SABIC Innovative Plastics™

Noryl GTX* Resin GTX910

Americas: COMMERCIAL

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

Property

TYPICAL PROPERTIES (1)			
MECHANICAL	Value	Unit	Standard
Tensile Stress, yld, Type I, 50 mm/min	59	MPa	ASTM D 638
Tensile Stress, brk, Type I, 50 mm/min	55	MPa	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	95	MPa	ASTM D 790
Flexural Modulus, 2.6 mm/min, 100 mm span	2240	MPa	ASTM D 790
Hardness, Rockwell R	116	-	ASTM D 785
IMPACT	Value	Unit	Standard
Izod Impact, notched, 23°C	240	J/m	ASTM D 256
Izod Impact, notched, -30°C	133	J/m	ASTM D 256
Instrumented Impact Energy @ peak, 23°C	50	J	ASTM D 3763
Instrumented Impact Energy @ peak, -30	39	J	ASTM D 3763
THERMAL	Value	Unit	Standard
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
PHYSICAL	Value	Unit	Standard
Specific Gravity	1.1	-	ASTM D 792
Density	1.107	g/cm³	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	1.1 - 1.3	%	SABIC Method
Mold Shrink, flow, annealed 130C 1hr	1.6 - 1.8	%	ASTM D 955
Mold Shrinkage, xflow, 3.2 mm	1 - 1.2	%	SABIC Method
ELECTRICAL	Value	Unit	Standard
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
FLAME CHARACTERISTICS	Value	Unit	Standard
UL Recognized, 94HB Flame Class Rating (3)	1.49	mm	UL 94

Source GMD, last updated:01/05/2000

Processing

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

Parameter Injection Molding	Value	Unit
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

Source GMD, last updated:01/05/2000

• 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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