

Product Texts

NORYL™ SE1GFN1 resin is a 10% 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 V1 at 1.5mm along with UL746C Outdoor Suitability rating of F1 and RTI 110C. NORYL SE1GFN1 exhibits high heat resistance, good dielectric strength, dimensional stability, hydrolytic stability, and very low moisture absorption. This material is an excellent candidate for appliance internals, indoor and outdoor electrical enclosures / housings / connectors.

UL Yellow Card Link [E45329-306538](https://www.ul.com/yellow-card/E45329-306538)

Processing/Physical Characteristics	Value	Unit	Test Standard
ISO Data			
Melt volume-flow rate, MVR	15	cm ³ /10min	ISO 1133
Temperature	280	°C	-
Load	10	kg	-

Mechanical properties	Value	Unit	Test Standard
ISO Data			
Tensile Modulus	4000	MPa	ISO 527
Yield stress	75	MPa	ISO 527
Yield strain	2.5	%	ISO 527
Stress at break	70	MPa	ISO 527
Strain at break	3	%	ISO 527
Flexural modulus	3000	MPa	ISO 178
Charpy impact strength, +23°C	30	kJ/m ²	ISO 179/1eU
Charpy impact strength, -30°C, 3mm	30	kJ/m ²	ISO 179/1eU
Charpy notched impact strength, +23°C, 3mm	6	kJ/m ²	ISO 179/1eA
Charpy notched impact strength, -30°C, 3mm	5	kJ/m ²	ISO 179/1eA
Izod impact strength, +23°C, 4mm	25	kJ/m ²	ISO 180/1U
Izod impact strength, -30°C, 4mm	25	kJ/m ²	ISO 180/1U
Izod notched impact strength, +23°C, 4mm	7	kJ/m ²	ISO 180/1A
Izod notched impact strength, -30°C, 4mm	6	kJ/m ²	ISO 180/1A
Ball indentation hardness	100	MPa	ISO 2039-1

Thermal properties	Value	Unit	Test Standard
ISO Data			
Vicat softening temperature, A	145	°C	ISO 306
Vicat softening temperature, B	140	°C	ISO 306
Vicat softening temperature, 120°C/h 50N	145	°C	ISO 306
Burning behav. at thickness h	V-1	class	IEC 60695-11-10
Thickness tested	0.8	mm	-
Burning behav. 5V at thickness h	5VA	class	IEC 60695-11-20
Thickness tested	2.5	mm	-
Thermal Conductivity	0.27	W/(m K)	DIN 52616
Glow Wire Flammability Index (GWFI)	960	°C	IEC 60695-2-12
Glow Wire Flammability Index (GWFI)	960	°C	IEC 60695-2-12
Glow Wire Flammability Index (GWFI)	960	°C	IEC 60695-2-12
Glow Wire Ignition Temperature (GWIT)	775	°C	IEC 60695-2-13
GWIT - thickness tested (1)	1	mm	-
Glow Wire Ignition Temperature (GWIT)	800	°C	IEC 60695-2-13
GWIT - thickness tested (2)	2	mm	-
Glow Wire Ignition Temperature (GWIT)	800	°C	IEC 60695-2-13
GWIT - thickness tested (3)	3	mm	-

Electrical properties	Value	Unit	Test Standard
ISO Data			
Relative permittivity, 1MHz	2.7	-	IEC 62631-2-1
Dissipation factor, 1MHz	30	E-4	IEC 62631-2-1
Volume resistivity	1E11	Ohm*m	IEC 62631-3-1
Surface resistivity	>1E15	Ohm	IEC 62631-3-2

NORYL™ Resin SE1GFN1 - Europe

(PPE+PS)-GF10

Saudi Basic Industries Corporation (SABIC)

Electric strength	33	kV/mm	IEC 60243-1
Comparative tracking index	250	-	IEC 60112

Other properties	Value	Unit	Test Standard
Water absorption	0.22	%	Sim. to ISO 62
Humidity absorption	0.07	%	Sim. to ISO 62
Density	1170	kg/m ³	ISO 1183
Density	1160	kg/m ³	ASTM D 792

Processing Recommendation Injection Molding	Value	Unit	Test Standard
Pre-drying - Temperature	100 - 120	°C	-
Pre-drying - Time	2 - 3	h	-
Melt temperature	280 - 300	°C	-
Mold temperature	80 - 120	°C	-
Feed temperature	60 - 80	°C	-
Zone 1	240 - 260	°C	-
Zone 2	260 - 280	°C	-
Zone 3	280 - 300	°C	-

Characteristics**Processing**

Injection Molding

Chemical Resistance

Hydrolytically Stable

Additives

Flame retarding agent

Applications

Automotive

Special Characteristics

Flame retardant

Regional Availability

Europe