NORYL™ Resin SE1GFN2 - Asia

(PPE+PS)-GF20 — Saudi Basic Industries Corporation (SABIC)

Product Texts

NORYL™ SE1GFN2 resin is a 20% glass reinforced blend of polyphenylene ether (PPE) + high impact polystyrene (HIPS). This injection moldable grade contains non-brominated, non-chlorinated flame retardant and carries a UL94 flame rating of 5VA at 2mm and V1 at 1.5mm along with UL746C Outdoor Suitability rating of F1 and RTI of 110C. NORYL SE1GFN2 exhibits high heat resistance, good dielectric strength, dimensional stability, hydrolytic stability, and very low moisture absorption. This material is an excellent candidate for a variety of applications such as solar frames, unattended power supply (UPS) inverter/charger, indoor and outdoor electrical enclosures / housings / connectors, and wall plates / sockets / switches.

UL Yellow Card Link E45587-100036373

Processing/Physical Characteristics	Value	Unit	Test Standard
ISO Data			
Melt volume-flow rate, MVR	**3**	cm³/10min	ISO 1133
Temperature	**280**	°C	-
Load	**5**	kg	-
ASTM Data			
Melt Flow Index, MFI	**3.5**	g/10min	ASTM D 1238
Temperature	**280**	°C	-
Load	**5**	kg	-

Mechanical properties	Value	Unit	Test Standard
ISO Data			
Tensile Modulus	**6400**	MPa	ISO 527
Stress at break	**100**	MPa	ISO 527
Strain at break	**2.5**	%	ISO 527
Flexural modulus	**5600**	MPa	ISO 178
Izod impact strength, +23°C, 4mm	**28**	kJ/m²	ISO 180/1U
Izod impact strength, -30°C, 4mm	**27**	kJ/m²	ISO 180/1U
Izod notched impact strength, +23°C, 4mm	**9**	kJ/m²	ISO 180/1A
Izod notched impact strength, -30°C, 4mm	**8**	kJ/m²	ISO 180/1A
ASTM Data			
Tensile Modulus	**7100**	MPa	ASTM D 638
Tensile Strength at Break	**120**	MPa	ASTM D 638
Elongation at Break	**3**	%	ASTM D 638
Flexural Modulus	**5500**	MPa	ASTM D 790
Izod Impact notched, 1/8 in	**100**	J/m	ASTM D 256
Izod Impact notched, Low-Temperature	**90**	J/m	ASTM D 256
Temperature	**-30**	°C	-
Izod Impact unnotched, 1/8 in	**520**	J/m	ASTM D 256

Thermal properties	Value	Unit	Test Standard
ISO Data			
Temp. of deflection under load, 1.80 MPa	**133**	°C	ISO 75-1/-2
Vicat softening temperature, B	**142**	°C	ISO 306
Vicat softening temperature, 120°C/h 50N	**144**	°C	ISO 306
Burning behav. at thickness h	**V-1**	class	IEC 60695-11-10
Thickness tested	**0.4**	mm	-
Burning behav. 5V at thickness h	**5VA**	class	IEC 60695-11-20
Thickness tested	**2.5**	mm	-
ASTM Data			
DTUL @ 66 psi	**142**	°C	ASTM D 648
DTUL @ 264 psi	**134**	°C	ASTM D 648
Vicat Temperature	**142**	°C	ASTM D 1525

Electrical properties	Value	Unit	Test Standard
ISO Data			
Relative permittivity, 1MHz	**2.9**	-	IEC 62631-2-1
Dissipation factor, 1MHz	**34**	E-4	IEC 62631-2-1
Volume resistivity	**>1E13**	Ohm*m	IEC 62631-3-1

Surface resistivity	**>1E15**	Ohm	IEC 62631-3-2
ASTM Data			
Dielectric Strength, Short Time	**26.2**	kV/mm	ASTM D 149
Dissipation Factor, 1 MHz	**0.0034**	-	ASTM D 150
Dielectric Constant, 1 MHz	**2.93**	-	ASTM D 150
Surface Resistivity	**>1E15**	Ohm	ASTM D 257
Volume Resistivity	**>1E15**	Ohm*cm	ASTM D 257

Other properties	**Value**	**Unit**	**Test Standard**
Density	**1230**	kg/m³	ASTM D 792

Processing Recommendation Injection Molding	**Value**	**Unit**	**Test Standard**
Pre-drying - Temperature	**110 - 120**	°C	-
Pre-drying - Time	**3 - 4**	h	-
Processing humidity	**≤0.02**	%	-
Melt temperature	**300 - 325**	°C	-
Mold temperature	**80 - 110**	°C	-
Zone 1	**265 - 315**	°C	-
Zone 2	**275 - 320**	°C	-
Zone 3	**290 - 325**	°C	-
Screw speed	**20 - 100**	rpm	-
Back pressure	**0.3 - 0.7**	MPa	-

Characteristics

Processing
Injection Molding

Additives
Flame retarding agent

Special Characteristics
Flame retardant

Chemical Resistance
Hydrolytically Stable

Applications
Automotive

Regional Availability
Asia Pacific