



Okoguard® - Okolene® Submarine Cable

15kV Shielded Power Cable

3 Copper Conductors/105°C Rating
133% Insulation Level



- A Conductor-Copper Class B Strand
- 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-Overall Serving Slushed with solar saturant and whiting 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 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.

Ethylene-propylene rubber screens are extruded over the conductor and the insulation. The triple tandem extrusion of these screens with the insulation provides optimum electrical characteristics.

Applications

The cables are recommended for use as primary circuits where large bodies of water must be traversed; such as river crossings, offshore production platforms and drilling rigs, etc.

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. An overall bulk continuous filament serving is applied over the armor wires. Asphalt slush is over and under the bulk continuous filament serving. Over the asphalt, a soapstone (whiting) finish is applied to help prevent layers from sticking.

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 overall serving.

Specifications

Conductor: Uncoated Class B strand copper. Compressed round conductors per ASTM B-3 and ASTM B-8. Compact round conductors per ASTM B-496. Filled Strand is also available.

Strand Screen:

Extruded EPR semiconducting strand screen. Meets or exceeds electrical and physical requirements of ICEA S-93-639/NEMA WC74 and AEIC CS8.

Insulation: Meets or exceeds electrical and physical requirements of ICEA S-93-639/NEMA WC74 and AEIC CS8.

Insulation Screen: Extruded EPR semiconducting insulation screen applied directly over the insulation. Meets or exceeds electrical and physical requirements of ICEA S-93-639/NEMA WC74 and AEIC CS8.

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

Jacket: Black Okolene® (Linear Low Density 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. 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".

Design Options:

- Specially designed control, signal and fiber optic components and grounding conductors can be included in the cable interstices.
- Optional 10 mil Bronze Tape for Teredo Protection.
- Wet core cable design.
- Double layer of steel wire armoring.
- Jacketed Armor Wires.
- 1/C Single cable constructions.
- URO-J concentric neutral cable design.
- Solid and stranded aluminum conductors.
- 3/C cable Voltage ratings up to 35kV and single cables up to 69kV.

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Product Data Section 2: Sheet 30

Catalog Number	Conductor size	Conductor Size mm ²	Nominal Dia. over Insulation (in.)	Nominal Dia. over Screen (in.)	Jacket Thickness - mils	Jacket Thickness - mm	Nominal O.D. (in.)	Nominal O.D. - mm	Approx. Net Weight (lbs./1000 ft)	Approx. Ship Weight (lbs./1000 ft)
Compressed Round Copper Conductor 220 mils Okoguard Insulation										
115-23-8502	#2(7X)	33.6	0.77	0.83	0.08	2.03	3.07	77.98	7427	8545
115-23-8504	#1(19X)	42.4	0.81	0.87	0.08	2.03	3.15	80.01	7846	8964
115-23-8506	1/0(19X)	53.5	0.85	0.91	0.08	2.03	3.24	82.29	8318	9700
115-23-8508	2/0(19X)	67.4	0.89	0.95	0.08	2.03	3.43	87.12	9980	11530
115-23-8512	4/0(19X)	107	0.99	1.05	0.08	2.03	3.65	92.71	11449	12624
115-23-xxxx	250(37X)	127	1.06	1.17	0.08	2.03	3.89	98.81	12298	13784
115-23-8518	350(37X)	177	1.16	1.22	0.08	2.03	4.02	102.11	14039	17094
115-23-8520	500(37X)	253	1.29	1.35	0.08	2.03	4.30	109.22	16373	19058
115-23-8522	750(61X)	380	1.48	1.55	0.08	2.03	4.72	119.88	20188	25883
115-23-xxxx	1000(61X)	507	1.64	1.69	0.11	2.79	5.17	131.32	24250	30923
Compact Round Copper Conductor 220 mils Okoguard Insulation										
•115-23-xxxx	#2(7X)	33.6	0.75	0.81	0.08	2.03	3.03	76.96	7291	8321
115-23-xxxx	#1(19X)	42.4	0.79	0.85	0.08	2.03	3.12	79.25	7742	9122
•115-23-xxxx	1/0(19X)	53.5	0.82	0.88	0.08	2.03	3.17	80.52	8096	9526
•115-23-xxxx	2/0(19X)	67.4	0.86	0.92	0.08	2.03	3.26	82.80	8625	10055
•115-23-xxxx	4/0(19X)	107	0.96	1.02	0.08	2.03	3.58	90.93	11181	12781
•115-23-xxxx	250(37X)	127	1.01	1.07	0.08	2.03	3.70	93.98	11926	15076
•115-23-xxxx	350(37X)	177	1.10	1.16	0.08	2.03	3.89	98.80	13541	16691
•115-23-xxxx	500(37X)	253	1.22	1.28	0.08	2.03	4.15	105.41	15781	19406
•115-23-xxxx	750(61X)	380	1.40	1.46	0.08	2.03	4.53	115.06	19441	23066
•115-23-xxxx	1000(61X)	507	1.55	1.60	0.11	2.79	4.97	126.24	23402	32877

Okonite's web site, www.okonite.com contains the most up to date information.

- Items use component core for quicker delivery.