

FLEX NORYL™ Resin WCV072 - Americas

(PPE+TPE)

Saudi Basic Industries Corporation (SABIC)

Product Texts

FLEX NORYL™ WCV072 resin is a flexible, non-reinforced extrusion grade of Polyphenylene Ether (PPE) + Thermoplastic Elastomer (TPE) with a Shore D Hardness rating of 72. FLEX NORYL WCV072 resin was developed for evaluation in automotive wire + cable applications requiring ISO6722 Class A or B. It exhibits ultra-thin wall capability, good scratch abrasion and pinch resistance, high dimensional stability, low shrinkage and warpage, very low water absorption, chemical resistance, and good dielectric strength. Processing is typically conducted on standard extrusion equipment, and UL 1581 testing is conducted on 2.0mm wire with 0.12mm X 20 stranded copper conductor.

| Processing/Physical Characteristics | Value | Unit | Test Standard |
|-------------------------------------|-------|------------------------|---------------|
| ISO Data | | | |
| Melt volume-flow rate, MVR | 13 | cm ³ /10min | ISO 1133 |
| Temperature | 280 | °C | - |
| Load | 5 | kg | - |
| ASTM Data | | | |
| Melt Flow Index, MFI | 13.8 | g/10min | ASTM D 1238 |
| Temperature | 280 | °C | - |
| Load | 5 | kg | - |

| Mechanical properties | Value | Unit | Test Standard |
|--|-------|-------------------|---------------|
| ISO Data | | | |
| Tensile Modulus | 1750 | MPa | ISO 527 |
| Yield stress | 44 | MPa | ISO 527 |
| Yield strain | 11 | % | ISO 527 |
| Stress at break | 42 | MPa | ISO 527 |
| Strain at break | 46 | % | ISO 527 |
| Flexural modulus | 1740 | MPa | ISO 178 |
| Charpy notched impact strength, +23°C | 33 | kJ/m ² | ISO 179/1eA |
| Izod notched impact strength, +23°C, 4mm | 36 | kJ/m ² | ISO 180/1A |
| Izod notched impact strength, -30°C, 4mm | 6 | kJ/m ² | ISO 180/1A |
| ASTM Data | | | |
| Tensile Modulus | 1710 | MPa | ASTM D 638 |
| Tensile Strength at Yield | 43 | MPa | ASTM D 638 |
| Tensile Strength at Break | 41 | MPa | ASTM D 638 |
| Elongation at Yield | 15 | % | ASTM D 638 |
| Elongation at Break | 83 | % | ASTM D 638 |
| Flexural Modulus | 1550 | MPa | ASTM D 790 |
| Izod Impact notched, 1/8 in | 309 | J/m | ASTM D 256 |
| Izod Impact notched, Low-Temperature | 67 | J/m | ASTM D 256 |
| Temperature | -30 | °C | - |

| Thermal properties | Value | Unit | Test Standard |
|--|-------|------|---------------|
| ISO Data | | | |
| Temp. of deflection under load, 1.80 MPa | 98 | °C | ISO 75-1/-2 |
| Vicat softening temperature, B | 114 | °C | ISO 306 |
| Vicat softening temperature, 120°C/h 50N | 117 | °C | ISO 306 |
| ASTM Data | | | |
| DTUL @ 264 psi | 92 | °C | ASTM D 648 |
| Vicat Temperature | 114 | °C | ASTM D 1525 |

| Other properties | Value | Unit | Test Standard |
|---------------------|-------|-------------------|----------------|
| Water absorption | 0.12 | % | Sim. to ISO 62 |
| Humidity absorption | 0.05 | % | Sim. to ISO 62 |
| Density | 1030 | kg/m ³ | ISO 1183 |
| Density | 1030 | kg/m ³ | ASTM D 792 |

| Processing Recommendation Injection Molding | Value | Unit | Test Standard |
|---|---------|------|---------------|
| Screw speed | 15 - 40 | rpm | - |

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Characteristics

Chemical Resistance

General Chemical Resistance

Regional Availability

North America