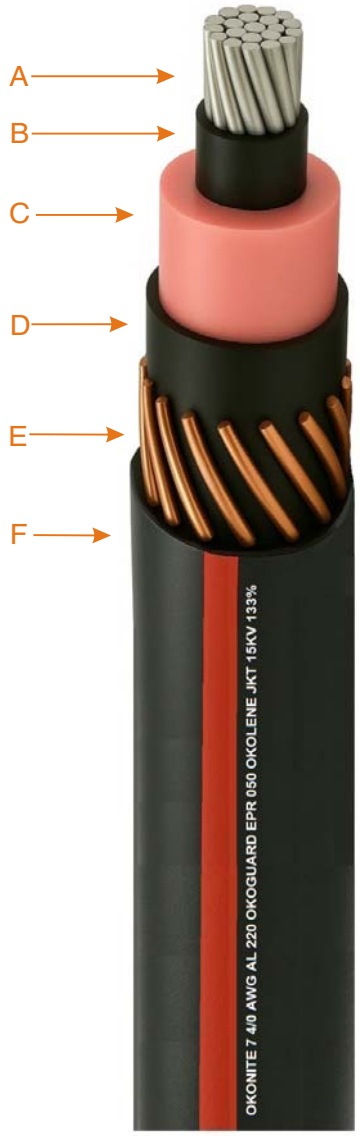
Okoguard® URO-J

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
B Strand Screen - Extruded Semiconducting EPR
C Insulation-Okoguard EPR
D Insulation Screen - Extruded Semiconducting 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 unequaled 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 a water swellable agent. 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 agent meets or exceeds ICEA T-31-610 water penetration resistance and ANSI/NEMA class A connectorability requirements.

Conductor Screen: Extruded semiconucting ethylene-propylene rubber meets or exceeds the requirements of ICEA S-94-649, AEIC CS8, and CSA C68.5.

Insulation: Extruded Okoguard meets or exceeds the requirements of ICEA S-94-649, AEIC CS8, and C68.5.

Insulation Screen: Extruded semiconducting ethylene-propylene rubber meets or exceeds the requirements of ICEA S-94-649, AEIC CS8, and CSA C68.5.

Concentric Conductor: Bare copper wires.

Jacket: Black Okolene with red extruded stripes meets or exceeds the requirements of ICEA S-94-649, AEIC CS8, and CSA C68.5 for polyethylene jackets.

Product Features

- Triple tandem extruded, all EPR system.
- Okoguard cables meet or exceed ICEA standards.
- Meets RUS 1728.204 for cables with filled strand or solid conductor and 133% insulation level.
- 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.
- CSA C68.5 listed, LTGG (-40°C), SR.
- 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.

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Filled Strand Aluminum Conductor/105°C Rating

100% Insulation Level

Okoguard Insulation: 175 mils 100% Insulation Level

Catalog Number	Conductor size (AWG or kcmil)	Nominal Dia. over Insulation (in.)	Insulation Screen Thickness (mils)	Nominal Dia. over Insulation Screen (in.)	Copper Neutral, No. x AWG (1)	Nominal O.D. (in.)	Approx. Net Weight lbs./1000'	Approx. Ship Weight lbs./1000'	90°C Ampacity Direct Burial (2)	90°C Ampacity Duct (2)	105°C Ampacity Direct Burial (2)	105°C Ampacity Duct (2)
FULL NEUTRAL												
▲163-23-2060	2(7X)	0.68	30	0.75	10X14	0.99	517	626	170	125	185	135
163-23-2066	1(19X)	0.72	30	0.79	13X14	1.03	588	698	195	145	210	155
▲163-23-2072	1/0(19X)	0.76	30	0.83	16X14	1.07	667	778	220	160	235	175
163-23-2075	2/0(19X)	0.80	30	0.87	14X12	1.14	793	910	250	185	270	205
163-23-2078	3/0(19X)	0.85	30	0.92	16X12	1.19	910	1029	285	210	310	230
163-23-2081	4/0(19X)	0.90	30	0.98	14X10	1.29	1131	1238	320	240	350	260
163-23-2084	250(37X)	0.97	30	1.04	16X10	1.35	1270	1418	350	270	380	295
163-23-2090	350(37X)	1.07	40	1.17	18X.1078	1.50	1603	1793	425	310	460	340
1/3 NEUTRAL												
162-23-2060	2(7X)	0.69	30	0.76	6X14	1.00	475	579	150	120	165	135
162-23-2066	1(19X)	0.72	30	0.79	6X14	1.03	506	617	175	140	185	150
162-23-2072	1/0(19X)	0.76	30	0.83	6X14	1.07	550	662	195	155	215	170
162-23-2075	2/0(19X)	0.80	30	0.87	7X14	1.11	612	726	225	180	240	195
162-23-2078	3/0(19X)	0.85	30	0.92	9X14	1.16	697	889	255	200	275	220
162-23-2081	4/0(19X)	0.90	30	0.98	11X14	1.21	794	922	285	235	310	255
162-23-2084	250(37X)	0.97	30	1.04	13X14	1.28	895	1018	305	250	330	275
162-23-2090	350(37X)	1.07	40	1.17	18X14	1.41	1138	1315	375	310	405	335
162-23-2093	500(37X)	1.20	40	1.30	16X12	1.57	1476	1691	450	370	490	405
162-23-2096	750(61X)	1.39	40	1.49	16X.0966	1.86	2066	2402	545	460	595	505
162-23-2099	1000(61X)	1.54	40	1.68	18X.1052	2.06	2645	3059	620	520	675	570

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

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

▲**Authorized stock item**. Available from our 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.

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Filled Strand Aluminum Conductor/105°C Rating

133% Insulation Levels

Okoguard Insulation: 220 mils 133% Insulation Level

Catalog Number	Conductor size (AWG or kcmil)	Nominal Dia. over Insulation (in.)	Insulation Screen Thickness (mils)	Nominal Dia. over Insulation Screen (in.)	Copper Neutral, No. x AWG (1)	Nominal O.D. (in.)	Approx. Net Weight lbs./1000'	Approx. Ship Weight lbs./1000'	90°C Ampacity Direct Burial (2)	90°C Ampacity Duct (2)	105°C Ampacity Direct Burial (2)	105°C Ampacity Duct (2)
FULL NEUTRAL												
▲163-23-3060	2(7X)	0.77	30	0.84	10X14	1.08	591	669	170	125	185	135
163-23-3066	1(19X)	0.81	30	0.88	13X14	1.12	670	766	195	145	210	155
▲163-23-3072	1/0(19X)	0.84	30	0.92	16X14	1.15	748	820	220	160	235	175
163-23-3075	2/0(19X)	0.89	30	0.96	14X12	1.23	902	996	250	185	270	205
163-23-3078	3/0(19X)	0.94	30	1.01	16X12	1.28	1004	1125	285	210	310	230
163-23-3081	4/0(19X)	0.98	30	1.06	14X10	1.38	1228	1347	320	240	350	260
163-23-3084	250(37X)	1.06	40	1.16	16X10	1.47	1410	1606	350	270	380	295
163-23-3090	350(37X)	1.16	40	1.26	18X.1078	1.59	1721	1912	425	310	460	340
1/3 NEUTRAL												
162-23-3060	2(7X)	0.77	30	0.84	6X14	1.08	544	627	150	120	165	135
162-23-3066	1(19X)	0.81	30	0.88	6X14	1.12	588	684	175	140	185	150
162-23-3072	1/0(19X)	0.84	30	0.92	6X14	1.15	631	733	195	155	215	170
162-23-3075	2/0(19X)	0.89	30	0.96	7X14	1.20	701	810	225	180	240	195
162-23-3078	3/0(19X)	0.94	30	1.01	9X14	1.25	789	905	255	200	275	220
▲162-23-3081	4/0(19X)	0.98	30	1.06	11X14	1.30	887	1005	285	235	310	255
162-23-3084	250(37X)	1.06	40	1.16	13X14	1.40	1029	1164	305	250	330	275
▲162-23-3090	350(37X)	1.16	40	1.26	18X14	1.50	1246	1425	375	310	405	335
▲162-23-3093	500(37X)	1.29	40	1.39	16X12	1.67	1600	1787	450	370	490	405
▲162-23-3096	750(61X)	1.47	40	1.58	16X.0966	1.95	2209	2468	545	460	595	505
▲162-23-3099	1000(61X)	1.64	55	1.77	18X.1052	2.16	2807	3093	620	520	675	570

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

THE OKONITE COMPANY
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