



NORYL GTX™ Resin GTX902

Americas: COMMERCIAL

Unreinforced. Excellent chemical resistance and paintability. 312F (155C) HDT.

TYPICAL PROPERTIES ¹	TYPICAL VALUE	Unit	Standard
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	610	kgf/cm ²	ASTM D 638
Tensile Stress, brk, Type I, 50 mm/min	570	kgf/cm ²	ASTM D 638
Tensile Strain, yld, Type I, 50 mm/min	9	%	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	52	%	ASTM D 638
Flexural Stress, yld, 2.6 mm/min, 100 mm span	910	kgf/cm ²	ASTM D 790
Flexural Modulus, 2.6 mm/min, 100 mm span	22800	kgf/cm ²	ASTM D 790
Hardness, Rockwell R	118	-	ASTM D 785
Taber Abrasion, CS-17, 1 kg	19	mg/1000cy	ASTM D 1044
IMPACT			
Izod Impact, unnotched, 23°C	326	cm-kgf/cm	ASTM D 4812
Izod Impact, unnotched, -30°C	326	cm-kgf/cm	ASTM D 4812
Izod Impact, unnotched, -40°C	326	cm-kgf/cm	ASTM D 4812
Izod Impact, notched, 23°C	27	cm-kgf/cm	ASTM D 256
Izod Impact, notched, -30°C	11	cm-kgf/cm	ASTM D 256
Izod Impact, notched, -40°C	5	cm-kgf/cm	ASTM D 256
Instrumented Impact Energy @ peak, 23°C	470	cm-kgf	ASTM D 3763
Instrumented Impact Energy @ peak, -30	367	cm-kgf	ASTM D 3763
Instrumented Impact Energy @ peak, -40°C	200	cm-kgf	ASTM D 3763
THERMAL			
Vicat Softening Temp, Rate A/50	232	°C	ASTM D 1525
Vicat Softening Temp, Rate B/50	232	°C	ASTM D 1525
HDT, 0.45 MPa, 6.4 mm, unannealed	155	°C	ASTM D 648
HDT, 1.82 MPa, 6.4 mm, unannealed	127	°C	ASTM D 648



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THERMAL			
CTE, -20°C to 150°C, flow	9.E-05	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
PHYSICAL			
Specific Gravity	1.08	-	ASTM D 792
Water Absorption, 24 hours	0.4	%	ASTM D 570
Water Absorption, equilibrium, 23C	3.6	%	ASTM D 570
Mold Shrinkage, flow, 3.2 mm (5)	0.9 - 1.2	%	SABIC Method
Mold Shrink, flow, annealed 130C 1hr (5)	1.1 - 1.5	%	ASTM D 955
Mold Shrinkage, xflow, 3.2 mm (5)	0.8 - 1.1	%	SABIC Method
FLAME CHARACTERISTICS			
UL Recognized, 94HB Flame Class Rating (3)	1.49	mm	UL 94



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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	275 - 300	°C
Nozzle Temperature	275 - 300	°C
Front - Zone 3 Temperature	270 - 300	°C
Middle - Zone 2 Temperature	265 - 300	°C
Rear - Zone 1 Temperature	260 - 300	°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.