



**NORYL GTX™ Resin GTX910**  
**Americas: COMMERCIAL**

Unfilled grade for automotive on-line painted components. Dimensional stability. Excellent chemical resistance. Class A surface appearance.

TYPICAL PROPERTIES <sup>1</sup>	TYPICAL VALUE	Unit	Standard
<b>MECHANICAL</b>			
Tensile Stress, yld, Type I, 50 mm/min	600	kgf/cm <sup>2</sup>	ASTM D 638
Tensile Stress, brk, Type I, 50 mm/min	560	kgf/cm <sup>2</sup>	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	60	%	ASTM D 638
Flexural Stress, yld, 2.6 mm/min, 100 mm span	970	kgf/cm <sup>2</sup>	ASTM D 790
Flexural Modulus, 2.6 mm/min, 100 mm span	22900	kgf/cm <sup>2</sup>	ASTM D 790
Hardness, Rockwell R	116	-	ASTM D 785
<b>IMPACT</b>			
Izod Impact, notched, 23°C	24	cm-kgf/cm	ASTM D 256
Izod Impact, notched, -30°C	13	cm-kgf/cm	ASTM D 256
Instrumented Impact Energy @ peak, 23°C	518	cm-kgf	ASTM D 3763
Instrumented Impact Energy @ peak, -30	403	cm-kgf	ASTM D 3763
<b>THERMAL</b>			
Vicat Softening Temp, Rate B/50	232	°C	ASTM D 1525
HDT, 0.45 MPa, 6.4 mm, unannealed	193	°C	ASTM D 648
HDT, 1.82 MPa, 6.4 mm, unannealed	143	°C	ASTM D 648
CTE, -40°C to 95°C, flow	9.E-05	1/°C	ASTM E 831
CTE, -40°C to 95°C, xflow	9.E-05	1/°C	ASTM E 831
CTE, 60°C to 138°C, flow	1.26E-04	1/°C	ASTM E 831
CTE, 60°C to 138°C, xflow	1.26E-04	1/°C	ASTM E 831
Relative Temp Index, Elec	50	°C	UL 746B
Relative Temp Index, Mech w/impact	50	°C	UL 746B
Relative Temp Index, Mech w/o impact	50	°C	UL 746B
<b>PHYSICAL</b>			
Specific Gravity	1.1	-	ASTM D 792

(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.

(5) 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.

(6) Needs hard coat to consistently pass 60 sec Vertical Burn.

Source GMD, last updated:

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### Americas: COMMERCIAL

TYPICAL PROPERTIES <sup>1</sup>	TYPICAL VALUE	Unit	Standard
<b>PHYSICAL</b>			
Density	1.107	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 (5)	1.1 - 1.3	%	SABIC Method
Mold Shrink, flow, annealed 130C 1hr (5)	1.6 - 1.8	%	ASTM D 955
Mold Shrinkage, xflow, 3.2 mm (5)	1 - 1.2	%	SABIC Method
<b>ELECTRICAL</b>			
Arc Resistance, Tungsten {PLC}	7	PLC Code	ASTM D 495
Hot Wire Ignition {PLC}	3	PLC Code	UL 746A
High Voltage Arc Track Rate {PLC}	4	PLC Code	UL 746A
High Ampere Arc Ign, surface {PLC}	0	PLC Code	UL 746A
Comparative Tracking Index (UL) {PLC}	1	PLC Code	UL 746A
<b>FLAME CHARACTERISTICS</b>			
UL Recognized, 94HB Flame Class Rating (3)	1.49	mm	UL 94

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## NORYL GTX™ Resin GTX910

### Americas: COMMERCIAL

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

PROCESSING PARAMETERS	TYPICAL VALUE	Unit
<b>Injection Molding</b>		
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	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

- 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.

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