

SABIC Innovative Plastics NORYL WCA871A PPE

Category : Polymer , Thermoplastic , Polyphenylene Ether/PPO

Material Notes:

Flame retardant performance and mechanical properties capable of meeting UL VW-1 requirement and 105C temperature rating as defined UL 1581. UL 1581 tests conducted on 1.0mmD wire with AWG28 conductor.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-NORYL-WCA871A-PPE.php

| Physical Properties | Metric | English | Comments |
|---------------------|---------------------------------------|---------------------------------------|------------|
| Specific Gravity | 1.06 g/cc | 1.06 g/cc | ASTM D792 |
| Melt Flow | 15 g/10 min | 15 g/10 min | ASTM D1238 |
| | @Load 5.00 kg, Temperature 250 Å°C | @Load 11.0 lb, Temperature 482 Å°F | |

| Mechanical Properties | Metric | English | Comments |
|---------------------------|--|--|-------------------------------------|
| Hardness, Shore A | 87 | 87 | 30S reading; ASTM D2240 |
| Tensile Strength at Break | 18.0 MPa | 2610 psi | Type I, 50 mm/min; ASTM D638 |
| | 18.0 MPa | 2610 psi | 50 mm/min; ISO 527 |
| | 27.0 MPa | 3920 psi | after 7days @136Å°C; UL 1581 |
| | 30.0 MPa | 4350 psi | UL 1581 |
| Elongation at Break | 130 % | 130 % | 50 mm/min; ISO 527 |
| | 140 % | 140 % | Type I, 50 mm/min; ASTM D638 |
| | 200 % | 200 % | after 7days @136Å°C; UL 1581 |
| | 280 % | 280 % | UL 1581 |
| Flexural Modulus | 0.100 GPa | 14.5 ksi | 12.5 mm/min, 100 mm span; ASTM D790 |
| | 0.100 GPa | 14.5 ksi | 12.5 mm/min; ISO 178 |
| Heat Distortion | 20 % | 20 % | UL 1581 |
| | @Load 0.250 kg, Temperature 121 Å°C | @Load 0.551 lb, Temperature 250 Å°F | |

| Thermal Properties | Metric | English | Comments |
|----------------------------------|---------|---------|--------------------------------|
| Maximum Service Temperature, Air | 105 Å°C | 221 Å°F | UL temperature rating; UL 1581 |
| Brittleness Temperature | | | ASTM D746 |

| Thermal Properties | -40.0 Â°C Metric | -40.0 Â°F English | Comments |
|--------------------|---------------------|----------------------|----------------|
| Oxygen Index | 28 % | 28 % | ISO 4589 |
| Glow Wire Test | 825 Â°C | 1520 Â°F | IEC 60695-2-13 |
| | 960 Â°C | 1760 Â°F | IEC 60695-2-12 |
| | @Thickness 3.00 mm | @Thickness 0.118 in | |

| Electrical Properties | Metric | English | Comments |
|----------------------------|-----------------------|-----------------------|---------------------|
| Volume Resistivity | 2.40e+16 ohm-cm | 2.40e+16 ohm-cm | ASTM D257 |
| Dielectric Constant | 2.6 | 2.6 | IEC 60250 |
| | @Frequency 1.00e+6 Hz | @Frequency 1.00e+6 Hz | |
| Dielectric Strength | 28.0 kV/mm | 711 kV/in | in oil; IEC 60243-1 |
| | @Thickness 1.50 mm | @Thickness 0.0591 in | |
| Dissipation Factor | 0.0028 | 0.0028 | IEC 60250 |
| | @Frequency 1.00e+6 Hz | @Frequency 1.00e+6 Hz | |
| Comparative Tracking Index | 600 V | 600 V | IEC 60112 |

| Descriptive Properties | Value | Comments |
|---|-------|------------|
| Smoke Density on 0.5mm plaque, Flame, Ds, max | 143 | ASTM E 662 |
| Smoke Density on 0.5mm plaque, Non-flame, Ds, max | 67 | ASTM E 662 |

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