

## 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 <sup>(1)</sup>            |           |      |              |
|--|-----------|------|--------------|
| 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                   | 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   |

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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