

FLEX NORYL™ RESIN WCD944

REGION EUROPE

DESCRIPTION

Flexible and non-halogenated flame retardant extrusion grade intended for applications such as jacket of optical fiber cables. Flame retardant performance capable of meeting EN 50265-2-1 requirement. IEC60754 compliant. 94 Shore A hardness. Processing typically conducted on standard extrusion equipment. Wire tests conducted on 2.0 mm wire with 0.12 mm x 20 stranded copper conductor.

TYPICAL PROPERTY VALUES

Revision 20181012

| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|---|----------------|----------|-------------------|
| MECHANICAL | | | |
| Tensile Stress, brk, Type I, 50 mm/min | 18 | MPa | ASTM D 638 |
| Tensile Strain, brk, Type I, 50 mm/min | 250 | % | ASTM D 638 |
| Flexural Modulus, 12.5 mm/min, 100 mm span | 160 | MPa | ASTM D 790 |
| Hardness, Shore A, 30S reading | 94 | - | ASTM D 2240 |
| Tensile Stress, break, 50 mm/min | 18 | MPa | ISO 527 |
| Tensile Strain, break, 50 mm/min | 220 | % | ISO 527 |
| Flexural Modulus, 12.5 mm/min | 140 | MPa | ISO 178 |
| PHYSICAL | | | |
| Specific Gravity | 0.99 | - | ASTM D 792 |
| Melt Flow Rate, 250°C/ 10.0 kgf | 16 | g/10 min | ASTM D 1238 |
| ELECTRICAL | | | |
| Volume Resistivity | 6.8E+15 | Ohm-cm | ASTM D 257 |
| Comparative Tracking Index | 600 | V | IEC 60112 |
| FLAME CHARACTERISTICS | | | |
| UL Compliant, 94V-0 Flame Class Rating | 6 | mm | UL 94 by SABIC-IP |
| Glow Wire Flammability Index 960°C, passes at | 3 | mm | IEC 60695-2-12 |
| Glow Wire Ignitability Temperature, 3.0 mm | 800 | °C | IEC 60695-2-13 |
| WIRE AND CABLE - UL 1581 TESTED ON 2.0MM WIRE WITH 0.12MMX20 STRANDED COPPER | | | |
| Tensile strength @ break | 22 | MPa | UL 1581 |
| Tensile elongation @ break | 310 | % | UL 1581 |
| Tensile strength @ break after 7days @136°C | 23 | MPa | UL 1581 |
| Tensile elongation @ break after 7days @136°C | 235 | % | UL 1581 |
| Heat Deformation at 121°C/250g | 11 | % | UL 1581 |
| Vertical Flame Test | PASSES | - | EN 50265-2-1 |
| WIRE COATING EXTRUSION | | | |
| Drying Temperature | 75 – 85 | °C | |
| Drying Time | 5 – 7 | hrs | |
| Drying Time (Cumulative) | 12 | hrs | |
| Maximum Moisture Content | 0.02 | % | |
| Extruder Length/Diameter Ratio (L/D) | 22:1 to 26:1 | - | |
| Screw Speed | 15 – 85 | rpm | |
| Feed Zone Temperature | 180 – 220 | °C | |
| Middle Zone Temperatures | 220 – 250 | °C | |

| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|--------------------------------|----------------|-------|--------------|
| Head Zone Temperature | 220 – 250 | °C | |
| Neck Temperature | 220 – 250 | °C | |
| Cross-head Temperature | 220 – 250 | °C | |
| Die Temperature | 220 – 250 | °C | |
| Melt Temperature | 220 – 250 | °C | |
| Conductor Pre-heat Temperature | 25 – 120 | °C | |
| Screen Pack | 150 – 100 | - | |
| Cooling Water Air Gap | 100 – 200 | mm | |
| Water Bath Temperature | 15 – 60 | °C | |

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