

FLEX NORYL™ Resin WCD841U - Asia

(PPE+TPE)

Saudi Basic Industries Corporation (SABIC)

Product Texts

FLEX NORYL™ WCD841U resin is a flexible, non-reinforced, UV stabilized extrudable blend of Polyphenylene Ether (PPE) + Thermoplastic Elastomer (TPE). This material contains non-halogenated flame retardant and performance capable of meeting UL VW-1 requirements, 80C end use temperature rating, and heat deformation performance as defined by UL 1581. FLEX NORYL WCD841U resin is intended for evaluation in wire insulation and cable jacket applications in light colors. It has a Shore A Hardness reading of 84 and exhibits superior thermal stability, very low water absorption, good electric properties, low specific gravity, and good color stability after UV weathering per ASTM D4459. 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 |
|-------------------------------------|-------|---------|---------------|
| ASTM Data | | | |
| Melt Flow Index, MFI | 23 | g/10min | ASTM D 1238 |
| Temperature | 250 | °C | - |
| Load | 5 | kg | - |

| Mechanical properties | Value | Unit | Test Standard |
|---------------------------|-------|------|---------------|
| ISO Data | | | |
| Stress at break | 17 | MPa | ISO 527 |
| Strain at break | 50 | % | ISO 527 |
| ASTM Data | | | |
| Tensile Strength at Break | 18 | MPa | ASTM D 638 |
| Elongation at Break | 250 | % | ASTM D 638 |
| Shore A Hardness | 84 | - | ASTM D 2240 |

| Thermal properties | Value | Unit | Test Standard |
|---------------------------------------|-------|------|----------------|
| ISO Data | | | |
| Glow Wire Flammability Index (GWFI) | 960 | °C | IEC 60695-2-12 |
| GWFI - thickness tested (3) | 3 | mm | - |
| Glow Wire Ignition Temperature (GWIT) | 750 | °C | IEC 60695-2-13 |
| GWIT - thickness tested (3) | 3 | mm | - |

| Electrical properties | Value | Unit | Test Standard |
|----------------------------|-------|--------|---------------|
| ISO Data | | | |
| Comparative tracking index | 600 | - | IEC 60112 |
| ASTM Data | | | |
| Dissipation Factor, 1 MHz | 0.006 | - | ASTM D 150 |
| Dielectric Constant, 1 MHz | 2.6 | - | ASTM D 150 |
| Volume Resistivity | >1E15 | Ohm*cm | ASTM D 257 |

| Other properties | Value | Unit | Test Standard |
|------------------|-------|-------------------|---------------|
| Density | 1080 | kg/m ³ | ASTM D 792 |

| Processing Recommendation Injection Molding | Value | Unit | Test Standard |
|---|---------|------|---------------|
| Screw speed | 15 - 85 | rpm | - |

Characteristics**Additives**

Flame retarding agent

Regional Availability

Asia Pacific

Special Characteristics

Flame retardant