

NORYL™ RESIN GFN2L

REGION ASIA

DESCRIPTION

NORYL GFN2L resin is a 20% glass fiber reinforced blend of polyphenylene ether (PPE) + polystyrene (PS). This injection moldable grade exhibits very low moisture absorption, high strength, hydrolytic stability, Low warpage, low specific gravity, and dimensional stability.

GENERAL INFORMATION

Features

Flame Retardant, Hydrolytic Stability, Low Warpage, Amorphous, Low Shrinkage, Low Moisture Absorption, Low Specific Gravity, Non Cl/Br flame retardant, Non halogenated flame retardant, Dimensional stability, High stiffness/Strength, No PFAS intentionally added

Fillers

Glass Fiber

Polymer Types

Polyphenylene Ether + PS (PPE+PS)

Processing Techniques

Injection Molding

INDUSTRY

Building and Construction

Electrical and Electronics

Industrial

SUB INDUSTRY

Building Component

Electronic Components, Mobile Phone - Computer - Tablets

Industrial General

TYPICAL PROPERTY VALUES

Revision 20231109

PROPERTIES

TYPICAL VALUES

UNITS

TEST METHODS

MECHANICAL ⁽¹⁾

Tensile Stress, yield

98

MPa

SABIC - Japan Method

Tensile Strain, break

8 – 10

%

SABIC - Japan Method

Flexural Stress

142

MPa

ASTM D790

Flexural Modulus

5570

MPa

ASTM D790

Hardness, Rockwell R

124

-

ASTM D785

IMPACT ⁽¹⁾

Izod Impact, notched, 23°C

107

J/m

ASTM D256

THERMAL ⁽¹⁾

HDT, 1.82 MPa, 6.4 mm, unannealed

139

°C

ASTM D648

CTE, -30°C to 30°C

0.000028 – 0.000045

1 / °C

TMA

Relative Temp Index, Elec ⁽²⁾

65

°C

UL 746B

Relative Temp Index, Mech w/impact ⁽²⁾

65

°C

UL 746B

Relative Temp Index, Mech w/o impact ⁽²⁾

65

°C

UL 746B

PHYSICAL ⁽¹⁾

Specific Gravity

1.23

-

ASTM D792

Water Absorption, (23°C/24hrs)

0.06

%

ASTM D570

Mold Shrinkage, flow, 3.2 mm ⁽³⁾

0.2 – 0.4

%

SABIC method

Melt Flow Rate, 300°C/5.0 kgf

11.1

g/10 min

ASTM D1238

ELECTRICAL ⁽¹⁾

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Surface Resistivity	1.E+16	Ω	ASTM D257
Relative Permittivity, 50/60 Hz	2.86	-	ASTM D150
Comparative Tracking Index (UL) {PLC}	3	PLC Code	UL 746A
High Amp Arc Ignition (HAI), PLC 0	≥1.5	mm	UL 746A
Hot-Wire Ignition (HWI), PLC 0	≥3	mm	UL 746A
Hot-Wire Ignition (HWI), PLC 3	≥1.5	mm	UL 746A
High Voltage Arc Track Rate {PLC}	4	PLC Code	UL 746A
Arc Resistance, Tungsten {PLC}	6	PLC Code	ASTM D495
FLAME CHARACTERISTICS ⁽²⁾			
UL Yellow Card Link	E45587-237021	-	-
UL Recognized, 94HB Flame Class Rating	≥1.5	mm	UL 94
INJECTION MOLDING ⁽⁴⁾			
Drying Temperature	110 – 120	°C	
Drying Time	3 – 4	Hrs	
Drying Time (Cumulative)	8	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	300 – 325	°C	
Nozzle Temperature	300 – 325	°C	
Front - Zone 3 Temperature	290 – 325	°C	
Middle - Zone 2 Temperature	275 – 320	°C	
Rear - Zone 1 Temperature	265 – 315	°C	
Mold Temperature	80 – 110	°C	
Back Pressure	0.3 – 0.7	MPa	
Screw Speed	20 – 100	rpm	

(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 and colors. 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.

ADDITIONAL PRODUCT NOTES

No PFAS intentionally added: The grade listed in this document does not contain PFAS intentionally added during Seller's manufacturing process and is not expected to contain unintentional PFAS impurities. Each user is responsible for evaluating the presence of unintentional PFAS impurities.

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