NORYL™ GFN3 resin

Polyphenylene Ether + PS

SABIC Innovative Plastics

Message:

PPE+PS blend. 30% Glass reinforced. NSF 61 listing in several colors (restrictions apply). FDA compliance (restrictions apply). Low water absorption. Hydrolytic stability. Dimensional stability. Suitable for fluid engineering applications including pump housings, pump impellers and water meter components.

General Information	
UL YellowCard	E121562-221162
Filler / Reinforcement	Glass Fiber,30% Filler by Weight
Features	Good Dimensional Stability Hydrolytically Stable Low to No Water Absorption
Uses	Pump Parts
Agency Ratings	FDA Unspecified Rating NSF 61
Processing Method	Injection Molding
Multi-Point Data	Coefficient of Thermal Expansion vs. Temperature (ASTM E831) Elastic Modulus vs Temperature (ASTM D4065) Flexural DMA (ASTM D4065) Instrumented Impact (Energy) (ASTM D3763) Instrumented Impact (Load) (ASTM D3763) Pressure-Volume-Temperature (PVT - Zoller Method) Shear DMA (ASTM D4065) Specific Heat vs. Temperature (ASTM D3417) Tensile Creep (ASTM D2990) Tensile Fatigue Tensile Stress vs. Strain (ASTM D638) Thermal Conductivity vs. Temperature (ASTM E1530) Viscosity vs. Shear Rate (ASTM D3835)

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.29	g/cm³	ASTM D792
Melt Mass-Flow Rate (MFR) (300°C/5.0 kg)	8.7	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (300°C/5.0 kg)	7.82	cm³/10min	ISO 1133
Molding Shrinkage - Flow (3.20 mm)	0.10 to 0.40	%	Internal Method
Water Absorption (24 hr)	0.060	%	ASTM D570

Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (L-Scale)	108		ASTM D785
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus			
-- [1]	9150	MPa	ASTM D638
--	8740	MPa	ISO 527-2/1
Tensile Strength			
Break [2]	116	MPa	ASTM D638
Break	117	MPa	ISO 527-2
Tensile Elongation			
Break [3]	2.0	%	ASTM D638
Break	1.8	%	ISO 527-2
Flexural Modulus			
100 mm Span [4]	7170	MPa	ASTM D790
50.0 mm Span [5]	8000	MPa	ASTM D790
--	8710	MPa	ISO 178
Flexural Stress			
--	183	MPa	ISO 178
Yield, 50.0 mm Span [6]	180	MPa	ASTM D790
Yield, 100 mm Span [7]	162	MPa	ASTM D790
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength			ISO 179/2C
-30°C	12	kJ/m^2	
23°C	13	kJ/m^2	
Charpy Unnotched Impact Strength [8]			ISO 179/1eU
-30°C	47	kJ/m^2	
23°C	39	kJ/m^2	
Notched Izod Impact			
-30°C	120	J/m	ASTM D256
23°C	120	J/m	ASTM D256
-30°C [9]	12	kJ/m^2	ISO 180/1A
23°C [10]	12	kJ/m^2	ISO 180/1A
Unnotched Izod Impact			
23°C	590	J/m	ASTM D4812
-30°C [11]	36	kJ/m^2	ISO 180/1U
23°C [12]	32	kJ/m^2	ISO 180/1U
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load			
0.45 MPa, Unannealed, 3.20 mm	142	°C	ASTM D648
0.45 MPa, Unannealed, 6.40 mm	158	°C	ASTM D648
0.45 MPa, Unannealed, 64.0 mm Span [13]	143	°C	ISO 75-2/Bf
1.8 MPa, Unannealed, 3.20 mm	137	°C	ASTM D648

1.8 MPa, Unannealed, 6.40 mm	138	°C	ASTM D648
1.8 MPa, Unannealed, 64.0 mm Span [14]	137	°C	ISO 75-2/Af
Vicat Softening Temperature			
--	143	°C	ISO 306/B50
--	147	°C	ISO 306/B120
CLTE			ASTM E831
Flow : -40 to 40°C	3.1E-5	cm/cm/°C	
Transverse : -40 to 40°C	6.2E-5	cm/cm/°C	
RTI Elec	90.0	°C	UL 746
RTI Imp	90.0	°C	UL 746
RTI Str	90.0	°C	UL 746
Electrical	**Nominal Value**	**Unit**	**Test Method**
Dielectric Strength (3.20 mm, in Oil)	22	kV/mm	ASTM D149
Dielectric Constant			ASTM D150
50 Hz	2.93		
60 Hz	2.93		
Dissipation Factor			ASTM D150
50 Hz	9.0E-4		
60 Hz	9.0E-4		
Arc Resistance [15]	PLC 7		ASTM D495
Comparative Tracking Index (CTI)	PLC 4		UL 746
High Amp Arc Ignition (HAI)	PLC 4		UL 746
High Voltage Arc Tracking Rate (HVTR)	PLC 3		UL 746
Hot-wire Ignition (HWI)	PLC 4		UL 746
Flammability	**Nominal Value**	**Unit**	**Test Method**
Flame Rating (1.47 mm)	HB		UL 94
Oxygen Index	26	%	ASTM D2863
Injection	**Nominal Value**	**Unit**	
Drying Temperature	110 to 121	°C	
Drying Time	3.0 to 4.0	hr	
Drying Time, Maximum	8.0	hr	
Suggested Max Moisture	0.020	%	
Suggested Shot Size	30 to 70	%	
Rear Temperature	266 to 316	°C	
Middle Temperature	277 to 321	°C	
Front Temperature	288 to 327	°C	
Nozzle Temperature	299 to 327	°C	
Processing (Melt) Temp	299 to 327	°C	
Mold Temperature	82.2 to 110	°C	
Back Pressure	0.345 to 0.689	MPa	
Screw Speed	20 to 100	rpm	
NOTE			

1.	5.0 mm/min
2.	Type I, 5.0 mm/min
3.	Type I, 5.0 mm/min
4.	2.6 mm/min
5.	1.3 mm/min
6.	1.3 mm/min
7.	2.6 mm/min
8.	80*10*4 sp=62mm
9.	80*10*4
10.	80*10*4
11.	80*10*4
12.	80*10*4
13.	80*10*4 mm
14.	80*10*4 mm
15.	Tungsten Electrode

Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

WECHAT