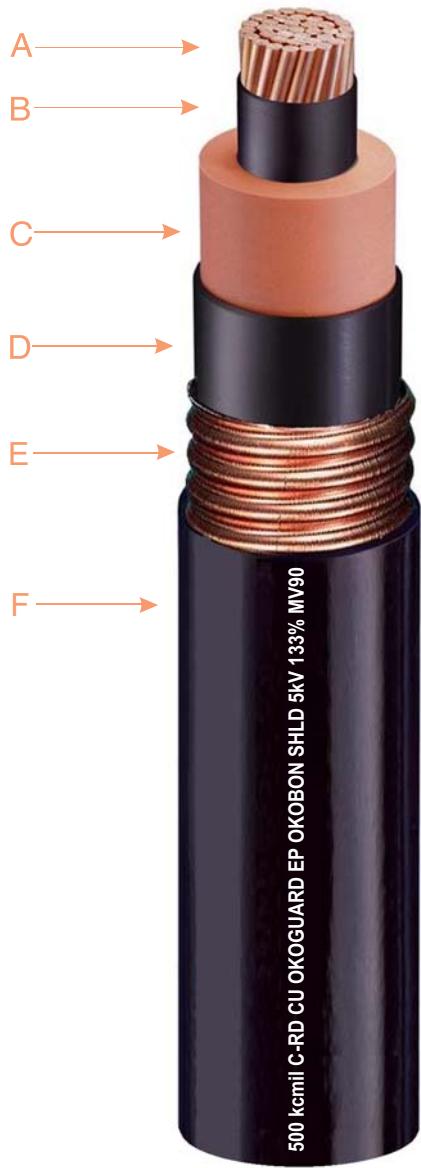




## Okoguard®-Okobon® Type MV-90 5/8kV Okobon Shielded Power Cable

One Okopact® (Compact Stranded) Copper Conductor 90°C Rating  
5kV-133% or 8kV-100% Insulation Level



### Insulation

Okoguard is Okonite's registered trade name for its exclusive ethylene-propylene rubber (EPR) based, thermosetting insulation compound. Its optimum balance of electrical and physical properties is unequaled among solid dielectric materials. Okoguard insulation, distinguished by its characteristic red color and fully integrated EPR system, provides excellent electrical performance and long, trouble-free service. The triple-tandem extrusion of the conductor shield, insulation, and insulation shield ensures uniformity and optimum electrical characteristics.

### Shield

A 6-mil copper longitudinally corrugated Okobon® shield is applied over the extruded semiconducting insulation screen with a sealed overlap, rendering the cable core impervious to moisture penetration. The tape is copolymer-coated to provide a permanent bond at the overlap and to the outer jacket. This construction results in substantially lower shield resistance than a tight, helically applied copper tape and provides exceptionally stable shield resistance throughout the service life of the cable.

### Jacket

The Okolene® jacket on this cable is a mechanically rugged polyethylene compound providing excellent resistance to oil and moisture. The outer jacket is firmly bonded to the corrugated copper shield, forming an effective 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 feeder or branch circuits in industrial and commercial installations.

Type MV cables may be installed in wet or dry locations, indoors or outdoors (including exposure to sunlight), in underground duct systems, directly buried when installed in a system with a grounding conductor in close proximity in accordance with NEC Sections 315.36 and 250.4(A)(5), or messenger-supported in industrial establishments and electric utilities. Okoguard-Okobon cables are especially suited for underground duct and direct-burial applications where

exposure to excessive moisture or water is anticipated.

### Specifications

**Conductor:** Annealed, uncoated copper, compact stranded per ASTM B-496.

**Strand Screen:** Extruded semiconducting EPR strand screen. Meets or exceeds the electrical and physical requirements of ICEA S-93-639/NEMA WC-74 and ICEA S-97-682, AEIC CS8 and UL 1072.

**Insulation:** Meets or exceeds the electrical and physical requirements of ICEA S-93-639/NEMA WC-74 and ICEA S-97-682, AEIC CS8 and UL 1072.

**Insulation Screen:** Extruded semiconducting EPR insulation screen applied directly over the insulation. Meets or exceeds the electrical and physical requirements of ICEA S-93-639/NEMA WC-74 and ICEA S-97-682, AEIC CS8 and UL 1072.

**Shield:** 6-mil longitudinally corrugated, copolymer-coated copper shield with a 0.25-inch sealed overlap.

**Jacket:** Meets or exceeds the electrical and physical requirements of ICEA S-93-639/NEMA WC-74 and UL 1072 for polyethylene jackets. UL Listed as Type MV-90 and sunlight resistant in accordance with UL 1072.

Okoguard-Okobon cables are also available with 15, 25, 35 and 69kV ratings.

### Product Features

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

- 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

# Okoguard-Okobon Type MV-90

## 5/8kV Okobon Shielded Power Cable

One Okopact (Compact Stranded)

Copper Conductor/ 90°C Rating

5kV-133% or 8kV-100% Insulation Level



## Product Data

### Section 2: Sheet 6

**Okoguard Insulation: 115 mils (2.91mm), 5kV-133% or 8kV-100% Insulation Level**

Catalog Number (1)	Conductor size AWG or kcmil	Conductor Size -mm <sup>2</sup>	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	Conduit Size Inches (5)*
114-23-6860	6	13.3	0.45	0.51	60	1.52	0.71	17.9	295	350	75	140	85
114-23-6861	4	21.2	0.48	0.54	60	1.52	0.75	19.0	360	415	97	180	110
114-23-6862	2	33.6	0.54	0.60	60	1.52	0.80	20.3	460	515	130	230	145
													2
													2
													2½
114-23-6865	2/0	67.4	0.65	0.71	60	1.52	0.91	23.1	715	780	205	295	220
114-23-6867	4/0	107.0	0.75	0.81	80	2.03	1.05	26.7	1030	1120	280	435	290
114-23-6869	350	177.0	0.89	0.95	80	2.03	1.20	30.5	1520	1640	385	570	385
													3
													3
													3½
114-23-6872	500	253.0	1.01	1.07	80	2.03	1.32	33.5	2035	2175	475	690	470
114-23-6875	750	380.0	1.19	1.25	80	2.03	1.50	38.1	2910	3145	600	845	585
114-23-6878	1000	507.0	1.34	1.42	80	2.03	1.64	41.7	3750	4000	690	980	670
													4
													5
													5

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

(1) Aluminum conductors are available on special order.

#### Ampacities

(2) Ampacities are in accordance with Table 315.60(C)(7) of the NEC for 5kV three single 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. Refer to Table 315.60(C)(7) for 8kV ampacities.

(3) Ampacities are in accordance with Table 315.60(C)(15) of the NEC for a 5kV 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 conductor center lines, and 24 inch spacing between circuits. Refer to Table 315.60(C)(15) for 8kV ampacities.

(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 of 90°C, 100% Load Factor, an ambient earth temperature of 20°C, and thermal resistance (RHO) of 90. Refer to Table 315.60(C)(11) for 8kV ampacities.

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.