

NORYL™ SE1GFN1 resin

Polyphenylene Ether + PS

SABIC Innovative Plastics

Message:

PPE+PS blend. 10% Glass reinforced. Non-brominated, non-chlorinated FR system. UL94 V1 listing. RTI 110/105/110. Dielectric strength. Dimensional stability. Suitable for E/E applications.

General Information			
UL YellowCard	E121562-100072184	E121562-221214	
Filler / Reinforcement	Glass fiber reinforced material, 10% filler by weight		
Additive	Flame retardancy		
Features	Chlorine Free		
	Good dimensional stability		
	Bromine-free		
	Flame retardancy		
Uses	Electrical/Electronic Applications		
Processing Method	Injection molding		
Multi-Point Data	Coefficient of Thermal Expansion vs. Temperature (ASTM E831)		
	Tensile Creep (ASTM D2990)		
	Tensile Fatigue		

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.16	g/cm ³	ASTM D792
Molding Shrinkage - Flow (3.20 mm)	0.30 - 0.50	%	Internal method
Water Absorption			ASTM D570
24 hr	0.070	%	ASTM D570
Equilibrium, 23°C	0.22	%	ASTM D570

Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (L-Scale)	104		ASTM D785

Mechanical	Nominal Value	Unit	Test Method
Tensile Strength ¹ (Break)	74.5	MPa	ASTM D638
Tensile Elongation ² (Break)	5.0	%	ASTM D638
Flexural Modulus ³ (50.0 mm Span)	4000	MPa	ASTM D790
Flexural Strength ⁴ (Break, 50.0 mm Span)	120	MPa	ASTM D790

Impact	Nominal Value	Unit	Test Method
Notched Izod Impact			ASTM D256
-40°C	69	J/m	ASTM D256
23°C	96	J/m	ASTM D256

Thermal	Nominal Value	Unit	Test Method
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Deflection Temperature Under Load (1.8 MPa, Unannealed, 6.40 mm)	132	°C	ASTM D648
Vicat Softening Temperature	148	°C	ASTM D1525 ⁵
RTI Elec	110	°C	UL 746
RTI Imp	105	°C	UL 746
RTI	110	°C	UL 746
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	1.0E+15	ohms·cm	ASTM D257
Dielectric Constant			ASTM D150
50 Hz	3.00		ASTM D150
60 Hz	3.00		ASTM D150
1 MHz	3.00		ASTM D150
Dissipation Factor			ASTM D150
50 Hz	1.7E-3		ASTM D150
60 Hz	1.7E-3		ASTM D150
1 MHz	1.6E-3		ASTM D150
Comparative Tracking Index (CTI)	PLC 2		UL 746
High Amp Arc Ignition (HAI)	PLC 2		UL 746
High Voltage Arc Tracking Rate (HVTR)	PLC 4		UL 746
Hot-wire Ignition (HWI)	PLC 1		UL 746
Flammability	Nominal Value	Unit	Test Method
Flame Rating (1.47 mm)	V-1		UL 94
Oxygen Index	34	%	ASTM D2863
Injection	Nominal Value	Unit	
Drying Temperature	104 - 110	°C	
Drying Time	3.0 - 4.0	hr	
Drying Time, Maximum	8.0	hr	
Suggested Max Moisture	0.020	%	
Suggested Shot Size	30 - 70	%	
Rear Temperature	249 - 299	°C	
Middle Temperature	260 - 304	°C	
Front Temperature	271 - 310	°C	
Nozzle Temperature	282 - 310	°C	
Processing (Melt) Temp	282 - 310	°C	
Mold Temperature	76.7 - 104	°C	
Back Pressure	0.345 - 0.689	MPa	
Screw Speed	20 - 100	rpm	
NOTE			
1.	Type 1, 5.0 mm/min		
2.	Type 1, 5.0 mm/min		
3.	1.3 mm/min		
4.	1.3 mm/min		

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