

## REGION AMERICAS

NORYL GFN3 resin is a 30% glass fiber reinforced blend of polyphenylene ether (PPE) + polystyrene (PS). This general-purpose injection moldable grade exhibits very low moisture absorption, high strength, hydrolytic stability, Low warpage, low specific gravity, and dimensional stability. NORYL GFN3 carries a UL746C outdoor suitability rating of F2 and is an excellent candidate for a variety of indoor and outdoor applications including construction, electrical components + displays, lawn and garden equipment. \*See NORYL GFN3F resin for FDA food compliant / NSF version.

INDUSTRY	SUB INDUSTRY
Building and Construction	Building Component
Consumer	Commercial Appliance
Electrical and Electronics	Electronic Components, Mobile Phone - Computer - Tablets

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL <sup>(1)</sup>			
Tensile Stress, brk, Type I, 5 mm/min	116	MPa	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	2	%	ASTM D638
Tensile Modulus, 5 mm/min	9150	MPa	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	180	MPa	ASTM D790
Flexural Stress, yld, 2.6 mm/min, 100 mm span	162	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	8000	MPa	ASTM D790
Flexural Modulus, 2.6 mm/min, 100 mm span	7170	MPa	ASTM D790
Hardness, Rockwell L	108	-	ASTM D785
Tensile Stress, break	117	MPa	ISO 527
Tensile Strain, break	1.8	%	ISO 527
Tensile Modulus, 1 mm/min	8740	MPa	ISO 527
Flexural Stress	183	MPa	ISO 178
Flexural Modulus	8710	MPa	ISO 178
IMPACT <sup>(1)</sup>			
Izod Impact, unnotched, 23°C	588	J/m	ASTM D4812
Izod Impact, notched, 23°C	117	J/m	ASTM D256
Izod Impact, notched, -30°C	124	J/m	ASTM D256
Izod Impact, unnotched 80*10*4 +23°C	31	kJ/m <sup>2</sup>	ISO 180/1U
Izod Impact, unnotched 80*10*4 -30°C	35	kJ/m <sup>2</sup>	ISO 180/1U



PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Drying Time (Cumulative)	8	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature Nozzle	300 – 325	°C	
Temperature Front - Zone 3	300 – 325	°C	
Temperature Middle - Zone	290 – 325	°C	
2 Temperature Rear - Zone 1	275 – 320	°C	
Temperature Mold	265 – 315	°C	
Temperature Back Pressure	80 – 110	°C	
Screw Speed Shot to	0.3 – 0.7	MPa	
	20 – 100	rpm	
Cylinder Size	30 – 70	%	

- (1) The information stated on Technical Datasheets should be used as indicative only for material selection purposes and not be utilized as specification or used for part or tool design.
- (2) UL Ratings shown on the technical datasheet might not cover the full range of thicknesses, colors and regions. For details, please see the UL Yellow Card.
- (3) Measurements made from laboratory test coupon. Actual shrinkage may vary outside of range due to differences in processing conditions, equipment, part geometry and tool design. It is recommended that mold shrinkage studies be performed with surrogate or legacy tooling prior to cutting tools for new molded article.
- (4) Injection Molding parameters are only mentioned as general guidelines. These may not apply or may need adjustment in specific situations such as low shot sizes, large part molding, thin wall molding and gas-assist molding.

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