Okoguard® URO-J

25kV Underground Primary Distribution Cable-Jacketed

Red Identification Stripes

Aluminum Conductor/105°C Rating
100% and 133% Insulation Levels

A Conductor-Stranded Aluminum
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 three extruded red ID stripe, 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 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.

An insulation screen of ethylene-propylene rubber is extruded over the insulation. The bare 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.

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 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.

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.
- Meets RUS 1728.204 for cables with filled strand or solid conductor and 100% 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”.
- Moisture resistant.
- Overall jacket provides extended life.
- Red extruded stripes
- Excellent resistance to most chemicals.
- Can be listed by UL as Type MV-90 on Special Orders.
- Can be CSA Listed to C68.5 on special orders.
- Design Options:
  - Additional conductor sizes
  - Filled strand
  - 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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Aluminum Conductor/105°C Rating
100% Insulation Levels

Okoguard Insulation: 260 mils 100% Insulation Level

Catalog Number	Conductor Size AWG\kcmil	Nominal Dia. over Insulation (in.)	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											
161-23-4066	1 (19x)	0.90	0.97	13 x 14	1.21	772	872	195	145	210	155
▲ 161-23-4069	1/0 (1x)	0.89	0.97	16 x 14	1.20	803	870	220	160	235	175
161-23-4072	1/0 (19x)	0.92	1.00	16 x 14	1.23	832	898	220	160	235	175
▲ 163-23-4072*	1/0 (19x)	0.92	1.00	16 x 14	1.23	833	899	220	160	235	175
161-23-4075	2/0 (19x)	0.98	1.05	13 x 12	1.33	1001	1117	250	185	270	205
161-23-4078	3/0 (19x)	1.03	1.13	16 x 12	1.40	1157	1273	285	210	310	230
161-23-4081	4/0 (19x)	1.09	1.19	13 x 10	1.50	1372	1550	320	240	350	260
161-23-4084	250 (37x)	1.14	1.24	16 x 10	1.56	1546	1724	350	270	380	295
161-23-4090	350 (37x)	1.25	1.35	20 x 10	1.73	1916	2166	425	310	460	340
1/3 NEUTRAL											
160-23-4066	1 (19x)	0.90	0.97	6 x 14	1.21	691	791	175	140	185	150
160-23-4072	1/0 (19x)	0.94	1.01	6 x 14	1.25	741	841	195	155	215	170
160-23-4075	2/0 (19x)	0.98	1.05	7 x 14	1.29	812	912	225	180	240	195
160-23-4078	3/0 (19x)	1.03	1.13	9 x 14	1.37	935	1051	255	200	275	220
160-23-4081	4/0 (19x)	1.07	1.17	11 x 14	1.40	1010	1128	285	235	310	255
▲ 162-23-4081*	4/0 (19x)	1.07	1.17	11 x 14	1.40	1011	1129	285	235	310	255
160-23-4084	250 (37x)	1.14	1.24	13 x 14	1.48	1152	1330	305	250	330	275
160-23-4090	350 (37x)	1.25	1.35	18 x 14	1.59	1388	1566	375	310	405	335
160-23-4093	500 (37x)	1.37	1.47	16 x 12	1.80	1782	1986	450	370	490	405
▲ 162-23-4093*	500 (37x)	1.37	1.47	16 x 12	1.80	1784	1988	450	370	490	405
160-23-4096	750 (61x)	1.56	1.70	15 x 10	2.06	2450	2754	545	460	595	505
▲ 162-23-4096*	750 (61x)	1.56	1.70	15 x 10	2.08	2450	2754	545	460	595	505
160-23-4099	1000 (61x)	1.71	1.85	18 x **(A)	2.23	3027	3533	620	520	675	570
▲ 162-23-4099*	1000 (61x)	1.71	1.85	18 x **(A)	2.23	3024	3535	620	520	675	570

* These items include filled strand
** 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 contains the most up to date information.

▲ **Authorized Stock Item** - Available from 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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25kV Underground Primary Distribution Cable-Jacketed
Red Identification Stripes
Aluminum Conductor/105°C Rating
133% Insulation Levels

Okoguard Insulation: 320 mils 133% Insulation Level

Catalog Number	Conductor Size AWG|kcmil	Number of Strands	Nominal Dia. over Insulation(in.)	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												
161-23-5066	1	(19x)	1.02	1.12	13 x 14	1.36	931	1047	195	145	210	155
161-23-5072	1/0	(19x)	1.06	1.16	16 x 14	1.40	1022	1138	220	160	235	175
161-23-5075	2/0	(19x)	1.10	1.20	13 x 12	1.47	1175	1353	250	185	270	205
161-23-5078	3/0	(19x)	1.15	1.25	16 x 12	1.52	1308	2503	285	210	310	230
161-23-5081	4/0	(19x)	1.21	1.31	13 x 10	1.69	1600	1819	320	240	350	260
161-23-5084	250	(37x)	1.27	1.37	16 x 10	1.74	1782	2032	350	270	380	295
161-23-5090	350	(37x)	1.37	1.47	20 x 10	1.85	2099	2349	425	310	460	340
1/3 NEUTRAL												
160-23-5066	1	(19x)	1.02	1.12	6 x 14	1.36	850	966	175	140	185	150
160-23-5072	1/0	(19x)	1.06	1.16	6 x 14	1.40	906	1022	195	155	215	170
160-23-5075	2/0	(19x)	1.10	1.20	7 x 14	1.44	983	1099	225	180	240	195
160-23-5078	3/0	(19x)	1.15	1.25	9 x 14	1.49	1083	1261	255	200	275	220
160-23-5081	4/0	(19x)	1.21	1.31	11 x 14	1.55	1200	1378	285	235	310	255
160-23-5084	250	(37x)	1.27	1.37	13 x 14	1.60	1312	1490	305	250	330	275
160-23-5090	350	(37x)	1.37	1.47	18 x 14	1.77	1631	1881	375	310	405	335
160-23-5093	500	(37x)	1.50	1.60	16 x 12	1.93	2025	2275	450	370	490	405
160-23-5096	750	(61x)	1.69	1.83	15 x 10	2.20	2722	3122	545	460	595	505
160-23-5099	1000	(61x)	1.84	1.98	18 x **(A)	2.35	3265	3771	620	520	675	570

(1) Individual wire size and count may vary. The resulting combination meets the 1/3 or full neutral, size requirement.
** Special Conductor Size, (A) Wire O.D. =0.1052"

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