SABIC Innovative Plastics™

Noryl GTX* Resin GTX918W

Americas: COMMERCIAL

High flow NORYL GTX resin for under-the-hood and electrical applications requiring retention of properties under thermal load

Property

TYPICAL PROPERTIES (1)			
MECHANICAL	Value	Unit	Standard
Tensile Stress, yld, Type I, 50 mm/min	62	MPa	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	53	%	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	98	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	2360	MPa	ASTM D 790
IMPACT	Value	Unit	Standard
Izod Impact, notched, 23°C	202	J/m	ASTM D 256
Instrumented Impact Energy @ peak, 23°C	40	J	ASTM D 3763
THERMAL	Value	Unit	Standard
HDT, 0.45 MPa, 3.2 mm, unannealed	188	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	148	°C	ASTM D 648
PHYSICAL	Value	Unit	Standard
Specific Gravity	1.09	-	ASTM D 792
Mold Shrinkage, flow, 3.2 mm	1.3 - 1.6	%	SABIC Method
Mold Shrinkage, xflow, 3.2 mm	1 - 1.3	%	SABIC Method

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	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: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.