

Product Texts

NORYL™ GFN1 resin is a 10% glass reinforced blend of polyphenylene ether (PPE) + high impact polystyrene (HIPS). This general-purpose injection moldable grade exhibits very low moisture absorption, high strength, hydrolytic stability, Low warpage, low specific gravity, and dimensional stability. NORYL GFN1 carries a UL746C outdoor suitability rating of F1 and is an excellent candidate for a variety of indoor and outdoor applications including construction, electrical components + displays, lawn and garden equipment. *See NORYL GFN1F resin for FDA food compliant / NSF version.

UL Yellow Card Link [E45587-237019](https://www.ul.com/yellow-card/E45587-237019)

Processing/Physical Characteristics	Value	Unit	Test Standard
ISO Data			
Melt volume-flow rate, MVR	4	cm ³ /10min	ISO 1133
Temperature	280	°C	-
Load	5	kg	-
ASTM Data			
Melt Flow Index, MFI	4	g/10min	ASTM D 1238
Temperature	280	°C	-
Load	5	kg	-

Mechanical properties	Value	Unit	Test Standard
ISO Data			
Tensile Modulus	3900	MPa	ISO 527
Yield stress	60	MPa	ISO 527
Yield strain	4.5	%	ISO 527
Stress at break	60	MPa	ISO 527
Strain at break	4.5	%	ISO 527
Flexural modulus	3700	MPa	ISO 178
Charpy notched impact strength, +23°C	8	kJ/m ²	ISO 179/1eA
Izod impact strength, +23°C, 4mm	30	kJ/m ²	ISO 180/1U
Izod impact strength, -30°C, 4mm	30	kJ/m ²	ISO 180/1U
Izod notched impact strength, +23°C, 4mm	10	kJ/m ²	ISO 180/1A
Izod notched impact strength, -30°C, 4mm	9	kJ/m ²	ISO 180/1A
ASTM Data			
Tensile Modulus	4400	MPa	ASTM D 638
Tensile Strength at Yield	75	MPa	ASTM D 638
Tensile Strength at Break	75	MPa	ASTM D 638
Elongation at Yield	3.5	%	ASTM D 638
Elongation at Break	3.5	%	ASTM D 638
Flexural Modulus	3400	MPa	ASTM D 790
Izod Impact notched, 1/8 in	84	J/m	ASTM D 256
Izod Impact notched, Low-Temperature	80	J/m	ASTM D 256
Temperature	-30	°C	-
Izod Impact unnotched, 1/8 in	410	J/m	ASTM D 256

Thermal properties	Value	Unit	Test Standard
ISO Data			
Temp. of deflection under load, 1.80 MPa	129	°C	ISO 75-1/-2
Vicat softening temperature, B	138	°C	ISO 306
Vicat softening temperature, 120°C/h 50N	140	°C	ISO 306
Burning behav. at 1.5 mm nom. thickn.	HB	class	IEC 60695-11-10
Thickness tested	1.5	mm	-
ASTM Data			
DTUL @ 66 psi	135	°C	ASTM D 648
DTUL @ 264 psi	130	°C	ASTM D 648
Vicat Temperature	138	°C	ASTM D 1525

Other properties	Value	Unit	Test Standard
Water absorption	0.12	%	Sim. to ISO 62
Humidity absorption	0.04	%	Sim. to ISO 62

NORYL™ Resin GFN1 - Asia

(PPE+PS)-GF10

Saudi Basic Industries Corporation (SABIC)

Density	1170	kg/m ³	ISO 1183
Density	1170	kg/m ³	ASTM D 792

Processing Recommendation Injection Molding	Value	Unit	Test Standard
Pre-drying - Temperature	105 - 110	°C	-
Pre-drying - Time	3 - 4	h	-
Processing humidity	≤0.02	%	-
Melt temperature	295 - 315	°C	-
Mold temperature	75 - 105	°C	-
Zone 1	260 - 305	°C	-
Zone 2	270 - 310	°C	-
Zone 3	280 - 315	°C	-
Screw speed	20 - 100	rpm	-
Back pressure	0.3 - 0.7	MPa	-

Characteristics**Processing**

Injection Molding

Certifications

Food contact, Food approval FDA 21 CFR

Chemical Resistance

Hydrolytically Stable

Regional Availability

Asia Pacific