# Okoguard®-Okoseal® Type MV-105

## 35kV Shielded Power Cable

One Okopact® (Compact Stranded) Copper Conductor/105°C Rating
100% and 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-Copper Tape
F Jacket-Okoseal

### Insulation

Okoguard 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.

### Jacket

The Okoseal (PVC) jacket supplied with this cable is mechanically rugged and has excellent resistance to oil and most chemicals.

### Applications

Okoguard shielded Okoseal Type MV-105 power cables are recommended 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 any raceway or 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.

### 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 WC7 & S-97-682, AEIC CS8, CSA C68.10 and UL 1072.
**Insulation:** Meets or exceeds electrical and physical requirements of ICEA S-93-639/NEMA WC74, & S-97-682 AEIC CS8, CSA C68.10 and UL 1072.
**Insulation Screen:** Extruded semiconducting EPR insulation screen. Meets or exceeds electrical and physical requirements of ICEA S-93-639/NEMA WC74 & S-97-682, AEIC CS8, CSA C68.10 and UL 1072.
**Shield:** 5 mil bare copper tape helically applied with 12.5% nominal overlap.
**Jacket:** Meets or exceeds electrical and physical requirements of ICEA S-93-639/NEMA WC74 & S-97-682, CSA C68.10 and UL 1072 for polyvinyl chloride jackets.

UL Listed as Type MV-105 and sunlight resistant, in accordance with UL 1072.

CSA C68.10 listed as FT1, SR, and LTDD (-25°C).

### Product Features

- Triple tandem extruded all EPR system.
- Okoguard cables meet or exceed all recognized industry standards (UL, AEIC, NEMA/ICEA, IEEE).
- 105°C continuous operating temperature.
- 140°C emergency rating.
- 250°C short circuit rating.
- Excellent corona resistance.
- Screens are clean stripping.
- Exceptional resistance to "treeing."
- Moisture resistant.
- Resistant to most oils, acids, and alkalies.
- Sunlight resistant.
- Improved Temperature Rating.

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| 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)* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Okoguard Insulation: 345 mils (8.76mm), 100% Insulation Level** | | | | | | | | | | | | | | |
| 115-23-3516 | 1/0 | 53.5 | 1.09 | 1.15 | 80 | 2.03 | 1.33 | 34.0 | 1140 | 1275 | 215 | 295 | 215 | 4 |
| 115-23-3517 | 2/0 | 67.4 | 1.12 | 1.19 | 80 | 2.03 | 1.37 | 35.0 | 1270 | 1380 | 255 | 335 | 245 | 4 |
| 115-23-3519 | 3/0 | 85.0 | 1.17 | 1.23 | 80 | 2.03 | 1.42 | 36.1 | 1420 | 1605 | 290 | 380 | 275 | 4 |
| 115-23-3521 | 4/0 | 107.0 | 1.23 | 1.29 | 80 | 2.03 | 1.47 | 37.4 | 1595 | 1800 | 330 | 435 | 315 | 4 |
| 115-23-3523 | 250 | 127.0 | 1.27 | 1.33 | 80 | 2.03 | 1.52 | 38.7 | 1790 | 1950 | 365 | 475 | 345 | 5 |
| 115-23-3527 | 350 | 177.0 | 1.36 | 1.43 | 80 | 2.03 | 1.61 | 41.2 | 2150 | 2420 | 440 | 575 | 415 | 5 |
| 115-23-3531 | 500 | 253.0 | 1.48 | 1.54 | 80 | 2.03 | 1.73 | 43.9 | 2720 | 3014 | 535 | 700 | 500 | 5 |
| 115-23-3535 | 750 | 380.0 | 1.66 | 1.72 | 110 | 2.79 | 1.97 | 50.1 | 3765 | 4240 | 655 | 865 | 610 | 6 |
| 115-23-3537 | 1000 | 507.0 | 1.81 | 1.86 | 110 | 2.79 | 2.12 | 53.9 | 4671 | 5300 | 755 | 1005 | 690 | 6 |
| **Okoguard Insulation: 420 mils (10.7mm), 133% Insulation Level** | | | | | | | | | | | | | | |
| 115-23-3656 | 1/0 | 53.5 | 1.24 | 1.30 | 80 | 2.03 | 1.49 | 37.9 | 1350 | 1535 | 215 | 295 | 215 | 5 |
| 115-23-3657 | 2/0 | 67.4 | 1.28 | 1.34 | 80 | 2.03 | 1.53 | 39.0 | 1470 | 1665 | 255 | 335 | 245 | 5 |
| 115-23-3659 | 3/0 | 85.0 | 1.32 | 1.39 | 80 | 2.03 | 1.57 | 40.0 | 1630 | 1825 | 290 | 380 | 275 | 5 |
| 115-23-3661 | 4/0 | 107.0 | 1.39 | 1.45 | 80 | 2.03 | 1.64 | 41.9 | 1840 | 2085 | 330 | 435 | 315 | 5 |
| 115-23-3663 | 250 | 127.0 | 1.42 | 1.48 | 80 | 2.03 | 1.69 | 42.9 | 1985 | 2250 | 365 | 475 | 345 | 5 |
| 115-23-3667 | 350 | 177.0 | 1.52 | 1.58 | 110 | 2.79 | 1.83 | 46.5 | 2495 | 2770 | 440 | 575 | 415 | 5 |
| 115-23-3671 | 500 | 253.0 | 1.63 | 1.69 | 110 | 2.79 | 1.94 | 49.3 | 3085 | 3555 | 535 | 700 | 500 | 6 |
| 115-23-3675 | 750 | 380.0 | 1.81 | 1.87 | 110 | 2.79 | 2.12 | 53.9 | 4055 | 4680 | 655 | 865 | 610 | 6 |
| 115-23-3677 | 1000 | 507.0 | 1.97 | 2.02 | 110 | 2.79 | 2.27 | 57.6 | 5980 | 5630 | 755 | 1005 | 690 | 8 |

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

**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 105°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 105°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 three single conductors or triplexed cable in one underground raceway, three feet deep with a conductor temperature of 105°C, 100% Load Factor, an ambient earth temperature of 20°C, and thermal resistance (RHO) of 90.
Refer to the 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.



THE OKONITE COMPANY
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