



Okoguard® URO-J

15kV to 35kV Underground Primary Distribution Cable Jacketed — Red Identification Stripes

Copper Conductor/105°C Rating 100% and 133% Insulation Level



- A Conductor-Compressed or Compact Round Copper
- 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 3 extruded red ID stripes, and 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.

An insulation screen of ethylene-propylene rubber is extruded over the insulation. The bare concentric copper 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 cables provide maximum circuit longevity in underground residential distribution systems. They can be buried direct or installed in underground ducts or conduits.

Specifications

Central Conductor: Uncoated soft copper. Compressed round conductors per ASTM B-3 and ASTM B-8. Compact round conductors per ASTM B-496.

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: Two insulation screen thicknesses are available:

Cables with Compressed Round Copper

Conductor: Have extruded semiconducting ethylene-propylene rubber insulation screens that meet the requirements of ICEA S-94-649, AEIC CS8 and UL 1072.

Cables with Compact Round Copper Conductor: Have extruded semiconducting

ethylene-propylene rubber insulation screens that meet the requirements of ICEA S-93-639/NEMA WC74 & S-97-682, AEIC CS8 and UL 1072.

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 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.
- Can be listed by UL as Type MV-90 on Special Orders.
- Cable CSA listed to C68.5 on special orders.
- Design Options:
 - Additional conductor sizes
 - Filled strand
 - Copper flat strap concentric neutral
 - Product identification via colored jackets.
 - Semiconducting jacket.
- Improved Temperature Rating.

Okoguard insulation system has been tested and qualified for operation at 105°C continuous and 140°C emergency operating temperature.

Okoguard URO-J

Copper Compressed Round Conductor/105°C Rating
(with ICEA S-94-649 Insulation Screen Thickness)

Product Data Section 2: Sheet 42

Catalog Number	Conductor Size AWG/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.)	Aprox. Net Weight lbs./1000'	Aprox. 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 — Okoguard Insulation: 220 mils (5.59mm), 133% Insulation Level - 15kV												
141-23-3060	2(7x)	0.78	30	0.85	16 x 14	1.08	804	871	210	160	230	175
141-23-3066	1(19x)	0.82	30	0.82	13 x 12	1.16	975	1055	235	180	260	200
141-23-3072	1/0(19x)	0.86	30	0.03	16 X 12	1.20	1105	1185	270	205	290	225
141-23-3075	2/0(19x)	0.90	30	0.98	13 x 10	1.29	1364	1454	310	235	335	255
141-23-3078	3/0(19x)	0.95	40	1.03	16 x 10	1.39	1563	1663	350	265	380	290
141-23-3081	4/0(19x)	1.01	40	1.08	20 x 10	1.40	1853	1953	405	305	440	330
1/3 NEUTRAL												
140-23-3060	2(7x)	0.78	30	0.85	6 x 14	1.09	688	755	195	160	210	175
140-23-3066	1(19x)	0.82	30	0.89	7 x 14	1.17	778	858	220	180	240	195
140-23-3072	1/0(19x)	0.86	30	0.93	9 x 14	1.20	892	972	250	200	275	220
140-23-3075	2/0(19x)	0.90	30	0.98	11 x 14	1.21	1025	1105	285	230	310	250
140-23-3078	3/0(19x)	0.95	30	1.03	14 x 14	1.30	1200	1290	325	260	350	285
140-23-3081	4/0(19x)	1.01	40	1.08	17 x 14	1.32	1416	1506	365	300	395	325
140-23-3084	250(37x)	1.08	40	1.17	13 x 12	1.44	1682	1798	395	325	430	355
140-23-3090	350(37x)	1.17	40	1.27	18 x 12	1.54	2133	2276	475	390	515	425
140-23-3093	500(37x)	1.27	40	1.40	17 x 10	1.77	2982	3146	555	455	610	500
140-23-3096	750(61x)	1.40	40	1.59	24x*(B)	1.97	4187	4353	650	545	710	600
140-23-3099	1000(61x)	1.64	55	1.77	32 x 10	2.15	5277	5667	815	685	885	750
FULL NEUTRAL — Okoguard Insulation: 260 mils (6.60mm), 100% Insulation Level - 25kV												
141-23-4066	1(19x)	0.89	30	0.96	13x12	1.23	1053	1165	235	180	260	200
141-23-4072	1/0(19x)	0.93	30	1.00	16x12	1.27	1187	1305	270	205	290	225
141-23-4075	2/0(19x)	0.97	30	1.04	13x10	1.36	1451	1569	310	235	335	255
141-23-4078	3/0(19x)	1.02	40	1.12	16x10	1.43	1683	1835	350	265	380	290
141-23-4081	4/0(19x)	1.07	40	1.17	20x10	1.49	1978	2139	405	305	440	330
1/3 NEUTRAL												
140-23-4066	1(19x)	0.89	30	0.96	7x14	1.19	854	921	220	180	240	195
140-23-4072	1/0(19x)	0.93	30	1.00	9x14	1.23	971	1083	250	200	275	220
140-23-4075	2/0(19x)	0.97	30	1.04	11x14	1.28	1108	1226	285	230	310	250
140-23-4078	3/0(19x)	1.02	40	1.12	14x14	1.36	1315	1433	325	260	350	285
140-23-4081	4/0(19x)	1.07	40	1.17	17x14	1.41	1536	1654	365	300	395	325
140-23-4084	250(37x)	1.14	40	1.24	13x12	1.51	1781	1965	395	325	430	355
140-23-4090	350(37x)	1.24	40	1.34	18x12	1.61	2239	2423	475	390	515	425
140-23-4093	500(37x)	1.37	40	1.47	17x10	1.85	3103	3408	555	455	610	500
140-23-4096	750(61x)	1.57	55	1.70	24x*(B)	2.08	4300	4622	650	545	710	600
140-23-4099	1000(61x)	1.71	55	1.85	32x10	2.23	5417	5817	815	685	885	750
FULL NEUTRAL — Okoguard Insulation: 345 mils (8.76mm), 100% Insulation Level - 35kV												
141-23-6072	1/0(19x)	1.11	40	1.21	13x12	1.48	1421	1564	265	210	285	230
141-23-6075	2/0(19x)	1.16	40	1.25	14x10	1.56	1697	1840	305	235	330	255
141-23-6078	3/0(19x)	1.20	40	1.30	16x10	1.61	1909	2052	345	270	375	295
141-23-6081	4/0(19x)	1.25	40	1.35	20x10	1.73	2275	2439	395	305	430	330
1/3 NEUTRAL												
140-23-6072	1/0(19x)	1.11	0.040	1.21	9x14	1.44	1201	1344	250	210	270	230
140-23-6075	2/0(19x)	1.15	0.040	1.25	11x14	1.48	1346	1489	280	235	305	260
140-23-6078	3/0(19x)	1.20	0.040	1.30	14x14	1.54	1533	1676	320	265	345	290
140-23-6081	4/0(19x)	1.25	0.040	1.35	17x14	1.59	1763	1906	360	300	395	330
140-23-6084	250(37x)	1.31	0.040	1.41	13x12	1.74	2071	2235	390	330	425	365
140-23-6090	350(37x)	1.41	0.040	1.51	18x12	1.85	2549	2736	470	400	510	435
140-23-6093	500(37x)	1.54	0.055	1.68	17x10	2.06	3447	3739	555	470	605	515
140-23-6096	750(61x)	1.74	0.055	1.87	24x*(B)	2.25	4604	5163	650	560	710	620
140-23-6099	1000(61x)	1.89	0.055	2.03	32x10	2.40	5764	6323	815	700	885	770

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

* Special Conductor Size, (B) Wire O.D.= 0.1010"

Okoguard URO-J

Copper Compact Round Conductor/105°C Rating

(with ICEA S-93-639 and S-97-682 Insulation Screen Thickness)

Product Data

Section 2: Sheet 42

Catalog Number	Conductor Size AWG/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.)	Aprox. Net Weight lbs./1000'	Aprox. 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 — Okoguard Insulation: 220 mils (5.59mm), 133% Insulation Level - 15kV												
▲ 141-23-9460 ¹	2(7x)	0.75	24	0.81	16 x 14	1.05	795	862	210	160	230	175
• 141-23-9060	2(7x)	0.76	24	0.81	16 x 14	1.05	775	841	210	160	230	175
• 141-23-9066	1(19x)	0.79	30	0.87	13 x 12	1.14	942	1022	235	180	260	200
• 141-23-9517	1/0(19x)	0.83	24	0.88	16 X 12	1.15	1065	1145	270	205	290	225
• 141-23-9075	2/0(19x)	0.87	30	0.94	13 x 10	1.26	1315	1405	310	235	335	255
• 141-23-9533	3/0(19x)	0.92	30	0.99	16 x 10	1.30	1541	1641	350	265	380	290
• 141-23-9535	4/0(19x)	0.97	24	1.02	20 x 10	1.33	1801	1901	405	305	440	330
1/3 NEUTRAL												
• 140-23-9512	2(7x)	0.76	24	0.81	6 x 14	1.05	657	724	195	160	210	175
• 140-23-9514	1(19x)	0.79	30	0.87	7 x 14	1.10	762	829	220	180	240	195
• 140-23-9523	1/0(19x)	0.83	24	0.88	9 x 14	1.12	853	933	250	200	275	220
• 140-23-9025	2/0(19x)	0.87	24	0.92	11 x 14	1.16	985	1065	285	230	310	250
• 140-23-9068	3/0(19x)	0.92	30	0.99	14 x 14	1.23	1180	1270	325	260	350	285
• 140-23-9055	4/0(19x)	0.97	24	1.02	17 x 14	1.26	1355	1445	365	300	395	325
• 140-23-9231	250(37x)	1.03	24	1.07	13 x 12	1.34	1574	1674	395	325	430	355
• 140-23-9234	350(37x)	1.12	24	1.16	18 x 12	1.43	2030	2173	475	390	515	425
• 140-23-9087	500(37x)	1.24	24	1.28	17 x 10	1.59	2763	2906	555	455	610	500
• 140-23-9096	750(61x)	1.41	24	1.46	24x*(B)	1.84	3931	4197	650	545	710	600
• 140-23-9048	1000(61x)	1.56	24	1.60	32 x 10	1.98	5040	5387	815	685	885	750
FULL NEUTRAL — Okoguard Insulation: 345 mils (8.76mm), 100% Insulation Level - 35kV												
• 141-23-9822	1/0(19x)	1.08	24	1.15	16x12	1.46	1401	1544	270	205	290	225
• 141-23-9825	2/0(19x)	1.12	40	1.23	13x10	1.55	1648	1791	310	235	335	255
• 141-23-9828	3/0(19x)	1.16	40	1.28	16x10	1.59	1887	2030	350	265	380	290
• 141-23-9831	4/0(19x)	1.22	24	1.29	20x10	1.60	2184	2327	405	305	440	330
1/3 NEUTRAL												
• 140-23-9822	1/0(19x)	1.08	24	1.19	9x14	1.39	1182	1325	250	200	275	220
• 140-23-9825	2/0(19x)	1.12	40	1.23	11x14	1.47	1330	1473	285	230	310	250
• 140-23-9828	3/0(19x)	1.16	40	1.28	14x14	1.52	1512	1655	325	260	350	285
• 140-23-9831	4/0(19x)	1.22	24	1.29	17x14	1.53	1724	1867	365	300	395	325
• 140-23-9834	250(37x)	1.26	40	1.38	13x12	1.65	1957	2100	395	325	430	355
• 140-23-9839	350(37x)	1.36	40	1.47	18x12	1.81	2503	2667	475	390	515	425
• 140-23-9841	500(37x)	1.48	24	1.52	17x10	1.92	3230	3496	555	455	610	500
• 140-23-9846	750(61x)	1.66	55	1.80	24x*(B)	2.20	4524	4924	650	545	710	600
• 140-23-9848	1000(61x)	1.82	55	1.95	32x10	2.33	5660	6219	815	685	885	750
FULL NEUTRAL — Okoguard Insulation: 420 mils (10.7mm), 133% Insulation Level - 35kV												
• 141-23-9922	1/0(19x)	1.27	24	1.31	16x12	1.58	1602	1745	265	210	285	230
• 141-23-9925	2/0(19x)	1.31	40	1.39	13x10	1.77	1921	2085	305	235	330	255
• 141-23-9928	3/0(19x)	1.36	40	1.44	16x10	1.81	2168	2332	345	270	375	295
• 141-23-9931	4/0(19x)	1.41	24	1.45	20x10	1.83	2475	2662	395	305	430	330
1/3 NEUTRAL												
• 140-23-9922	1/0(19x)	1.27	24	1.31	9x14	1.55	1380	1523	250	210	270	230
• 140-23-9924	2/0(19x)	1.31	40	1.39	11x14	1.63	1534	1677	280	235	305	260
• 140-23-9927	3/0(19x)	1.36	40	1.44	14x14	1.74	1784	1948	320	265	345	290
• 140-23-9928	4/0(19x)	1.41	24	1.45	17x14	1.75	2005	2169	360	300	395	330
• 140-23-9930	250(37x)	1.47	40	1.54	13x12	1.87	2251	2438	390	330	425	365
• 140-23-9939	350(37x)	1.57	40	1.63	18x12	1.96	2757	3014	470	400	510	435
• 140-23-9947	500(37x)	1.70	24	1.69	17x10	2.07	3470	3756	555	470	605	515
• 140-23-9948	750(61x)	1.90	55	1.96	24x*(B)	2.34	4820	5380	650	560	710	620
• 140-23-9949	1000(61x)	1.97	55	2.10	32x10	2.48	5977	6547	815	700	885	770

▲ Authorized stock item. Available from our Customer Service Centers.

* these items use component core for quicker delivery

¹ 141-23-9460 is listed and shipped UL's MV-90 rating on jacket. All other cables shown are available with same listing on special order.

* Special Conductor Size, (B) Wire O.D. = 0.1010"

Okoguard URO-J

15kV to 35kV Underground Primary Distribution Cable

Jacketed — Red Identification Stripes

Copper Conductor/105°C Rating 100% and 133% Insulation Level

Product Data Section 2: Sheet 42

Table CN Insulation Screen Thickness* per ICEA S-94-649 (for Traditional Concentric Neutral Shield)	
Calculated Minimum Diameter over Insulation (In.)	Minimum Point (mils)
0 - 1.000	30
1.001 - 1.500	40
1.5001 - 2.000	55
2.001 - larger	55

Table CT Insulation Screen Thickness* per ICEA S-93-639 (for Traditional Copper Tape Shield)	
Calculated Minimum Diameter over Insulation (In.)	Minimum Point (mils)
ALL	24

***Insulation Screens:** Two insulation screen thicknesses are available:

Cables with Compressed Round Copper Conductor (Table CN):

Have extruded semiconducting ethylene-propylene rubber insulation screens that meet the requirements of ICEA S-94-649 and AEIC CS8.

Cables with Compact Round Copper Conductor (Table CT):

Have extruded semiconducting ethylene-propylene rubber insulation screens that meet the requirements of ICEA S-93-639/NEMA WC74 & S-97-682, AEIC CS8 and UL 1072.

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

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.