



NORYL GTX™ Resin GTX951W

Americas: COMMERCIAL

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

TYPICAL PROPERTIES ¹	TYPICAL VALUE	Unit	Standard
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	670	kgf/cm ²	ASTM D 638
Tensile Stress, brk, Type I, 50 mm/min	580	kgf/cm ²	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	22900	kgf/cm ²	ASTM D 638
Flexural Stress, brk, 2.6 mm/min, 100 mm span	1010	kgf/cm ²	ASTM D 790
Flexural Modulus, 2.6 mm/min, 100 mm span	26000	kgf/cm ²	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	21	cm-kgf/cm	ASTM D 256
Izod Impact, notched, -30°C	10	cm-kgf/cm	ASTM D 256
Instrumented Impact Energy @ peak, 23°C	489	cm-kgf	ASTM D 3763
Instrumented Impact Energy @ peak, -30	326	cm-kgf	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



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TYPICAL PROPERTIES ¹	TYPICAL VALUE	Unit	Standard
THERMAL			
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 (5)	1.4 - 1.7	%	ASTM D 955
Mold Shrinkage, xflow, 24 hrs (5)	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, Equilibrium	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



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

PROCESSING PARAMETERS	TYPICAL 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

- 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 air circulating tray ovens. Moisture levels in heated ambient air can exceed moisture level in the resin itself, causing moisture ABSORPTION not drying.
- 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.