

Noryl GTX* Resin GTX951W

Americas: DEVELOPMENTAL

A new high flow GTX designed for under-the-hood applications such as power distribution boxes, relay boxes and junction boxes.
Developmental name EXNX0151.

Property

TYPICAL PROPERTIES ⁽¹⁾			
	Value	Unit	Standard
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	66	MPa	ASTM D 638
Tensile Stress, brk, Type I, 50 mm/min	57	MPa	ASTM D 638
Tensile Strain, yld, Type I, 50 mm/min	5	%	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	55	%	ASTM D 638
Tensile Modulus, 50 mm/min	2250	MPa	ASTM D 638
Flexural Stress, brk, 2.6 mm/min, 100 mm span	100	MPa	ASTM D 790
Flexural Modulus, 2.6 mm/min, 100 mm span	2550	MPa	ASTM D 790
Tensile Stress, yield, 50 mm/min	66	MPa	ISO 527
Tensile Strain, break, 50 mm/min	51	%	ISO 527
Flexural Stress, break, 2 mm/min	98	MPa	ISO 178
Flexural Modulus, 2 mm/min	2370	MPa	ISO 178
IMPACT			
Izod Impact, notched, 23°C	211	J/m	ASTM D 256
Izod Impact, notched, -30°C	100	J/m	ASTM D 256
Instrumented Impact Energy @ peak, 23°C	48	J	ASTM D 3763
Instrumented Impact Energy @ peak, -30	32	J	ASTM D 3763
Izod Impact, notched 63.5*12.7*3.2, 23°C	13	kJ/m ²	ISO 180/4A
Izod Impact, notched 63.5*12.7*3.2, -30°C	8	kJ/m ²	ISO 180/4A
Charpy Impact, notched, 23°C	21	kJ/m ²	ISO 179/2C
Charpy Impact, notched, -20°C	10	kJ/m ²	ISO 179/2C
THERMAL			
HDT, 0.45 MPa, 6.4 mm, unannealed	196	°C	ASTM D 648
CTE, -40°C to 40°C, flow	9.E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	8.5E-05	1/°C	ASTM E 831
CTE, 60°C to 138°C, flow	1.67E-04	1/°C	ASTM E 831
CTE, 60°C to 138°C, xflow	1.53E-04	1/°C	ASTM E 831
HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm	181	°C	ISO 75/Be
PHYSICAL			
Specific Gravity	1.1	-	ASTM D 792
Mold Shrinkage, flow, 24 hrs	1.4 - 1.7	%	ASTM D 955
Mold Shrinkage, xflow, 24 hrs	1.2 - 1.5	%	ASTM D 955
Melt Flow Rate, 280°C/2.16 kgf	23	g/10 min	ASTM D 1238
Melt Flow Rate, 280°C/5.0 kgf	64	g/10 min	ASTM D 1238
Water Absorption, 23°C/24hrs	1.99	%	ISO 62-1
Moisture Absorption, 50% RH, 24hrs	0.39	%	ISO 62-4
ELECTRICAL			
Dielectric Strength, in oil, 1.6 mm	22.4	kV/mm	ASTM D 149
Dissipation Factor, 1 MHz	0.017	-	ASTM D 150

Processing

- Do NOT mix NORYL GTX* resin with other grades of NORYL* resins.

Parameter	Value	Unit
Injection Molding		
Drying Temperature	95 - 105	°C
Drying Time	3 - 4	hrs
Drying Time (Cumulative)	8	hrs
Maximum Moisture Content	0.07	%
Minimum Moisture Content	0.02	%
Melt Temperature	270 - 295	°C
Nozzle Temperature	270 - 295	°C
Front - Zone 3 Temperature	265 - 295	°C
Middle - Zone 2 Temperature	260 - 295	°C
Rear - Zone 1 Temperature	255 - 295	°C
Mold Temperature	65 - 95	°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

Source GMD, last updated:2009/04/23

- Polystyrene and acrylic regrind are effective purging Materials. Use temperature range appropriate for particular purging resin.
- Regrind must also be dried. Maximum 25% regrind.
- Dry at recommended temperatures and times for optimum performance. Overdrying can cause loss of physical properties and/or create appearance defects. Do not exceed recommended basic drying time and temperature above or:
 - 4-8 hrs at 95°C (200°F), 10 hrs max
 - 6-12 hrs at 80°C (175°F), 16 hrs max
 - 8-16 hrs at 65°C (150°F), 24 hrs max
- Avoid melt temperature in excess of 300°C (575°F) and residence times over 6-8 minutes (may affect properties and/or appearance).
- Nozzle temperature controls assist in elimination of drool premature freeze-off.
- Shot sizes in excess of 50% barrel capacity can lead to difficulties in providing a consistent, homogenous plastic melt.

THESE PROPERTY VALUES ARE NOT INTENDED FOR SPECIFICATION PURPOSES.

PLEASE CHECK WITH YOUR [\(LOCAL SALES OFFICE\)](#) FOR AVAILABILITY IN YOUR REGION

(1) Typical values only. Variations within normal tolerances are possible for various colors. All values are measured after at least 48 hours storage at 23°C/50% relative humidity. All properties, except the melt volume and melt flow rates, are measured on injection molded samples. All samples tested under ISO test standards are prepared according to ISO 294.

(2) Only typical data for selection purposes. Not to be used for part or tool design.

(3) This rating is not intended to reflect hazards presented by this or any other material under actual fire conditions.

(4) Internal measurements according to UL standards.

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