

# MV-90 EPR Insulated, PE Jacketed

5 kV – 35 kV, LC Shielded



A Viakable Company

## Features

UL listed as MV-90.

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

Heavy duty mechanical and sunlight resistance jacket.

True Triple extrusion system for optimum concentricity, and excellent electric field control.

Complete cable is Silicon Free

## Application

Underground primary residential and commercial distribution circuits.

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

## Standards

UL 1072

Medium Voltage Power Cables.

ICEA S-97-682

Utility Shielded Power Cables Rated 5 kV – 46 kV.

ICEA S-93-639

5 kV – 46 kV Shielded Power Cable.

AEIC CS8

Specifications for Extruded Dielectric, Shielded Power Cable, rated 5 kV – 46 kV.

## Specifications

### Maximum operating voltage:

- 5 kV – 35 kV, 100% and 133% IL

### Maximum conductor operation temperatures:

Wet and dry locations

- Normal: 90 °C
- Emergency: 130 °C
- Short Circuit: 250 °C

## Engineering Information

**1. Conductor:** Soft annealed uncoated copper compacted Class B per ASTM B496 or hard drawn Aluminum-1350 compacted Class B per ASTM B400.

*On request, filled strand conductor.*

**Sizes:** 350 – 1000 kcmil

*On request, strand filled, compressed stranded, tin coating for copper conductors (available with concentric or compressed stranding.)*

**Conductor Shield:** Extruded Semiconducting cross-linked polyethylene.

*On request, super smooth compounds.*

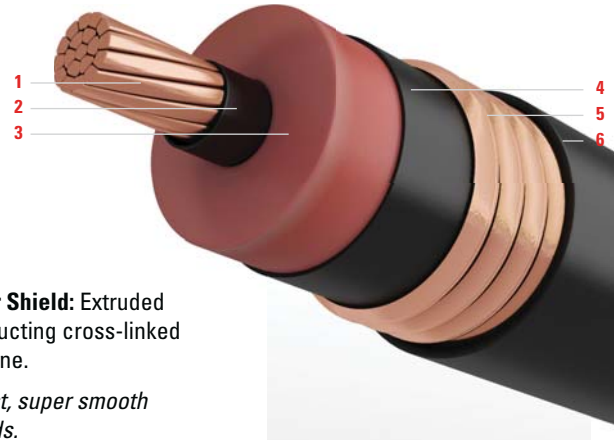
**2. Insulation:** Thermosetting ethylene propylene rubber (EPR).

**3. Insulation Shield:** Extruded Semiconducting cross-linked polyethylene.

**4. Shield:** Longitudinal corrugated copper tape shield, 10 mil thickness of annealed uncoated copper.

*On request, 8 mil thickness copper tape.*

**5. Jacket:** Extruded to fill of Black Low Density thermoplastic Polyethylene (LDPE) sunlight resistant.



## Technical Data

### 15 kV EPR Insulated

Size AWG or kcmil	Number of Strands	Conductor Diameter in	100% Insulation Level (175 mil)					133% Insulation Level (220 mil)				
			Nominal Diameter Over Insulation in	Jacket Thickness mil	Approximate Outside Diameter in	Approximate Net Weight		Nominal Diameter Over Insulation in	Jacket Thickness mil	Approximate Outside Diameter in	Approximate Net Weight	
						Copper	Aluminum				Copper	Aluminum
							lb/kft					
2	7	0.27	0.67	80	1.02	637	494	0.76	80	1.11	722	580
1	19	0.30	0.70	80	1.05	709	530	0.79	80	1.14	797	618
1/0	19	0.34	0.74	80	1.08	802	575	0.83	80	1.18	892	665
2/0	19	0.38	0.78	80	1.12	914	628	0.87	80	1.22	1008	722
3/0	19	0.42	0.82	80	1.17	1053	692	0.92	80	1.26	1150	789
4/0	19	0.48	0.88	80	1.22	1223	769	0.97	80	1.32	1325	870
300	37	0.57	0.98	80	1.33	1567	922	1.08	80	1.45	1705	1060
400	37	0.66	1.07	80	1.44	1964	1105	1.16	80	1.54	2082	1223
600	61	0.81	1.24	80	1.61	2696	1406	1.33	80	1.70	2828	1538

The above data are approximate and subject to normal manufacturing tolerances. Other sizes available upon request.

**Capacities:** Refer to beginning of section.

Technical Data *continued*

## 25 kV EPR Insulated

Size AWG or kcmil	Number of Strands	Conductor Nominal OD  in	100% Insulation Levels (260 mil)				Approximate Net Weight	
			Insulation Thickness  mil	Jacket Thickness  mil	Approximate Outside Diameter  in	Copper	Aluminum	
						lb/kft	lb/kft	
1	19	0.30	0.88	80	1.22	881	702	
1/0	19	0.34	0.91	80	1.26	979	752	
2/0	19	0.38	0.95	80	1.30	1097	811	
3/0	19	0.42	1.00	80	1.35	1243	882	
4/0	19	0.48	1.05	80	1.42	1449	994	
300	37	0.57	1.16	80	1.53	1810	1165	
400	37	0.66	1.25	80	1.62	2194	1334	
600	61	0.81	1.41	110	1.85	3025	1735	

## 28 kV EPR Insulated

Size AWG or kcmil	Number of Strands	Conductor Nominal OD  in	100% Insulation Levels (280 mil)				Approximate Net Weight	
			Insulation Thickness  mil	Jacket Thickness  mil	Approximate Outside Diameter  in	Copper	Aluminum	
						lb/kft	lb/kft	
1	19	0.30	0.92	80	1.27	926	746	
1/0	19	0.34	0.96	80	1.30	1024	797	
2/0	19	0.38	1.00	80	1.34	1144	858	
3/0	19	0.42	1.04	80	1.41	1319	958	
4/0	19	0.48	1.09	80	1.47	1500	1046	
300	37	0.57	1.20	80	1.57	1864	1220	
400	37	0.66	1.29	80	1.66	2251	1392	
600	61	0.81	1.45	110	1.89	3090	1800	

## 35 kV EPR Insulated

Size AWG or kcmil	Number of Strands	Conductor Nominal OD  in	100% Insulation Levels (345 mil)				Approximate Net Weight	
			Insulation Thickness  mil	Jacket Thickness  mil	Approximate Outside Diameter  in	Copper	Aluminum	
						lb/kft	lb/kft	
1	19	0.30	1.05	80	1.43	1107	927	
1/0	19	0.34	1.09	80	1.46	1211	984	
2/0	19	0.38	1.13	80	1.50	1335	1049	
3/0	19	0.42	1.18	80	1.55	1489	1128	
4/0	19	0.48	1.23	80	1.60	1676	1221	
300	37	0.57	1.34	80	1.71	2052	1408	
400	37	0.66	1.42	110	1.86	2524	1665	
600	61	0.81	1.59	110	2.06	3366	2076	

The above data are approximate and subject to normal manufacturing tolerances. Other sizes available upon request.

**Ampacities:** Refer to beginning of section.