

## SABIC Innovative Plastics NORYL GTX GTX973 PPE+PA (Europe-Africa-Middle East)

Category : Polymer , Thermoplastic , Nylon , Polyphenylene Ether/PPO

### Material Notes:

NORYL GTX973 is a material especially designed for electrostatic painting and powder coating applications. The material combines high heat resistance with impact and conductivity in a unique way.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_SABIC-Innovative-Plastics-NORYL-GTX-GTX973-PPEPA-Europe-Africa-Middle-East.php](http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-NORYL-GTX-GTX973-PPEPA-Europe-Africa-Middle-East.php)

| Physical Properties               | Metric                                               | English                                              | Comments                                |
|-----------------------------------|------------------------------------------------------|------------------------------------------------------|-----------------------------------------|
| Specific Gravity                  | 1.09 g/cc                                            | 1.09 g/cc                                            | ASTM D792                               |
| Density                           | 1.10 g/cc                                            | 0.0397 lb/in <sup>3</sup>                            | ISO 1183                                |
| Moisture Absorption               | 1.20 %                                               | 1.20 %                                               | 23Â°C / 50% RH; ISO 62                  |
| Water Absorption at Saturation    | 4.2 %                                                | 4.2 %                                                | ISO 62                                  |
| Linear Mold Shrinkage, Flow       | 0.014 - 0.017 cm/cm<br>@Thickness 3.20 mm            | 0.014 - 0.017 in/in<br>@Thickness 0.126 in           | SABIC Method                            |
| Linear Mold Shrinkage, Transverse | 0.012 - 0.015 cm/cm<br>@Thickness 3.20 mm            | 0.012 - 0.015 in/in<br>@Thickness 0.126 in           | SABIC Method                            |
| Melt Flow                         | 20 g/10 min<br>@Load 5.00 kg,<br>Temperature 280 Â°C | 20 g/10 min<br>@Load 11.0 lb,<br>Temperature 536 Â°F | ASTM D1238                              |
| Melt Index of Compound            | 12 g/10 min<br>@Load 5.00 kg,<br>Temperature 280 Â°C | 12 g/10 min<br>@Load 11.0 lb,<br>Temperature 536 Â°F | MVR [cm <sup>3</sup> /10 min]; ISO 1133 |

| Mechanical Properties     | Metric   | English  | Comments                     |
|---------------------------|----------|----------|------------------------------|
| Tensile Strength at Break | 55.0 MPa | 7980 psi | Type I, 50 mm/min; ASTM D638 |
|                           | 55.0 MPa | 7980 psi | 50 mm/min; ISO 527           |
| Tensile Strength, Yield   | 60.0 MPa | 8700 psi | Type I, 50 mm/min; ASTM D638 |
|                           | 60.0 MPa | 8700 psi | 50 mm/min; ISO 527           |
| Elongation at Break       | 30 %     | 30 %     | 50 mm/min; ISO 527           |
|                           | 55 %     | 55 %     | Type I, 50 mm/min; ASTM D638 |
| Elongation at Yield       | 4.0 %    | 4.0 %    | 50 mm/min; ISO 527           |

| Mechanical Properties      | Metric                 | English                | Comments                           |
|----------------------------|------------------------|------------------------|------------------------------------|
| Tensile Modulus            | 2.20 GPa               | 319 ksi                | 50 mm/min; ASTM D638               |
|                            | 2.30 GPa               | 334 ksi                | 1 mm/min; ISO 527                  |
| Flexural Yield Strength    | 90.0 MPa               | 13100 psi              | 1.3 mm/min, 50 mm span; ASTM D790  |
|                            | 90.0 MPa               | 13100 psi              | 2 mm/min; ISO 178                  |
| Flexural Modulus           | 2.30 GPa               | 334 ksi                | 1.3 mm/min, 50 mm span; ASTM D790  |
|                            | 2.30 GPa               | 334 ksi                | 2 mm/min; ISO 178                  |
| Izod Impact, Notched       | 1.30 J/cm              | 2.44 ft-lb/in          | ASTM D256                          |
|                            | 0.800 J/cm             | 1.50 ft-lb/in          | ASTM D256                          |
|                            | @Temperature -30.0 Â°C | @Temperature -22.0 Â°F |                                    |
| Izod Impact, Notched (ISO) | 15.0 kJ/mÂ²            | 7.14 ft-lb/inÂ²        | 80*10*4; ISO 180/1A                |
|                            | 7.00 kJ/mÂ²            | 3.33 ft-lb/inÂ²        | 80*10*4; ISO 180/1A                |
|                            | @Temperature -30.0 Â°C | @Temperature -22.0 Â°F |                                    |
| Charpy Impact, Notched     | 1.50 J/cmÂ²            | 7.14 ft-lb/inÂ²        | Edgew 80*10*4 sp=62mm; ISO 179/1eA |
|                            | 0.600 J/cmÂ²           | 2.86 ft-lb/inÂ²        | Edgew 80*10*4 sp=62mm; ISO 179/1eA |
|                            | @Temperature -30.0 Â°C | @Temperature -22.0 Â°F |                                    |
| Dart Drop, Total Energy    | 50.0 J                 | 36.9 ft-lb             | ASTM D3763                         |
|                            | @Temperature 23.0 Â°C  | @Temperature 73.4 Â°F  |                                    |

| Thermal Properties              | Metric                        | English                      | Comments    |
|---------------------------------|-------------------------------|------------------------------|-------------|
| CTE, linear, Parallel to Flow   | 85.0 Âµm/m-Â°C                | 47.2 Âµin/in-Â°F             | ASTM E 831  |
|                                 | @Temperature -40.0 - 40.0 Â°C | @Temperature -40.0 - 104 Â°F |             |
|                                 | 90.0 Âµm/m-Â°C                | 50.0 Âµin/in-Â°F             | ISO 11359-2 |
|                                 | @Temperature 23.0 - 60.0 Â°C  | @Temperature 73.4 - 140 Â°F  |             |
| CTE, linear, Transverse to Flow | 90.0 Âµm/m-Â°C                | 50.0 Âµin/in-Â°F             | ASTM E 831  |
|                                 | @Temperature -40.0 - 40.0 Â°C | @Temperature -40.0 - 104 Â°F |             |

| Thermal Properties                          | Metric                       | English                     | Comments                           |
|---------------------------------------------|------------------------------|-----------------------------|------------------------------------|
|                                             | @Temperature 23.0 - 60.0 Â°C | @Temperature 73.4 - 140 Â°F | ISO 11359-2                        |
| Deflection Temperature at 0.46 MPa (66 psi) | 190 Â°C                      | 374 Â°F                     | Edgew 120*10*4 sp=100mm; ISO 75/Be |
|                                             | 195 Â°C                      | 383 Â°F                     | unannealed; ASTM D648              |
|                                             | @Thickness 3.20 mm           | @Thickness 0.126 in         |                                    |
| Vicat Softening Point                       | 195 Â°C                      | 383 Â°F                     | Rate B/50; ISO 306                 |
|                                             | 200 Â°C                      | 392 Â°F                     | Rate B/120; ISO 306                |
|                                             | 200 Â°C                      | 392 Â°F                     | Rate B/50; ASTM D1525              |

| Electrical Properties | Metric              | English             | Comments     |
|-----------------------|---------------------|---------------------|--------------|
| Volume Resistivity    | 1000 - 10000 ohm-cm | 1000 - 10000 ohm-cm | SABIC Method |

| Descriptive Properties              | Value  | Comments       |
|-------------------------------------|--------|----------------|
| Ball Pressure Test, 125Â°C +/- 2Â°C | PASSES | IEC 60695-10-2 |

## Contact Songhan Plastic Technology Co.,Ltd.

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