



Okoguard® Submarine Cable

15 kV Shielded Power Cable
3 Copper Conductors/90°C Rating
133% Insulation Level



- A Conductor- Copper
- B Strand Screen- Extruded Semi-conducting EPR
- C Insulation- Okoguard
- D Insulation Screen- Extruded Semi-conducting EPR
- E Shield-Copper Tape
- F Jacket- Okolene
- G Fillers- Polypropylene
- H Binder Tape
- J Bedding- Polypropylene
- K Armor- Galvanized Steel Wires
- L Covering- Nylon Serving Slushed with solar saturant and whitening finish.

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 unequaled in other solid dielectrics. The clean red color of Okoguard is the result of an evolutionary development in ethylene-propylene compounding to gain greater dependability of the electrical characteristics. 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.

Screens and Shielding

Strand and insulation screens are extruded semiconducting EPR materials completely compatible with the insulation. In addition, they are triple-tandem extruded with the insulation to provide a contaminate and ionization-free interface that will not separate with time and become a source of corona discharge. A 5-mil thick copper tape with 25% overlap applied over the outer screen completes the shielding system.

Coverings

Each insulated conductor is covered with an extruded Okolene (Polyethylene) jacket. Multiple galvanized steel wires provide the primary mechanical protection and, in addition, provide longitudinal strength for laying the cable on the sea bottom and, if ever necessary, for its retrieval. Each armor wire may be provided with a high density polyethylene jacket for additional corrosion protection. A layer of nylon over the armor protects it from scrapes and damage during the laying process.

Assembly

The individually jacket single conductors are assembled with fillers and a binder tape overall. One or more ground conductors can be placed in the outer interstices of the cable. Over the core binder, a layer of polypropylene yarn is applied as an armor bedding. The armor is applied over the bedding and a nylon serving slushed with solar saturant is applied overall.

Specifications

Conductor: Uncoated (or optional coated), Class B compressed stranded per ASTM B8, or compact stranded per ASTM B496.

Strand/Insulation Screens: Thermoset semiconducting EPR screens triple-tandem extruded with the insulation exceed the physical and conductivity requirements of ICEA S-93-639/NEMA WC74 and AEIC CS8.

Insulation: Okoguard meets or exceeds electrical and physical requirements of Class II and III insulations per ICEA S-93-639/NEMA WC74 and AEIC CS8 where applicable.

Shield: 5 mil bare copper tape helically applied with 25% overlap.

Jacket: Black Okolene (polyethylene) meets or exceeds the requirements of ICEA S-93-639/NEMA WC74 and ASTM D-1248.

Armor: Meets physical requirements of ICEA S-93-639/NEMA WC74 for Division I type round galvanized steel armor wire.

Product Features

- Triple-tandem extruded, all EPR system.
- Custom designed.
- URO-J concentric neutral cable design for the 1/C cables are also available.
- Okoguard cables meet or exceed all recognized industry standards UL, AEIC, NEMA/ICEA.
- 105°C continuous operating temperatures.
- 140°C emergency rating.
- 250°C short circuit rating.
- Excellent corona resistance.
- Exceptional resistance to "treeing".
- Specially designed control, signal and fiberoptic components can be included in the cable interstices.
- Okoguard Submarine Power Cables are also available with 5, 8, 25 and 35kV ratings.

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Product Data Section 2: Sheet 30

Typical Sizes Available

Catalog Number	Conductor Size (AWG/kcmil)	Approx. Dia. over Insulation - Inches	Approx. Dia. over Screen - Inches	Approx. O.D. - Inches	Approx. Net Weight lbs./1000'
Okoguard Insulation: 15kV - 220 Mils					
115-23-8502	2(7x)	0.79	0.85	3.12	7,603
115-23-8504	1(19x)	0.83	0.89	3.20	8,001
115-23-8506	1/0(19x)	0.87	0.93	3.39	9,583
115-23-8508	2/0(19x)	0.91	0.97	3.48	10,155
115-23-8512	4/0(19x)	1.02	1.08	3.70	11,663
115-23-8518	350(37x)	1.18	1.24	4.05	14,130
115-23-8520	500(37x)	1.31	1.37	4.33	16,498
115-23-8522	750(61x)	1.49	1.55	4.72	20,162