NORYL™ Resin GFN3F - Americas

(PPE+PS)-GF30 — Saudi Basic Industries Corporation (SABIC)

Product Texts

NORYL™ GFN3F resin is a 30% 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 GFN3F carries a UL746C outdoor suitability rating of F2 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 GFN3 resin for NON FDA / NSF version.

UL Yellow Card Link E121562-221162

Processing/Physical Characteristics	Value	Unit	Test Standard
ISO Data			
Melt volume-flow rate, MVR	**7**	cm³/10min	ISO 1133
Temperature	**300**	°C	-
Load	**5**	kg	-
ASTM Data			
Melt Flow Index, MFI	**8.7**	g/10min	ASTM D 1238
Temperature	**300**	°C	-
Load	**5**	kg	-

Mechanical properties	Value	Unit	Test Standard
ISO Data			
Tensile Modulus	**8500**	MPa	ISO 527
Stress at break	**117**	MPa	ISO 527
Strain at break	**1.8**	%	ISO 527
Flexural modulus	**8710**	MPa	ISO 178
Flexural strength	**183**	MPa	ISO 178
Charpy impact strength, +23°C	**39**	kJ/m²	ISO 179/1eU
Charpy impact strength, -30°C	**47**	kJ/m²	ISO 179/1eU
Izod impact strength, +23°C, 4mm	**31**	kJ/m²	ISO 180/1U
Izod impact strength, -30°C, 4mm	**35**	kJ/m²	ISO 180/1U
Izod notched impact strength, +23°C, 4mm	**12**	kJ/m²	ISO 180/1A
Izod notched impact strength, -30°C, 4mm	**11**	kJ/m²	ISO 180/1A
ASTM Data			
Tensile Modulus	**9150**	MPa	ASTM D 638
Tensile Strength at Break	**116**	MPa	ASTM D 638
Elongation at Break	**2**	%	ASTM D 638
Flexural Modulus	**8000**	MPa	ASTM D 790
Rockwell Hardness	**L108**	-	ASTM D 785
Izod Impact notched, 1/8 in	**117**	J/m	ASTM D 256
Izod Impact notched, Low-Temperature	**124**	J/m	ASTM D 256
Temperature	**-30**	°C	-
Izod Impact unnotched, 1/8 in	**588**	J/m	ASTM D 256

Thermal properties	Value	Unit	Test Standard
ISO Data			
Temp. of deflection under load, 1.80 MPa	**137**	°C	ISO 75-1/-2
Temp. of deflection under load, 0.45 MPa	**143**	°C	ISO 75-1/-2
Vicat softening temperature, B	**143**	°C	ISO 306
Vicat softening temperature, 120°C/h 50N	**147**	°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	**142**	°C	ASTM D 648
DTUL @ 264 psi	**137**	°C	ASTM D 648

Electrical properties	Value	Unit	Test Standard
ASTM Data			
Dielectric Strength, Short Time	**21.7**	kV/mm	ASTM D 149

Dissipation Factor, 60 Hz	**0.0009**	-	ASTM D 150
Dielectric Constant, 60 Hz	**2.93**	-	ASTM D 150

Other properties	**Value**	**Unit**	**Test Standard**
Density	**1290**	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

Certifications
Food contact, Food approval FDA 21 CFR

Chemical Resistance
Hydrolytically Stable

Regional Availability
North America