

NORYL™ SE1GFN3 resin

Polyphenylene Ether + PS

SABIC Innovative Plastics

Message:

GR 30%. 275F (135C) DTUL. UL94 V-1 rated. Halogen free flame retardant. For electrical construction market.

General Information			
UL YellowCard	E45587-237105	E207780-228591	
Filler / Reinforcement	Glass fiber reinforced material, 30% filler by weight		
Additive	Flame retardancy		
Features	Halogen-free		
	Flame retardancy		
Uses	Electrical/Electronic Applications		
	Architectural application field		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.31	g/cm³	ASTM D792
Molding Shrinkage - Flow (3.20 mm)	0.10 - 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 Strength ¹ (Break)	121	MPa	ASTM D638
Tensile Elongation ² (Break)	5.0	%	ASTM D638
Flexural Modulus ³ (100 mm Span)	7790	MPa	ASTM D790
Flexural Strength ⁴ (Yield, 100 mm Span)	172	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact			ASTM D256
-40°C	96	J/m	ASTM D256
23°C	120	J/m	ASTM D256
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, unannealed, 6.40mm	141	°C	ASTM D648
1.8 MPa, unannealed, 6.40mm	135	°C	ASTM D648
CLTE - Flow (-40 to 95°C)	2.5E-5	cm/cm/°C	ASTM E831
RTI Elec	110	°C	UL 746
RTI Imp	105	°C	UL 746
RTI	110	°C	UL 746

Electrical	Nominal Value	Unit	Test Method
Dielectric Strength (3.20 mm, in Oil)	21	kV/mm	ASTM D149
Dielectric Constant			ASTM D150
50 Hz	3.15		ASTM D150
60 Hz	3.15		ASTM D150
Dissipation Factor			ASTM D150
50 Hz	2.0E-3		ASTM D150
60 Hz	2.0E-3		ASTM D150
Arc Resistance ⁵	PLC 6		ASTM D495
Comparative Tracking Index (CTI)	PLC 3		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 0		UL 746
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
1.47 mm	V-1		UL 94
5.99 mm	V-0		UL 94
Oxygen Index	36	%	ASTM D2863
Injection	Nominal Value	Unit	
Drying Temperature	110 - 121	°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	266 - 316	°C	
Middle Temperature	277 - 321	°C	
Front Temperature	288 - 327	°C	
Nozzle Temperature	299 - 327	°C	
Processing (Melt) Temp	299 - 327	°C	
Mold Temperature	82.2 - 110	°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.	2.6 mm/min		
4.	2.6 mm/min		
5.	Tungsten electrode		

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