

Product Texts

NORYL™ GFN1F resin is a 10% glass reinforced blend of polyphenylene ether (PPE) + high impact polystyrene (HIPS). This injection moldable grade exhibits very low moisture absorption, high strength, hydrolytic stability, Low warpage, low specific gravity, and dimensional stability. NORYL GFN1F carries a UL746C outdoor suitability rating of F1 along with FDA food contact compliance and NSF 61 listings in several colors. The properties of this material makes it an excellent candidate for water management applications such as water filter and meter components, pump housings / impellers, shower + faucet, and valves.*See NORYL GFN1 resin for NON FDA / NSF version.

UL Yellow Card Link [F121562-221234](https://www.ul.com/yellow-card/F121562-221234)

Processing/Physical Characteristics	Value	Unit	Test Standard
ISO Data			
Melt volume-flow rate, MVR	16	cm ³ /10min	ISO 1133
Temperature	300	°C	-
Load	5	kg	-
ASTM Data			
Melt Flow Index, MFI	16.6	g/10min	ASTM D 1238
Temperature	300	°C	-
Load	5	kg	-

Mechanical properties	Value	Unit	Test Standard
ISO Data			
Tensile Modulus	4400	MPa	ISO 527
Stress at break	64	MPa	ISO 527
Strain at break	3	%	ISO 527
Flexural modulus	4160	MPa	ISO 178
Flexural strength	122	MPa	ISO 178
Charpy impact strength, +23°C	34	kJ/m ²	ISO 179/1eU
Charpy impact strength, -30°C	33	kJ/m ²	ISO 179/1eU
Izod impact strength, +23°C, 4mm	27	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	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	4350	MPa	ASTM D 638
Tensile Strength at Break	63	MPa	ASTM D 638
Elongation at Break	3	%	ASTM D 638
Flexural Modulus	3840	MPa	ASTM D 790
Rockwell Hardness	L104	-	ASTM D 785
Izod Impact notched, 1/8 in	118	J/m	ASTM D 256
Izod Impact notched, Low-Temperature	103	J/m	ASTM D 256
Temperature	-30	°C	-
Izod Impact unnotched, 1/8 in	449	J/m	ASTM D 256

Thermal properties	Value	Unit	Test Standard
ISO Data			
Vicat softening temperature, B	131	°C	ISO 306
Vicat softening temperature, 120°C/h 50N	134	°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	131	°C	ASTM D 648
DTUL @ 264 psi	122	°C	ASTM D 648

Electrical properties	Value	Unit	Test Standard
ASTM Data			
Dissipation Factor, 1 MHz	0.0014	-	ASTM D 150
Dielectric Constant, 1 MHz	2.9	-	ASTM D 150

NORYL™ Resin GFN1F - Americas

(PPE+PS)-GF10

Saudi Basic Industries Corporation (SABIC)

Other properties	Value	Unit	Test Standard
Density	1130	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

North America