mm	
4.	80*10*4	
5.	120*10*4 mm	

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