



# Okoguard® URO-J

## 15kV 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 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 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, AEIC CS8, and CSA C68.5.

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

**Insulation Screen:** Extruded semiconducting ethylene-propylene rubber meets or exceeds the requirements of ICEA S-94-649, AEIC CS8, and 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".
  - 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.
  - CSA C68.5 listed, LTGG (-40°C), SR.
  - Design Options:
    - Additional conductor sizes
    - Filled strand
    - Copper central conductor
    - 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.
- Minimum installation temperature of -40°C.

# Okoguard URO-J

## 15kV Underground Primary Distribution Cable-Jacketed

Red Identification Stripes  
Aluminum Conductor/105°C Rating  
133% Insulation Levels

# Product Data

## Section 2: Sheet 35



### 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)
<b>FULL NEUTRAL</b>												
▲ 161-23-3057	2(1X)	0.74	30	0.82	10X14	1.06	572	635	170	125	185	135
161-23-3060	2(7X)	0.77	30	0.84	10X14	1.08	590	662	170	125	185	135
161-23-3066	1(19X)	0.81	30	0.88	13X14	1.12	669	781	195	145	210	155
▲ 161-23-3069	1/0(1X)	0.80	30	0.89	16X14	1.12	721	792	220	160	235	175
▲ 161-23-9525	1/0(1X)	0.80	30	0.89	10X14*	1.12	651	718	230	170	245	185
161-23-3072	1/0(19X)	0.84	30	0.92	16X14	1.15	746	818	220	160	235	175
161-23-3075	2/0(19X)	0.89	30	0.92	14X12	1.23	900	1012	250	185	270	205
161-23-3078	3/0(19X)	0.94	30	1.01	16X12	1.28	998	1136	285	210	310	230
161-23-3081	4/0(19X)	0.98	30	1.06	14X10	1.38	1226	1357	320	240	350	260
161-23-3084	250(37X)	1.06	40	1.16	16X10	1.47	1405	1619	350	270	380	295
161-23-3090	350(37X)	1.16	40	1.26	18X.1078	1.59	1716	1912	425	310	460	340
<b>1/3 NEUTRAL</b>												
160-23-3057	2(1X)	0.74	30	0.82	6X14	1.06	525	621	150	120	165	135
160-23-3060	2(7X)	0.76	30	0.84	6X14	1.08	543	659	150	120	165	135
160-23-3066	1(19X)	0.81	30	0.88	6X14	1.12	586	700	175	140	185	150
160-23-3069	1/0(1X)	0.80	30	0.89	6X14	1.12	604	715	195	155	215	170
160-23-3072	1/0(19X)	0.84	30	0.92	6X14	1.15	629	748	195	155	215	170
160-23-3075	2/0(19X)	0.89	30	0.96	7X14	1.20	699	826	225	180	240	195
160-23-3078	3/0(19X)	0.94	30	1.01	9X14	1.25	787	916	255	200	275	220
160-23-3081	4/0(19X)	0.99	30	1.06	11X14	1.30	884	1002	285	235	310	255
160-23-3084	250(37X)	1.06	40	1.16	13X14	1.40	1024	1168	305	250	330	275
160-23-3090	350(37X)	1.16	40	1.26	18X14	1.50	1243	1458	375	310	405	335
160-23-3093	500(37X)	1.29	40	1.39	16X12	1.72	1650	1959	450	370	490	405
160-23-3096	750(61X)	1.47	40	1.58	16X.0966	1.95	2201	2518	545	460	595	505
160-23-3099	1000(61X)	1.64	55	1.77	18X.1052	2.16	2802	3223	620	520	675	570
**▲ 160-23-9590	1100(61X)	1.61	55	1.74	18X12**	2.01	2470	2833	675	575	730	620

Okonite's web site, [www.okonite.com](http://www.okonite.com) contains the most up to date information.

\* - Special design 64% neutral

\*\* - Special design 1/6 neutral, compact conductor, non-CSA listed, reduced jacket thickness not in compliance with AEIC/ICEA.

(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.

# Primary UD EPR / PVC, Concentric Neutral

15 kV – 46 kV

**CME**<sup>®</sup>  
wire and cable

A Viakable Company

## Features

Low tension stripping compounds.

Sealed conductor passes the production water penetration tests per ICEA-T-31-610 at 15 psi for 60 minutes.

Strand Filled compound meets compatibility test requirements in accordance with ICEA-T-32-610.

True Triple extrusion system and closed handling raw materials system, to eliminate any contact with ambient, until extrusion of insulation and shields.

On request, can be UL Listed as MV105 for use in accordance with Article 328 of the NEC.

On request, two abrasion resistant ripcords placed longitudinally 180° apart for easy jacket removal.

## Application

Underground primary residential and commercial distribution circuits.

May be used in wet or dry locations, installed in underground ducts or direct burial.

## Standards

ICEA S-94-649: Standard for Concentric Neutral Rated Cables 5 kV – 46 kV

AEIC CS8: Specifications for Extruded Dielectric, Shielded Power Cable, rated 5 kV – 46 kV

## Specifications

Maximum operating voltage:

- 5 kV – 46 kV, 100 and 133% IL
- Maximum conductor operation temperatures:

Wet and dry locations

- Normal: 105 °C
- Emergency: 140 °C
- Short Circuit: 250 °C

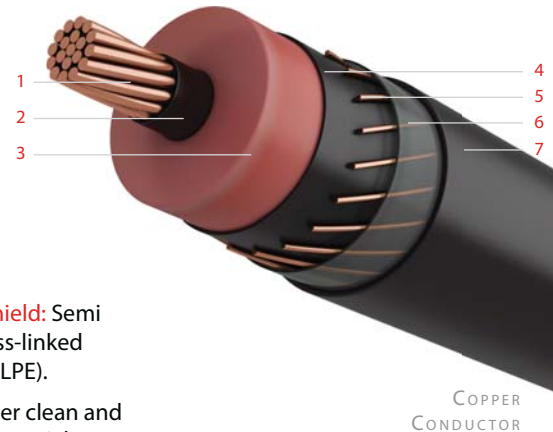
## Engineering Information

**1. Conductor:** Soft annealed uncoated copper Class B compressed or unilay compressed per ASTM B8 or hard drawn aluminum Class B compressed or unilay compressed stranding per ASTM B231.

On request: strand filled.

Sizes: 8 AWG – 1000 kcmil.

On request, larger sizes.



COPPER  
CONDUCTOR

**2. Conductor Shield:** Semi conducting cross-linked polyethylene (XLPE).

On request: super clean and super smooth materials.

**3. Insulation:** Thermoset ethylene propylene rubber (EPR).

On request: amorphous EPR.

**4. Insulation Shield:** Semi conducting cross-linked polyethylene (XLPE).

**5. Concentric Neutral:** Soft annealed solid copper wires per ASTM B3, helically applied and uniformly spaced.

Full or 1/3 Neutral.

On request options: alternate neutral constructions, Water Swellable Powder (WSP), and ripcords.

**6. Binder Tape:** A suitable polyester tape, as required.

**7. Jacket:** Extruded Overlying (Sleeve) Black polyvinyl chloride (PVC) sunlight resistant.

Configuration Options:

On request: Triplex or Paralleled configurations.



ALUMINUM  
CONDUCTOR

**CME 500-37/W AMORPHOUS EPR, 15KV, 220MIL, 1/3N, 16W X 12AWG**

Technical Data continued

### 15 kV EPR Insulated

Size AWG or kcmil	Number of Strands	Nominal OD Over Insulation in	1/3 Neutral					Full Neutral				
			Number of Wires	Size AWG	Jacket Thickness mil	Approximate Outside Diameter in	Approximate Net Weight lb/kft	Number of Wires	Size AWG	Jacket Thickness mil	Approximate Outside Diameter in	Approximate Net Weight lb/kft
<b>Copper 133% Insulation Level (220 mil)</b>												
2	7	0.77	6	14	80	1.14	721	16	14	80	1.14	855
1	19	0.81	7	14	80	1.18	812	13	12	80	1.21	1000
1/0	19	0.85	9	14	80	1.22	932	16	12	80	1.25	1157
2/0	19	0.89	11	14	80	1.26	1072	13	10	80	1.34	1377
3/0	19	0.94	14	14	80	1.31	1252	16	10	80	1.39	1618
4/0	19	1.00	18	14	80	1.37	1478	16	9	80	1.47	1935
250	37	1.05	13	12	80	1.48	1698	25	10	80	1.52	2273
350	37	1.16	18	12	80	1.58	2182	22	8	80	1.68	2997
500	37	1.28	17	10	110	1.82	3039	31	8	110	1.87	4143
750	61	1.47	20	9	110	2.03	4232	—	—	—	—	—
1000	61	1.62	26	9	110	2.21	5418	—	—	—	—	—
<b>Aluminum 133% Insulation Level (220 mil)</b>												
2	7	0.76	6	14	80	1.14	577	10	14	80	1.14	631
1	19	0.80	6	14	80	1.18	617	13	14	80	1.18	711
1/0	19	0.84	6	14	80	1.22	663	16	14	80	1.22	797
2/0	19	0.89	7	14	80	1.26	731	13	12	80	1.29	919
3/0	19	0.94	9	14	80	1.31	823	16	12	80	1.34	1048
4/0	19	0.99	11	14	80	1.37	928	13	10	80	1.44	1233
250	37	1.05	13	14	80	1.44	1050	16	10	80	1.52	1430
350	37	1.15	18	14	80	1.55	1279	16	9	80	1.65	1737
500	37	1.28	16	12	110	1.77	1718	29	10	110	1.81	2367
750	61	1.49	15	10	110	2.02	2289	—	—	—	—	—
1000	61	1.64	16	9	110	2.23	2864	—	—	—	—	—

The above data are approximate and subject to normal manufacturing tolerances. Other sizes available upon request.  
 Ampacities: Refer to beginning of section.