

## SABIC Innovative Plastics NORYL WCA875 PPE-TPE (Asia Pacific)

Category : Polymer , Thermoplastic , Elastomer, TPE , Polyphenylene Ether/PPO

### Material Notes:

Non-halogenated flame retardant Flexible Noryl extrusion grade intended for evaluation in applications such as wire insulation and cable jacket. Excellent flame retardant performance with balanced tensile elongation, capable of VW-1 performance and 105C temperature rating as defined by UL 1581. 87 Shore A hardness. Processing typically conducted on standard extrusion equipment. UL 1581 tests conducted on 2.0mm wire with 0.12mm X 20 stranded copper conductor.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_SABIC-Innovative-Plastics-NORYL-WCA875-PPE-TPE-Asia-Pacific.php](http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-NORYL-WCA875-PPE-TPE-Asia-Pacific.php)

| Physical Properties | Metric                                | English                               | Comments   |
|---------------------|---------------------------------------|---------------------------------------|------------|
| Specific Gravity    | 1.03 g/cc                             | 1.03 g/cc                             | ASTM D792  |
| Melt Flow           | 16 g/10 min                           | 16 g/10 min                           | ASTM D1238 |
|                     | @Load 10.0 kg,<br>Temperature 250 Å°C | @Load 22.0 lb,<br>Temperature 482 Å°F |            |

| Mechanical Properties     | Metric                                 | English                                | Comments                            |
|---------------------------|--|--|-------------------------------------|
| Hardness, Shore A         | 87                                     | 87                                     | 30S reading; ASTM D2240             |
| Tensile Strength at Break | 16.0 MPa                               | 2320 psi                               | Type I, 50 mm/min; ASTM D638        |
|                           | 16.0 MPa                               | 2320 psi                               | 50 mm/min; ISO 527                  |
|                           | 26.0 MPa                               | 3770 psi                               | after 7days @136Å°C; UL 1581        |
|                           | 27.0 MPa                               | 3920 psi                               | UL 1581                             |
| Elongation at Break       | 170 %                                  | 170 %                                  | 50 mm/min; ISO 527                  |
|                           | 180 %                                  | 180 %                                  | Type I, 50 mm/min; ASTM D638        |
|                           | 190 %                                  | 190 %                                  | after 7days @136Å°C; UL 1581        |
|                           | 250 %                                  | 250 %                                  | UL 1581                             |
| Flexural Modulus          | 0.0400 GPa                             | 5.80 ksi                               | 12.5 mm/min, 100 mm span; ASTM D790 |
|                           | 0.0400 GPa                             | 5.80 ksi                               | 12.5 mm/min; ISO 178                |
| Heat Distortion           | 10 %                                   | 10 %                                   | UL 1581                             |
|                           | @Load 0.250 kg,<br>Temperature 121 Å°C | @Load 0.551 lb,<br>Temperature 250 Å°F |                                     |

| Thermal Properties | Metric | English | Comments |
|--------------------|--------|---------|----------|
|--------------------|--------|---------|----------|

| Maximum Service Temperature, Air Thermal Properties | 105 Â°C<br>Metric             | 221 Â°F<br>English              | UL Temperature rating; UL 1581<br>Comments |
|---|-------------------------------|---------------------------------|--|
| Brittleness Temperature                             | <= -40.0 Â°C                  | <= -40.0 Â°F                    | ASTM D746                                  |
| Oxygen Index  | 29 %                          | 29 %                            | ISO 4589                                   |
| Glow Wire Test                                      | 800 Â°C                       | 1470 Â°F                        | IEC 60695-2-13                             |
|   | 960 Â°C<br>@Thickness 3.00 mm | 1760 Â°F<br>@Thickness 0.118 in | IEC 60695-2-12                             |

| Electrical Properties      | Metric                           | English                           | Comments            |
|----------------------------|----------------------------------|-----------------------------------|---------------------|
| Volume Resistivity         | <= 1.00e+17 ohm-cm               | <= 1.00e+17 ohm-cm                | ASTM D257           |
| Dielectric Constant        | 2.7<br>@Frequency 1.00e+6 Hz     | 2.7<br>@Frequency 1.00e+6 Hz      | IEC 60250           |
| Dielectric Strength        | 22.8 kV/mm<br>@Thickness 2.00 mm | 579 kV/in<br>@Thickness 0.0787 in | in oil; IEC 60243-1 |
| Dissipation Factor         | 0.0035<br>@Frequency 1.00e+6 Hz  | 0.0035<br>@Frequency 1.00e+6 Hz   | IEC 60250           |
| Comparative Tracking Index | 600 V                            | 600 V                             | IEC 60112           |

| Descriptive Properties                            | Value | Comments   |
|---|-------|------------|
| Smoke Density on 0.5mm plaque, Flame, Ds, max     | 146   | ASTM E 662 |
| Smoke Density on 0.5mm plaque, Non-flame, Ds, max | 112   | ASTM E 662 |
| VW-1  | Pass  | UL 1581    |

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