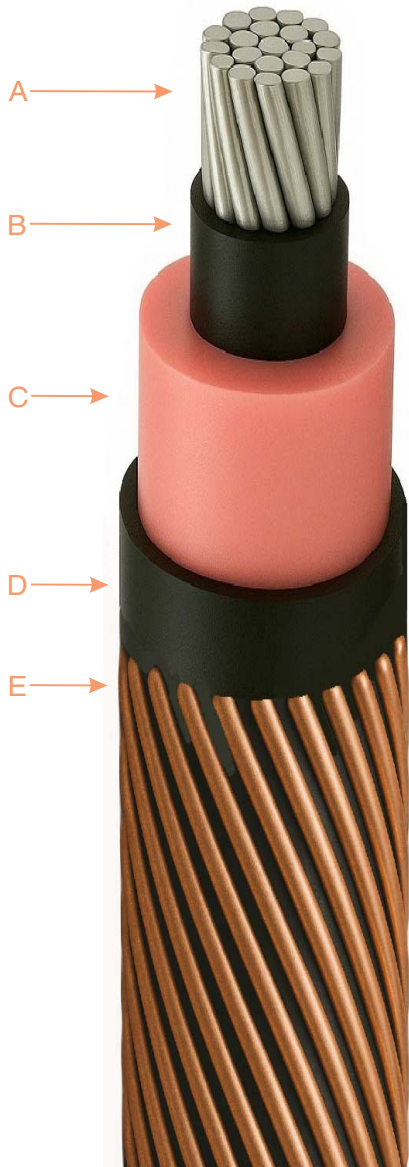


### Okoguard® UD

#### 15kV Underground Primary Distribution Cable

Aluminum Conductor/105°C Rating  
133% Insulation Level



- A Conductor-Stranded Aluminum
- B Strand Screen-Extruded Semiconducting EPR
- C Insulation-Okoguard-EPR
- D Insulation Screen-Extruded Semiconducting EPR
- E Concentric Conductor-Annealed Bare Copper Wires

#### 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.

An insulation screen of ethylene-propylene rubber is extruded over the insulation. The annealed bare copper wires are uniformly spaced around the insulation screen.

#### Applications

Okoguard UD cables provide excellent circuit longevity in underground distribution systems. They can be buried direct or installed in underground ducts or conduits.

#### Specifications

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

**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 for ethylene-propylene rubber 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.

#### Product Features

- Triple tandem extruded, all EPR system.
  - Okoguard cables meet or exceed ICEA standards.
  - 105°C continuous operating temperatures.
  - 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".
  - Moisture resistant.
  - Excellent resistance to most chemicals.
  - Design Options:
    - Additional conductor sizes
    - Filled strand
    - Copper conductor
    - Custom neutral sizes
    - 100% Insulation Level
    - Semiconducting outer jacket
  - 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.
  - Cable print legend with sequential footage printed on insulation screen.

# Okoguard UD

## 15kV Underground Primary Distribution Cable

Aluminum Conductor/105°C Rating  
133% Insulation Level

## Product Data

### Section 2: Sheet 34

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

| Catalog Number      | Conductor size<br>(AWG or kcmil) | Nominal Dia. over Insulation<br>(in.) | Insulation Screen Thickness (mils) | 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> |                                  |                                       |                                    |                                              |                               |                    |                                  |                                   |                                 |                        |                                  |                         |
| 161-23-3910         | 2(7x)                            | 0.76                                  | 30                                 | 0.84                                         | 10 x 14                       | 0.97               | 481                              | 571                               | 170                             | 120                    | 180                              | 130                     |
| 161-23-3916         | 1(19x)                           | 0.81                                  | 30                                 | 0.88                                         | 13 x 14                       | 1.01               | 555                              | 645                               | 195                             | 135                    | 205                              | 150                     |
| 161-23-3922         | 1/0(19x)                         | 0.84                                  | 30                                 | 0.92                                         | 16 x 14                       | 1.04               | 635                              | 725                               | 220                             | 155                    | 235                              | 170                     |
| 161-23-3925         | 2/0(19x)                         | 0.89                                  | 30                                 | 0.96                                         | 14 x 12                       | 1.12               | 746                              | 836                               | 250                             | 175                    | 270                              | 200                     |
| 161-23-3928         | 3/0(19x)                         | 0.94                                  | 30                                 | 1.01                                         | 16 x 12                       | 1.17               | 867                              | 957                               | 285                             | 200                    | 305                              | 225                     |
| 161-23-3931         | 4/0(19x)                         | 0.98                                  | 30                                 | 1.06                                         | 14 x 10                       | 1.27               | 1035                             | 1135                              | 325                             | 230                    | 350                              | 260                     |
| 161-23-3934         | 250(37x)                         | 1.06                                  | 40                                 | 1.16                                         | 16 x 10                       | 1.36               | 1228                             | 1344                              | 360                             | 255                    | 385                              | 285                     |
| 161-23-3940         | 350(37x)                         | 1.16                                  | 40                                 | 1.26                                         | 18x.1078                      | 1.47               | 1525                             | 1692                              | 425                             | 300                    | 455                              | 340                     |
| <b>1/3 NEUTRAL</b>  |                                  |                                       |                                    |                                              |                               |                    |                                  |                                   |                                 |                        |                                  |                         |
| 160-23-3910         | 2(7x)                            | 0.76                                  | 30                                 | 0.84                                         | 6 x 14                        | 0.97               | 429                              | 519                               | 160                             | 135                    | 165                              | 130                     |
| 160-23-3916         | 1(19x)                           | 0.81                                  | 30                                 | 0.88                                         | 6 x 14                        | 1.01               | 464                              | 554                               | 180                             | 155                    | 190                              | 150                     |
| 160-23-3922         | 1/0(19x)                         | 0.84                                  | 30                                 | 0.92                                         | 6 x 14                        | 1.04               | 506                              | 596                               | 205                             | 175                    | 215                              | 175                     |
| 160-23-3925         | 2/0(19x)                         | 0.89                                  | 30                                 | 0.96                                         | 7 x 14                        | 1.09               | 568                              | 658                               | 235                             | 200                    | 245                              | 195                     |
| 160-23-3928         | 3/0(19x)                         | 0.94                                  | 30                                 | 1.01                                         | 9 x 14                        | 1.14               | 653                              | 743                               | 270                             | 230                    | 280                              | 225                     |
| 160-23-3931         | 4/0(19x)                         | 0.98                                  | 30                                 | 1.06                                         | 11 x 14                       | 1.19               | 752                              | 852                               | 300                             | 240                    | 315                              | 255                     |
| 160-23-3934         | 250(37x)                         | 1.06                                  | 40                                 | 1.16                                         | 13 x 14                       | 1.29               | 873                              | 973                               | 330                             | 260                    | 345                              | 280                     |
| 160-23-3940         | 350(37x)                         | 1.16                                  | 40                                 | 1.26                                         | 18 x 14                       | 1.39               | 1092                             | 1208                              | 390                             | 320                    | 415                              | 345                     |
| 160-23-3943         | 500(37x)                         | 1.29                                  | 40                                 | 1.39                                         | 16 x 12                       | 1.55               | 1405                             | 1583                              | 470                             | 385                    | 495                              | 415                     |
| 160-23-3946         | 750(61x)                         | 1.49                                  | 40                                 | 1.59                                         | 16x.0966                      | 1.78               | 1895                             | 2170                              | 570                             | 470                    | 600                              | 510                     |
| 160-23-3949         | 1000(61x)                        | 1.64                                  | 55                                 | 1.77                                         | 18x.1052                      | 2.16               | 2802                             | 2813                              | 665                             | 550                    | 685                              | 585                     |

\*-Special Conductor Size (A) Wire O.D. =0.1052"

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

Okonite's web site, [www.okonite.com](http://www.okonite.com) contains the most up to date information.

#### Ampacities

(2) Full neutral, single phase ampacities are based on ICEA's S-94-649, Appendix F for 90°C conductor temperature, 20°C ambient temperature, 100% load factor, and earth thermal resistivity of RHO 90 and modified for un-jacketed cable.

One third neutral ampacities are based on ICEA P-53-426 triplexed or triangular configuration for the same conditions stated above.