

NORYL™ SE100X resin

Polyphenylene Ether + PS

SABIC Innovative Plastics

Message:

PPE+PS blend. Unfilled. Non-brominated, non-chlorinated FR system. UL94 V0/V1 rated. RTI Elec/Imp/Str 95/80/95. Good flow. Suitable for E/E market indoor/outdoor applications.

General Information	
UL YellowCard	E121562-221213
Additive	Flame Retardant
Features	Bromine Free
	Chlorine Free
	Flame Retardant
	Good Flow
Uses	Electrical/Electronic Applications
	Outdoor Applications
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)
	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	1.10	g/cm ³	ASTM D792
Molding Shrinkage			Internal Method
Flow : 3.20 mm	0.50 to 0.70	%	
Across Flow ¹	0.50 to 0.70	%	
Outdoor Suitability	f1		UL 746C
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength ²			ASTM D638
Yield	57.9	MPa	
Break	46.9	MPa	
Tensile Elongation ³			ASTM D638
Yield	6.5	%	

Break	25	%	
Flexural Modulus ⁴ (100 mm Span)	2310	MPa	ASTM D790
Flexural Strength ⁵ (Yield, 100 mm Span)	82.7	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact			ASTM D256
-30°C	91	J/m	
23°C	260	J/m	
Instrumented Dart Impact			ASTM D3763
-30°C, Energy at Peak Load	16.3	J	
23°C, Energy at Peak Load	40.7	J	
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, Unannealed, 6.40 mm	102	°C	
1.8 MPa, Unannealed, 6.40 mm	92.8	°C	
RTI Elec	95.0	°C	UL 746
RTI Imp	80.0	°C	UL 746
RTI Str	95.0	°C	UL 746
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	> 1.0E+15	ohms	ASTM D257
Volume Resistivity	3.1E+16	ohms·cm	ASTM D257
Dielectric Strength (3.20 mm, in Oil)	18	kV/mm	ASTM D149
Dielectric Constant			ASTM D150
50 Hz	2.66		
60 Hz	2.66		
1 MHz	2.57		
Dissipation Factor			ASTM D150
50 Hz	6.0E-3		
60 Hz	6.0E-3		
1 MHz	2.6E-3		
Arc Resistance ⁶	PLC 7		ASTM D495
Comparative Tracking Index (CTI)	PLC 1		UL 746
High Voltage Arc Tracking Rate (HVTR)	PLC 4		UL 746
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
1.47 mm	V-1		
5.99 mm	V-0		
Oxygen Index	33	%	ASTM D2863
Radiant Panel Listing (UL)	YES		
Injection	Nominal Value	Unit	
Drying Temperature	76.7 to 82.2	°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	216 to 266	°C
Middle Temperature	227 to 271	°C
Front Temperature	238 to 277	°C
Nozzle Temperature	249 to 277	°C
Processing (Melt) Temp	249 to 277	°C
Mold Temperature	54.4 to 76.7	°C
Back Pressure	0.345 to 0.689	MPa
Screw Speed	20 to 100	rpm
Vent Depth	0.038 to 0.051	mm

NOTE

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|----|--------------------|
| 1. | Tensile Bar |
| 2. | Type I, 50 mm/min |
| 3. | Type I, 50 mm/min |
| 4. | 2.6 mm/min |
| 5. | 2.6 mm/min |
| 6. | Tungsten Electrode |

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