



## Okoguard® URO-J

### 15kV Underground Primary Distribution Cable-Jacketed Red Identification Stripes

Filled Strand Aluminum Conductor/105°C Rating  
100% and 133% Insulation Levels



- A Conductor - Stranded Aluminum with Filled Strand - Water Swellable Powder
- B Strand Screen - Extruded Semi-conducting EPR
- C Insulation - Okoguard EPR
- D Insulation Screen - Extruded Semi-conducting EPR
- E Concentric Conductor-Bare Copper Wires
- F Encapsulating Jacket-Okolene with Extruded ID Stripes & NESC lightning bolt

#### Insulation

Okoguard is Okonite's registered trade name for its exclusive ethylene-propylene rubber (EPR) based, thermosetting compound, whose optimum balance of electrical and physical properties is unequalled in other solid dielectrics. Okoguard insulation, with the distinctive red color and a totally integrated EPR system, provides the optimum balance of electrical and physical properties for long, problem free service.

The triple tandem extrusion of the screens with the insulation provides optimum electrical characteristics.

The compressed conductors are filled with water swellable powder. This construction slows the migration of water through the strands in the event of a mechanical dig-in followed by external exposure to water.

An insulation screen of ethylene-propylene rubber is extruded over the insulation. The copper concentric wires are uniformly spaced around the insulation screen. The overall polyethylene jacket provides protection against mechanical damage and corrosion.

Product identification is provided through the use of three red stripes placed 120° apart in the black jacket, with an NESC lightning bolt.

#### Applications

Okoguard URO-J cables provide maximum circuit longevity in underground residential distribution systems. They can be buried directly or installed in underground ducts or conduits.

#### Specifications

**Central Conductor:** Aluminum per ASTM B-609, Class B stranded per B-231.

**Filled Strand:** Water swellable powder meets or exceeds ICEA T-31-610 water penetration resistance and ANSI/NEMA class A connectorability requirements.

**Conductor Screen:** Extruded semiconducting ethylene-propylene rubber meets or exceeds the requirements of ICEA S-94-649 and AEIC CS8.

**Insulation:** Extruded Okoguard meets or exceeds the requirements of ICEA S-94-649 and AEIC CS8.

**Insulation Screen:** Extruded semiconducting ethylene-propylene rubber meets or exceeds the requirements of ICEA S-94-649 and AEIC CS8.

**Concentric Conductor:** Bare copper wires.

**Jacket:** Black Okolene with red extruded stripes meets or exceeds the requirements of ICEA S-94-649 for polyethylene jackets.

#### Product Features

- Triple tandem extruded, all EPR system.
- Okoguard cables meet or exceed NEMA/ICEA and RUS 7CFR 1728.204 standards.
- 105°C continuous operating temperature.
- 140°C emergency rating.
- 250°C short circuit rating.
- Excellent corona resistance.
- Low dielectric constant and power factor.
- Screens are clean stripping.
- Exceptional resistance to "treeing".
- Filled strand conductor.
- Moisture resistant.
- Overall jacket provides extended life.
- Excellent resistance to most chemicals.
- Can be listed by UL as Type MV-90 on special orders.
- Cable listed by CSA to C68.5 on special orders.
- Design Options:
  - Additional conductor sizes
  - Copper central conductor
  - Copper flat strap concentric neutral
  - Product identification via colored jackets.
  - Semiconducting jackets.
- Improved Temperature Rating. Okoguard insulation system has been tested and qualified for operation at 105°C continuous and 140°C emergency operating temperature.
- Minimum installation temperature of -40°C.



# Okoguard URO-J

15kV Underground Primary Distribution Cable-Jacketed  
 Red Identification Stripes  
 Filled Strand Aluminum Conductor/105°C Rating  
 133% Insulation Level

## Product Data Section 2: Sheet 36

### Okoguard Insulation: 220 mils 133% Insulation Level

| Catalog Number      | Conductor Size<br>AWG/kcmil | Nominal Dia. over Insulation (in.) | Nominal Dia. over Insulation<br>Screen (in.) | Copper Neutral, No. x AWG (1) | Nominal O.D. (in.) | Aprox. Net Weight<br>lbs./1000' | Aprox. Ship Weight<br>lbs./1000' | 90°C Ampacity Direct Burial (2) | 90°C Ampacity Duct (2) | 105°C Ampacity Direct Burial (2) | 105°C Ampacity Duct (2) |
|---------------------|-----------------------------|------------------------------------|--|-------------------------------|--------------------|---------------------------------|----------------------------------|---------------------------------|------------------------|----------------------------------|-------------------------|
| <b>FULL NEUTRAL</b> |                             |                                    |  |                               |                    |                                 |                                  |                                 |                        |                                  |                         |
| ▲ 163-23-3060       | 2(7x)                       | 0.77                               | 0.85   | 10 x 14                       | 1.08               | 602                             | 669                              | 170                             | 125                    | 185                              | 135                     |
| 163-23-3066         | 1(19x)                      | 0.82                               | 0.90   | 13 x 14                       | 1.14               | 694                             | 766                              | 195                             | 145                    | 210                              | 155                     |
| ▲ 163-23-3072       | 1/0(19x)                    | 0.84                               | 0.92   | 16 x 14                       | 1.15               | 753                             | 820                              | 220                             | 160                    | 235                              | 175                     |
| 163-23-3075         | 2/0(19x)                    | 0.91                               | 0.98   | 13 x 12                       | 1.25               | 916                             | 996                              | 250                             | 185                    | 270                              | 205                     |
| 163-23-3078         | 3/0(19x)                    | 0.96                               | 1.04   | 16 x 12                       | 1.31               | 1045                            | 1125                             | 285                             | 210                    | 310                              | 230                     |
| 163-23-3081         | 4/0(19x)                    | 1.02                               | 1.09   | 13 x 10                       | 1.41               | 1252                            | 1347                             | 320                             | 240                    | 350                              | 260                     |
| 163-23-3084         | 250(37x)                    | 1.07                               | 1.17   | 16 x 10                       | 1.48               | 1456                            | 1606                             | 350                             | 270                    | 380                              | 295                     |
| 163-23-3090         | 350(37x)                    | 1.18                               | 1.28   | 20 x 10                       | 1.59               | 1762                            | 1912                             | 425                             | 310                    | 460                              | 340                     |
| <b>1/3 NEUTRAL</b>  |                             |                                    |  |                               |                    |                                 |                                  |                                 |                        |                                  |                         |
| 162-23-3060         | 2(7x)                       | 0.78                               | 0.85   | 6 x 14                        | 1.09               | 562                             | 627                              | 150                             | 120                    | 165                              | 135                     |
| 162-23-3066         | 1(19x)                      | 0.82                               | 0.90   | 6 x 14                        | 1.14               | 612                             | 684                              | 175                             | 140                    | 185                              | 150                     |
| 162-23-3072         | 1/0(19x)                    | 0.86                               | 0.94   | 6 x 14                        | 1.18               | 661                             | 733                              | 195                             | 155                    | 215                              | 170                     |
| 162-23-3075         | 2/0(19x)                    | 0.91                               | 0.98   | 7 x 14                        | 1.22               | 730                             | 810                              | 225                             | 180                    | 240                              | 195                     |
| 162-23-3078         | 3/0(19x)                    | 0.96                               | 1.04   | 9 x 14                        | 1.27               | 825                             | 905                              | 255                             | 200                    | 275                              | 220                     |
| ▲ 162-23-3081       | 4/0(19x)                    | 0.99                               | 1.06   | 11 x 14                       | 1.30               | 891                             | 1005                             | 285                             | 235                    | 310                              | 255                     |
| 162-23-3084         | 250(37x)                    | 1.07                               | 1.17   | 13 x 14                       | 1.41               | 1069                            | 1164                             | 305                             | 250                    | 330                              | 275                     |
| ▲ 162-23-3090       | 350(37x)                    | 1.16                               | 1.26   | 18 x 14                       | 1.50               | 1254                            | 1425                             | 375                             | 310                    | 405                              | 335                     |
| ▲ 162-23-3093       | 500(37x)                    | 1.29                               | 1.39   | 16 x 12                       | 1.72               | 1666                            | 1853                             | 450                             | 370                    | 490                              | 405                     |
| ▲ 162-23-3096       | 750(61x)                    | 1.48                               | 1.58   | 15 x 10                       | 1.95               | 2244                            | 2468                             | 545                             | 460                    | 595                              | 505                     |
| ▲ 162-23-3099       | 1000(61x)                   | 1.63                               | 1.77   | 18 x *(A)                     | 2.15               | 2808                            | 3093                             | 620                             | 520                    | 675                              | 570                     |

\* - Special Conductor Size (A) Wire O.D. = 0.1066"

(1) Individual wire size and count may vary. The resulting combination meets the 1/3 or full neutral, size requirement.

Visit Okonite's web site [www.okonite.com](http://www.okonite.com) for the most up to date dimensions.

▲ Authorized Stock Item - Available from Customer Service centers.

#### Ampacities

(2) Full neutral, single phase ampacities are based on ICEA P-117-734 for 90°C or 105°C conductor temperature, 25°C ambient temperature, 100% load factor, and earth thermal resistivity of RHO 90.

One third neutral ampacities are based on triplexed or triangular configuration for the same conditions stated above.

# Okoguard URO-J

15kV Underground Primary Distribution Cable-Jacketed  
Red Identification Stripes

Filled Strand Aluminum Conductor/105°C Rating  
100% Insulation Level

## Product Data Section 2: Sheet 36

### Okoguard Insulation: 175 mils 100% Insulation Level

| Catalog Number      | Conductor Size<br>AWG/kcmil | Nominal Dia. over Insulation (in.) | Nominal Dia. over Insulation<br>Screen (in.) | Copper Neutral, No. x AWG (1) | Nominal O.D. (in.) | Approx. Net Weight<br>lbs./1000' | Approx. Ship Weight<br>lbs./1000' | 90°C Ampacity Direct Burial (2) | 90°C Ampacity Duct (2) | 105°C Ampacity Direct Burial (2) | 105°C Ampacity Duct (2) |
|---------------------|-----------------------------|------------------------------------|--|-------------------------------|--------------------|----------------------------------|-----------------------------------|---------------------------------|------------------------|----------------------------------|-------------------------|
| <b>FULL NEUTRAL</b> |                             |                                    |  |                               |                    |                                  |                                   |                                 |                        |                                  |                         |
| 163-23-2060         | 2(7x)                       | 0.68                               | 0.76   | 10 x 14                       | 1.00               | 536                              | 626                               | 170                             | 125                    | 185                              | 135                     |
| 163-23-2066         | 1(19x)                      | 0.72                               | 0.80   | 13 x 14                       | 1.03               | 608                              | 698                               | 195                             | 145                    | 210                              | 155                     |
| **163-23-2072       | 1/0(19x)                    | 0.76                               | 0.84   | 16 x 14                       | 1.07               | 688                              | 778                               | 220                             | 160                    | 235                              | 175                     |
| 163-23-2075         | 2/0(19x)                    | 0.81                               | 0.88   | 13 x 12                       | 1.15               | 820                              | 910                               | 250                             | 185                    | 270                              | 205                     |
| 163-23-2078         | 3/0(19x)                    | 0.86                               | 0.93   | 16 x 12                       | 1.20               | 939                              | 1029                              | 285                             | 210                    | 310                              | 230                     |
| 163-23-2081         | 4/0(19x)                    | 0.91                               | 0.99   | 13 x 10                       | 1.30               | 1138                             | 1238                              | 320                             | 240                    | 350                              | 260                     |
| 163-23-2084         | 250(37x)                    | 0.97                               | 1.04   | 16 x 10                       | 1.36               | 1302                             | 1418                              | 350                             | 270                    | 380                              | 295                     |
| 163-23-2090         | 350(37x)                    | 1.07                               | 1.17   | 20 x 10                       | 1.49               | 1615                             | 1793                              | 425                             | 310                    | 460                              | 340                     |
| <b>1/3 NEUTRAL</b>  |                             |                                    |  |                               |                    |                                  |                                   |                                 |                        |                                  |                         |
| 162-23-2060         | 2(7x)                       | 0.68                               | 0.76   | 6 x 14                        | 1.00               | 489                              | 579                               | 150                             | 120                    | 165                              | 135                     |
| 162-23-2066         | 1(19x)                      | 0.72                               | 0.80   | 6 x 14                        | 1.03               | 527                              | 617                               | 175                             | 140                    | 185                              | 150                     |
| 162-23-2072         | 1/0(19x)                    | 0.76                               | 0.84   | 6 x 14                        | 1.07               | 572                              | 662                               | 195                             | 155                    | 215                              | 170                     |
| 162-23-2075         | 2/0(19x)                    | 0.81                               | 0.88   | 7 x 14                        | 1.12               | 636                              | 726                               | 225                             | 180                    | 240                              | 195                     |
| 162-23-2078         | 3/0(19x)                    | 0.86                               | 0.93   | 9 x 14                        | 1.17               | 722                              | 889                               | 255                             | 200                    | 275                              | 220                     |
| 162-23-2081         | 4/0(19x)                    | 0.91                               | 0.99   | 11 x 14                       | 1.23               | 822                              | 922                               | 285                             | 235                    | 310                              | 255                     |
| 162-23-2084         | 250(37x)                    | 0.97                               | 1.04   | 13 x 14                       | 1.28               | 918                              | 1018                              | 305                             | 250                    | 330                              | 275                     |
| 162-23-2090         | 350(37x)                    | 1.07                               | 1.17   | 18 x 14                       | 1.41               | 1166                             | 1315                              | 375                             | 310                    | 405                              | 335                     |
| 162-23-2093         | 500(37x)                    | 1.20                               | 1.30   | 16 x 12                       | 1.57               | 1513                             | 1691                              | 450                             | 370                    | 490                              | 405                     |
| 162-23-2096         | 750(61x)                    | 1.39                               | 1.49   | 15 x 10                       | 1.87               | 2152                             | 2402                              | 545                             | 460                    | 595                              | 505                     |
| 162-23-2099         | 1000(61x)                   | 1.54                               | 1.68   | 18 x *(B)                     | 2.06               | 2711                             | 3059                              | 620                             | 520                    | 675                              | 570                     |

\* - Special Conductor Size (A) Wire O.D. =0.1066"

\*\* Stocked as unfilled strand as 161-23-2072, see Sec 2, Sheet 35.

(1) Individual wire size and count may vary. The resulting combination meets the 1/3 or full neutral, size requirement.

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#### Ampacities

(2) Full neutral, single phase ampacities are based on ICEA P-117-734 for 90°C or 105°C conductor temperature, 25°C ambient temperature, 100% load factor, and earth thermal resistivity of RHO 90.

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