

# NORYL GTX<sup>TM</sup> RESIN GTX830

REGION AMERICAS

## DESCRIPTION

NORYL GTX<sup>TM</sup> 830 resin is a 30% glass 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 GTX GTX830 resin is an excellent candidate for a wide variety of applications including automotive under the bonnet applications and water meter housings.

## TYPICAL PROPERTY VALUES

Revision 20200327

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
<b>MECHANICAL</b>			
Nominal Stress, yld, Type I, 5 mm/min	151	MPa	ASTM D 638
Nominal Stress, brk, Type I, 5 mm/min	158	MPa	ASTM D 638
Nominal Strain, brk, 5 mm/min	7	%	ASTM D 638
Flexural Stress, yld, 2.6 mm/min, 100 mm span	248	MPa	ASTM D 790
Flexural Modulus, 2.6 mm/min, 100 mm span	8580	MPa	ASTM D 790
Hardness, Rockwell R	120	-	ASTM D 785
<b>IMPACT</b>			
Izod Impact, notched, 23°C	106	J/m	ASTM D 256
Izod Impact, notched, -30°C	80	J/m	ASTM D 256
<b>THERMAL</b>			
Vicat Softening Temp, Rate B/50	248	°C	ASTM D 1525
HDT, 0.45 MPa, 6.4 mm, unannealed	254	°C	ASTM D 648
HDT, 1.82 MPa, 6.4 mm, unannealed	240	°C	ASTM D 648
CTE, -20°C to 150°C, flow	0.0000198 – 0.0000306	1/°C	ASTM E 831
<b>PHYSICAL</b>			
Specific Gravity	1.33	-	ASTM D 792
Density	1.328	g/cm <sup>3</sup>	ASTM D 792
Water Absorption, 50% RH, equilib	1	%	ASTM D 570
Moisture Absorption, 50% RH, 24 hrs	0.5	%	ASTM D 570
Mold Shrinkage, flow, 3.2 mm	0.2 – 0.3	%	SABIC method
Mold Shrinkage, xflow, 3.2 mm	0.65 – 0.85	%	SABIC method
<b>ELECTRICAL</b>			
Arc Resistance, Tungsten {PLC}	6	PLC Code	ASTM D 495
High Voltage Arc Track Rate {PLC}	1	PLC Code	UL 746A
Comparative Tracking Index (UL) {PLC}	2	PLC Code	UL 746A
High Amp Arc Ignition (HAI), PLC 2	≥1.5	mm	UL 746A
Hot-Wire Ignition (HWI), PLC 0	≥1.5	mm	UL 746A
<b>FLAME CHARACTERISTICS<sup>(1)</sup></b>			
UL Yellow Card Link	E121562-220762	-	-
UL Recognized, 94HB Flame Class Rating	≥1.5	mm	UL 94
<b>INJECTION MOLDING</b>			
Drying Temperature	95 – 105	°C	
Drying Time	3 – 4	hrs	

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Drying Time (Cumulative)	8	hrs	
Maximum Moisture Content	0.07	%	
Minimum Moisture Content	0.02	%	
Melt Temperature	280 – 305	°C	
Nozzle Temperature	280 – 305	°C	
Front - Zone 3 Temperature	275 – 305	°C	
Middle - Zone 2 Temperature	270 – 305	°C	
Rear - Zone 1 Temperature	265 – 305	°C	
Mold Temperature	75 – 120	°C	
Back Pressure	0.3 – 1.4	MPa	
Screw Speed	20 – 100	rpm	
Shot to Cylinder Size	30 – 50	%	
Vent Depth	0.013 – 0.038	mm	

(1) 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.

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