

NORYL GTX™ RESIN GTX830

REGION EUROPE

DESCRIPTION

NORYL GTX830 resin is a 30% glass fiber reinforced alloy of Polyphenylene Ether (PPE) + Polyamide (PA). This injection moldable grade has high stiffness (flexural modulus 8200 MPa), excellent chemical resistance, and high heat resistance. NORYL GTX830 resin is an excellent candidate for a wide variety of applications including automotive under the bonnet applications and water meter housings.

GENERAL INFORMATION

Features

Chemical Resistance, Hydrolytic Stability, Low Warpage, Low Moisture Absorption, Low Specific Gravity, Potable water safe, Dimensional stability, High stiffness/Strength, High temperature resistance, No PFAS intentionally added

Fillers

Glass Fiber

Polymer Types

Polyphenylene Ether + PA (PPE+Nylon)

Processing Techniques

Injection Molding

INDUSTRY

Automotive

Building and Construction

Electrical and Electronics

Industrial

SUB INDUSTRY

Automotive Under the Hood

Water Management

Electronic Components

Electrical

TYPICAL PROPERTY VALUES

Revision 20230607

PROPERTIES

TYPICAL VALUES

UNITS

TEST METHODS

MECHANICAL ⁽¹⁾

Tensile Stress, break, 5 mm/min

110

MPa

ISO 527

Tensile Strain, break, 5 mm/min

2.5

%

ISO 527

Tensile Modulus, 1 mm/min

7300

MPa

ISO 527

Flexural Stress, break, 2 mm/min

170

MPa

ISO 178

Flexural Modulus, 2 mm/min

6200

MPa

ISO 178

Ball Indentation Hardness, H358/30

110

MPa

ISO 2039-1

IMPACT ⁽¹⁾

Izod Impact, unnotched 80°10°4 +23°C

45

kJ/m²

ISO 180/1U

Izod Impact, unnotched 80°10°4 -30°C

45

kJ/m²

ISO 180/1U

Charpy Impact, notched, 23°C

7

kJ/m²

ISO 179/2C

Charpy Impact, notched, -20°C

7

kJ/m²

ISO 179/2C

Charpy 23°C, Unnotch Edgew 80°10°4 sp=62mm

60

kJ/m²

ISO 179/1eU

Charpy -30°C, Unnotch Edgew 80°10°4 sp=62mm

40

kJ/m²

ISO 179/1eU

THERMAL ⁽¹⁾

Thermal Conductivity

0.26

W/m·°C

ISO 8302

CTE, 23°C to 60°C, flow

2.E-05

1/°C

ISO 11359-2

CTE, 23°C to 60°C, xflow

8.E-05

1/°C

ISO 11359-2

Ball Pressure Test, 125°C +/- 2°C

PASSES

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IEC 60695-10-2

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Vicat Softening Temp, Rate B/50	220	°C	ISO 306
Vicat Softening Temp, Rate B/120	220	°C	ISO 306
Relative Temp Index, Elec ⁽²⁾	120	°C	UL 746B
Relative Temp Index, Mech w/impact ⁽²⁾	90	°C	UL 746B
Relative Temp Index, Mech w/o impact ⁽²⁾	125	°C	UL 746B
PHYSICAL ⁽¹⁾			
Mold Shrinkage, flow, 3.2 mm ⁽³⁾	0.2 – 0.3	%	SABIC method
Mold Shrinkage, xflow, 3.2 mm ⁽³⁾	0.8 – 1	%	SABIC method
Density	1.32	g/cm ³	ISO 1183
Water Absorption, (23°C/saturated)	3.1	%	ISO 62-1
Moisture Absorption (23°C / 50% RH)	1.09	%	ISO 62
Melt Volume Rate, MVR at 280°C/5.0 kg	7	cm ³ /10 min	ISO 1133
FLAME CHARACTERISTICS ⁽²⁾			
UL Yellow Card Link	F45329-236571	-	-
UL Recognized, 94HB Flame Class Rating	≥1.5	mm	UL 94
Oxygen Index (LOI)	29	%	ISO 4589
INJECTION MOLDING ⁽⁴⁾			
Drying Temperature	100 – 110	°C	
Drying Time	2 – 3	Hrs	
Maximum Moisture Content	0.07	%	
Melt Temperature	280 – 300	°C	
Nozzle Temperature	270 – 290	°C	
Front - Zone 3 Temperature	280 – 300	°C	
Middle - Zone 2 Temperature	270 – 290	°C	
Rear - Zone 1 Temperature	260 – 280	°C	
Hopper Temperature	60 – 80	°C	
Mold Temperature	80 – 100	°C	

(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.

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.

MORE INFORMATION

For curve data and CAE cards, please visit and register at <https://materialfinder.sabic-specialties.com>



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