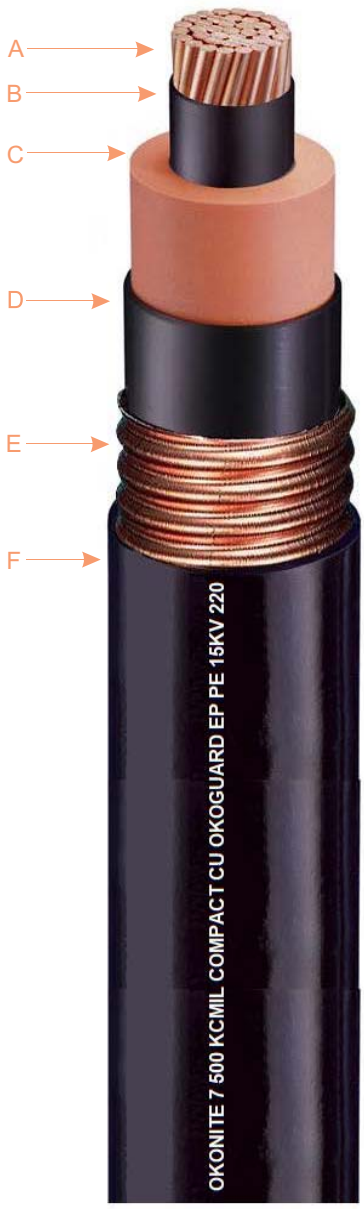
Okoguard®-Okobon® Type MV-90

15kV Okobon Shielded Power Cable

One Okopact® (Compact Stranded) Copper Conductor 90°C Rating
133% Insulation Level



A Uncoated, Okopact (Compact Stranded) Copper Conductor
B Strand Screen-Extruded Semiconducting EPR
C Insulation-Okoguard EPR
D Insulation Screen-Extruded Semiconducting EPR
E Shield-6 mil Okobon Copper Tape
F Jacket-Okolene

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.

Shield

A 6 mil copper longitudinal corrugated Okobon shield is applied over the extruded semiconducting insulation screen with a sealed overlap to make the cable core impervious to moisture penetration. The tape is copolymer coated to provide a bond at the overlap and to the outer jacket. This construction provides a substantially lower shield resistance compared to a tight helically applied copper tape. The tape shield resistance is also extremely stable for the life of the cable.

Jacket

The Okolene jacket on this cable is a polyethylene compound which is mechanically rugged; oil and moisture resistant. The outer jacket is firmly bonded to the corrugated copper shield for a moisture barrier.

Applications

Okoguard shielded Okobon Type MV-90 power cables are recommended for use by electric utilities and industrial operations for distribution circuits, and for feeders or branch circuits in industrial and commercial installations.
Type MV cables may be installed in wet or dry locations, indoors or outdoors (exposed to sunlight), in underground duct, directly buried if installed in a system with a grounding conductor in close proximity that conforms with NEC Section 315.36 and 250.4(A)(5), or messenger supported in industrial establishments and electric utilities. Okoguard-Okobon is especially suited for underground applications in duct or direct burial where it is subject to excessive water.

Specifications

Conductor: Annealed uncoated copper, compact stranded per ASTM B-496.
Strand Screen: Extruded semiconducting EPR strand screen. Meets or exceeds electrical and physical requirements of ICEA S-93-639/NEMA WC74, AEIC CS8 and UL 1072.
Insulation: Meets or exceeds electrical and physical requirements of ICEA S-93-639/NEMA WC74, AEIC CS8 and UL 1072.
Insulation Screen: Extruded semiconducting EPR insulation screen applied directly over the insulation. Meets or exceeds electrical and physical requirements of ICEA S-93-639/NEMA WC74, AEIC CS8 and UL 1072.
Shield: 6 mil longitudinal corrugated, copolymer coated copper shield with a 0.25" overlap.
Jacket: Meets or exceeds electrical and physical requirements of ICEA S-93-639/NEMA WC74, and UL 1072 for polyethylene jackets.
UL Listed as Type MV-90, sunlight resistant in accordance with UL 1072.
Okoguard-Okobon cables are also available with 5, 25, 35 and 69kV ratings.

Product Features

- Triple tandem extruded, all EPR system.
- Okoguard cables meet or exceed all recognized industry standards (UL, AEIC, NEMA/ICEA, IEEE).
- 90°C continuous operating temperature.
- 130°C emergency rating.
- 250°C short circuit rating.
- Excellent corona resistance.
- Provides "flat line" corona response.
- Screens are clean stripping.
- Exceptional resistance to "treeing."
- Low shield resistance.
- Moisture resistant.
- Resistant to most oils, acids and alkalies.
- Sunlight resistant.
- Improved Temperature Rating.

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One Okopact (Compact Stranded)
Copper Conductor/ 90°C Rating
133% Insulation Level

Okoguard Insulation: 220 mils (5.591mm), 133% Insulation Level

Catalog Number (1)	Conductor size AWG or kcmil	Conductor Size -mm²	Approx. Dia. over Insulation (in.)	Approx. Dia. over Screen (in.)	Jacket Thickness - mils	Jacket Thickness - mm	Approx. O.D. -Inches	Approx. O.D. -mm	Approx. Net Weight lbs./1000'	Approx. Ship Weight lbs./1000'	Ampacities (2) Conduit in Air	Ampacities (3) Direct Burial	Ampacities (4) Underground Duct	Conduit Size Inches (5)*
115-23-6211	2	33.6	0.76	0.82	80	2.03	1.06	27.0	675	735	150	210	155	3
115-23-6217	2/0	67.4	0.87	0.93	80	2.03	1.17	29.8	960	1070	225	310	230	3½
115-23-6221	4/0	107.0	0.97	1.02	80	2.03	1.27	32.2	1260	1375	295	405	295	3½
115-23-6227	350	177.0	1.10	1.16	80	2.03	1.41	35.9	1790	1940	395	535	390	4
115-23-6231	500	253.0	1.22	1.28	80	2.03	1.53	38.8	2325	2510	480	650	465	5
115-23-6235	750	380.0	1.40	1.46	80	2.03	1.71	43.4	3215	3465	585	805	565	5
115-23-6239	1000	507.0	1.54	1.60	110	2.79	1.91	48.6	4150	4455	675	930	640	6

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

Minimum Manufacturing Quantity for non-stock items is 5000'.
Aluminum Conductors
(1) Aluminum conductors are available on special order.
Ampacities
(2) Ampacities are in accordance with Table 315.60(C)(7) of the NEC for three single Type MV-105 conductors, or single conductors twisted together (triplexed) and installed in an isolated conduit in air at an ambient temperature of 40°C and a conductor temperature of 90°C.
(3) Ampacities are in accordance with Table 315.60(C)(15) of the NEC for an insulated single conductor directly buried with a conductor temperature rating of 90°C, ambient earth temperature of 20°C, 100% Load Factor, thermal resistance (RHO) of 90, 7 1/2 inch spacing between conductor center lines, and 24 inch spacing between circuits.
(4) Ampacities are in accordance with Table 315.60(C)(11) of the NEC for 5kV three single conductors or triplexed cable in one underground raceway, three feet deep with a conductor temperature 90°C, 100% Load Factor, an ambient earth temperature of 20°C, and thermal resistance (RHO) of 90.
Refer to NEC, IEEE/ICEA-S-135 Power Cable Ampacities, or the Okonite Engineering Data Bulletin for installation in duct banks, multiple point grounded shields, other ambient temperatures, circuit configurations or installation requirements.
(5) Recommended size of rigid or nonmetallic conduit for three conductors based on 40% maximum fill.
* The jam ratio, conduit I.D. to cable O.D. should be checked to avoid possible jamming.

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