



SECTION 2

TYPE MV-90/MV-105 POWER AND UNDERGROUND DISTRIBUTION CABLE

TYPE MV-90/MV-105 Power Cable

SPEC 2-11	(XLP) 1/C 2400V (5000V), Non-Shielded, MV-90, Dry
SPEC 2-11-1	(XLP) 1/C 2400V (5000V), Non-Shielded, MV-90, Dry
SPEC 2-11-2	(XLP) 1/C 2400V (5000V), Non-Shielded, MV-90, PVC or CPE
SPEC 2-21	(XLP) 2400V (5000V), Non-Shielded, MV-90, Wet or Dry
SPEC 2-21-1	(XLP) 1/C 2400V (5000V), Non-Shielded, MV-90, Wet or Dry
SPEC 2-21-1.3	(XLP) 3/C 2400V (5000V), Non-Shielded, MV-90, Wet or Dry
SPEC 2-31	(XLP) Shielded, MV-90
SPEC 2-31-1	(XLP) 1/C 5000 VOLT, Shielded, MV-90
SPEC 2-31-1.3	(XLP) 3/C 5000 VOLT, Shielded, MV-90
SPEC 2-31-2	(XLP) 1/C 5000/8000 VOLT, Shielded, MV-90, 100% and 133%
SPEC 2-31-2.3	(XLP) 3/C 5000/8000 VOLT, Shielded, MV-90, 100% and 133%
SPEC 2-31-3	(XLP) 1/C 15000 VOLT, Shielded, MV-90, 100% and 133%
SPEC 2-31-3.3	(XLP) 3/C 15000 VOLT, Shielded, MV-90, 100% and 133%
SPEC 2-31-4	(XLP) 1/C 25000 VOLT, Shielded, MV-90, 100% and 133%
SPEC 2-31-4.3	(XLP) 3/C 25000 VOLT, Shielded, MV-90, 100% and 133%
SPEC 2-31-5	(XLP) 1/C 28000 VOLT, Shielded, MV-90, 100% and 133%
SPEC 2-31-5.3	(XLP) 3/C 28000 VOLT, Shielded, MV-90, 100% and 133%
SPEC 2-31-6	(XLP) 1/C 35000 VOLT, Shielded, MV-90, 100% and 133%
SPEC 2-31-6.3	(XLP) 3/C 35000 VOLT, Shielded, MV-90, 100% and 133%
SPEC 2-41	(EPR) 1/C 2400V (5000V), Non-Shielded, MV-90, Dry
SPEC 2-41-1	(EPR) 1/C 2400V (5000V), Non-Shielded, MV-90, Dry
SPEC 2-51	(EPR) 2400V (5000V), Non-Shielded, MV-90/MV-105, Wet or Dry
SPEC 2-51-1	(EPR) 1/C 2400V (5000V), Non-Shielded, MV-90, Wet or Dry
SPEC 2-51-1.3	(EPR) 3/C 2400V (5000V), Non-Shielded, MV-105, Wet or Dry
SPEC 2-61	(EPR) Shielded, MV-105
SPEC 2-61-1	(EPR) 1/C 5000 VOLT, Shielded, MV-105
SPEC 2-61-1.3	(EPR) 3/C 5000 VOLT, Shielded, MV-105
SPEC 2-61-2	(EPR) 1/C 5000/8000 VOLT, Shielded, MV-105, 100% and 133%
SPEC 2-61-2.3	(EPR) 3/C 5000/8000 VOLT, Shielded, MV-105, 100% and 133%
SPEC 2-61-3	(EPR) 1/C 15000 VOLT, Shielded, MV-105, 100% and 133%
SPEC 2-61-3.3	(EPR) 3/C 15000 VOLT, Shielded, MV-105, 100% and 133%
SPEC 2-61-4	(EPR) 1/C 25000 VOLT, Shielded, MV-105, 100% and 133%
SPEC 2-61-4.3	(EPR) 3/C 25000 VOLT, Shielded, MV-105, 100% and 133%
SPEC 2-61-5	(EPR) 1/C 28000 VOLT, Shielded, MV-105, 100% and 133%
SPEC 2-61-5.3	(EPR) 3/C 28000 VOLT, Shielded, MV-105, 100% and 133%
SPEC 2-61-6	(EPR) 1/C 35000 VOLT, Shielded, MV-105, 100% and 133%
SPEC 2-61-6.3	(EPR) 3/C 35000 VOLT, Shielded, MV-105, 100% and 133%

(Continued on next page)



SECTION 2

TYPE MV-90/MV-105 POWER AND UNDERGROUND DISTRIBUTION CABLE

(Continued from previous page)

Underground Distribution Cable (URD)

SPEC 2-71	(XLP) 1/C (URD) Full or 1/3rd Neutral
SPEC 2-71-1	(XLP) 1/C (URD), 5000 VOLT, Full or 1/3rd Neutral, PVC or LLDPE
SPEC 2-71-2	(XLP) 1/C (URD), 5000/8000 VOLT, 100% and 133%, Full or 1/3rd Neutral, PVC or LLDPE
SPEC 2-71-3	(XLP) 1/C (URD), 15000 VOLT, 100% and 133%, Full or 1/3rd Neutral, PVC or LLDPE
SPEC 2-71-4	(XLP) 1/C (URD), 25000 VOLT, 100% and 133%, Full or 1/3rd Neutral, PVC or LLDPE
SPEC 2-71-5	(XLP) 1/C (URD), 28000 VOLT, 100% and 133%, Full or 1/3rd Neutral, PVC or LLDPE
SPEC 2-71-6	(XLP) 1/C (URD), 35000 VOLT, 100% and 133%, Full or 1/3rd Neutral, PVC or LLDPE
SPEC 2-81	(EPR) 1/C (URD) Full or 1/3rd Neutral
SPEC 2-81-1	(EPR) 1/C (URD), 5000 VOLT, Full or 1/3rd Neutral, PVC or LLDPE
SPEC 2-81-2	(EPR) 1/C (URD), 5000/8000 VOLT, 100% and 133%, Full or 1/3rd Neutral, PVC or LLDPE
SPEC 2-81-3	(EPR) 1/C (URD), 15000 VOLT, 100% and 133%, Full or 1/3rd Neutral, PVC or LLDPE
SPEC 2-81-4	(EPR) 1/C (URD), 25000 VOLT, 100% and 133%, Full or 1/3rd Neutral, PVC or LLDPE
SPEC 2-81-5	(EPR) 1/C (URD), 28000 VOLT, 100% and 133%, Full or 1/3rd Neutral, PVC or LLDPE
SPEC 2-81-6	(EPR) 1/C (URD), 35000 VOLT, 100% and 133%, Full or 1/3rd Neutral, PVC or LLDPE

POWER CABLE, NON-SHIELDED, 2400VOLT (5000VOLT*), DRY CROSS-LINKED POLYETHYLENE INSULATION (XLP) WITH OPTIONAL JACKET, TYPE MV-90 SINGLE CONDUCTOR

SCOPE:

This specification covers Aetna Insulated Wire's standard construction for single conductor non-shielded power cables, Type MV-90, insulated with solid dielectric cross-linked polyethylene (XLP) to the 2400V level and with an optional jacket overall and a "dry" rating.

***NOTE:** NEC does not recognize a non-shielded 5000V cable in this construction and only recognizes 2400V non-shielded cables with the specific construction attributes included in this specification. These cables do however, meet the current relevant ICEA standards for 5000 V non-shielded cables.

PRODUCT SPECIFICATIONS AND RATINGS:

- i) National Fire Protection Association (NFPA 70), National Electric Code (NEC)
- ii) Underwriters Laboratories 1072 for Medium Voltage Power Cables
- iii) ICEA S-96-659/NEMA WC71 Nonshielded 2001V - 5KV Cables
- iv) See individual product sheets for specific listings and ratings.

APPLICATION:

These cables comply with the requirements of NEC Article 310.10 (E) and the exceptions No.1 and No. 2 with respect to non-shielded cables above 2000V and NEC Table 310.104(D) for Dry Locations. Consequently where NEC requirements permit, this cable is suitable for use in dry locations at a continuous conductor operating temperature of 90°C, at an emergency overload conductor temperature of 130°C and at a short circuit conductor temperature of 250°C. Respecting the requirements for a "dry" location, these cables may be installed in duct or conduit or properly supported aerially.

CONSTRUCTION DATA:

Conductors - The conductor consists of uncoated soft, copper strands meeting the requirements of ASTM B3. Unless otherwise specified the conductors are supplied as compact round per ASTM B496.

Conductor Shield - The conductor shield consists of an extruded semi-conducting layer meeting the requirements of the governing specification.

Insulation - The insulation is cross-linked polyethylene (XLP) in black color extruded in a single pass with the conductor shield to the wall thickness as specified in the governing specifications listed and as shown on the individual product specification sheets.

Jacket - For jacketed construction a sunlight and ozone resistant polyvinylchloride (PVC), chlorinated polyethylene (CPE) or low smoke halogen free (LSHF) Polyolefin jacket is extruded over the insulation.

ALTERNATE CONSTRUCTIONS:

- a) (-40°C) PVC jacket (not U.L. listed for single conductor cables)
- b) Linear Low Density Polyethylene jackets are available.

**XLP POWER CABLE, NON-SHIELDED, 2400V (5000V*)
TYPE MV-90, DRY, BLACK**

SPEC 2-11-1

Ver. 8.0
Revised: 07/04/13



90°C CONDUCTOR TEMPERATURE, DRY						
Conductor			Insulation in Mils	Approximate O.D. in Inches	Ampacity** 40°C Ambient	Approximate Net Weight Lbs/Kft
Size AWG or KCMIL	No. of Strands	Nominal O.D in Inches				
SINGLE CONDUCTOR 2400 VOLT OR 5000 VOLT*, 100% INSULATION LEVEL, NON-SHIELDED						
8*	7	0.14	110	0.42	55	100
6*	7	0.18	110	0.46	75	140
4*	7	0.23	110	0.51	97	195
2	7	0.27	110	0.55	130	280
1	19	0.30	110	0.58	155	340
1/0	19	0.34	110	0.62	180	410
2/0	19	0.38	110	0.66	205	505
3/0	19	0.42	110	0.70	240	620
4/0	19	0.48	110	0.76	280	765
250	37	0.52	120	0.83	315	900
350	37	0.62	120	0.92	385	1230
500	37	0.74	120	1.04	475	1715
750	61	0.91	130	1.23	600	2535
1000*	61	1.12	130	1.46	690	3375

Note: **Based on three single conductor cables in isolated conduit in air per NEC.

*Compressed conductors.

*ICEA voltage class.

The above data is approximate and subject to normal manufacturing tolerances.

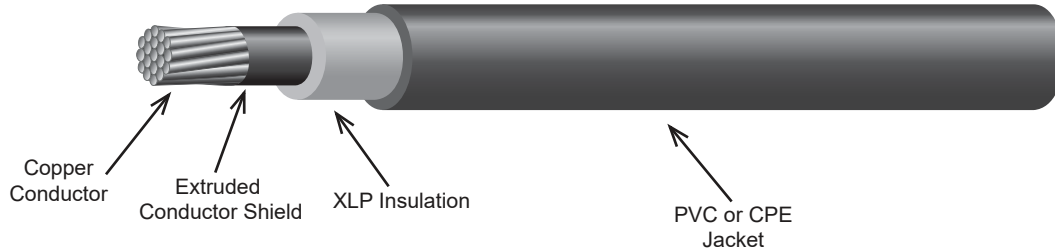
STANDARDS AND RATINGS:

1. Listed by UL as Type MV-90 per Standard 1072.
2. Conforms to ICEA S-96-659/NEMA WC71 Nonshielded 2001V - 5KV Cables.

**XLP POWER CABLE, NON-SHIELDED, 2400VOLT (5000VOLT*)
TYPE MV-90, DRY, PVC or CPE JACKET**

SPEC 2-11-2

Ver. 8.0
Revised: 07/04/13



90°C CONDUCTOR TEMPERATURE, DRY							
Conductor			Insulation in Mils	Jacket in Mils	Approximate O.D. in Inches	Ampacity** 40°C Ambient	Approximate Net Weight Lbs/Kft
Size AWG or KCMIL	No. of Strands	Nominal O.D in Inches					
SINGLE CONDUCTOR 2400 VOLT OR 5000 VOLT*, 100% INSULATION LEVEL, NON-SHIELDED							
8*	7	0.14	90	30	0.52	55	150
6*	7	0.18	90	30	0.56	75	190
4*	7	0.23	90	45	0.61	97	255
2	7	0.27	90	45	0.65	130	340
1	19	0.30	90	45	0.68	155	405
1/0	19	0.34	90	45	0.72	180	485
2/0	19	0.38	90	45	0.76	205	580
3/0	19	0.42	90	65	0.84	240	730
4/0	19	0.48	90	65	0.90	280	885
250	37	0.52	90	65	0.94	315	1020
350	37	0.62	90	65	1.04	385	1360
500	37	0.74	90	65	1.16	475	1860
750	61	0.91	90	65	1.33	600	2690
1000*	61	1.12	90	65	1.56	690	3555

Note: **Based on three single conductor cables in isolated conduit in air per NEC.

*Compressed conductors.

*ICEA voltage class.

The above data is approximate and subject to normal manufacturing tolerances.

STANDARDS AND RATINGS:

1. Listed by UL as Type MV-90 per Standard 1072.
2. Conforms to ICEA S-96-659/NEMA WC71 Nonshielded 2001V - 5KV Cables.
3. Listed by UL For CT Use (CPE jacketed sizes 500KCMIL and larger).



POWER CABLE, NON-SHIELDED, 2400V (5000V*) CROSS-LINKED POLYETHYLENE INSULATION (XLP) TYPE MV-90, WET OR DRY, SINGLE AND MULTI-CONDUCTOR

SCOPE:

This specification covers Aetna Insulated Wire's standard construction for single and multi conductor non-shielded power cables, Type MV-90, insulated with solid dielectric cross-linked polyethylene (XLP) to the 2400 V level, with an overall jacket and a wet or dry rating.

***Note:** The NEC does not recognize a non-shielded 5000 V cable in this construction and only recognizes 2400 V non-shielded with the specific construction attributes included in this specification. These cables do however meet the current relevant ICEA standards for 5000 V non-shielded cables.

PRODUCT SPECIFICATIONS AND RATINGS:

- i) National Fire Protection Association (NFPA 70), National Electric Code (NEC)
- ii) Underwriters Laboratories 1072 for Medium Voltage Power Cables
- iii) ICEAS-96-659/NEMA WC71 Non-Shielded 2001V - 5KV Cables
- iv) See individual product sheets for specific listings and ratings.

APPLICATION:

These cables comply with the requirements of NEC Article 310.10 (E) and the exceptions No.1 and No. 2 with respect to non-shielded cables above 2000V and NEC Table 310.104(D) for wet and dry locations. Consequently, where NEC requirements apply, this cable is suitable for use in wet and dry locations at a continuous conductor operating temperature of 90°C, at an emergency overload conductor temperature of 130°C and at a short circuit conductor temperature of 250°C. These cables may be installed in duct or conduit or properly supported aerially. Cables that are rated for use in cable tray applications are shown on the individual product specification sheets.

CONSTRUCTION DATA:

Conductors - The conductor consists of uncoated soft, copper strands meeting the requirements of ASTM B3. Unless otherwise specified the conductors are supplied as Class B compact per ASTM B496.

Conductor Shield - The conductor shielding consists of an extruded semi-conducting layer meeting the requirements of the governing specifications.

Insulation - The insulation is cross-linked polyethylene (XLP) extruded in a single pass with the conductor shield to the wall thickness as specified in the governing specifications listed and as shown on the individual product specification sheets.

Conductor Coding - Phase identification for multi conductor cables is provide by a printed stripe on each of the conductors.

Ground Wire - Standard multi conductor cables include one stranded bare copper ground in one of the outer cable interstices. The ground wire is sized per UL requirements however, custom ground wire sizes and configurations are available upon request.

Assembly - The assembly of multi conductor cables is done by cabling together the required number of insulated non-shielded conductors and the ground wires (if applicable) with a suitable left hand lay. Suitable fillers will be used in the interstices to round out the cable cross section. A mylar binder is applied over the assembly.

Jacket - A sunlight and ozone resistant polyvinylchloride (PVC), chlorinated polyethylene (CPE) or low smoke halogen free (LSHF) Polyolefin jacket is extruded over the single and multi conductor assembly. Optional jacket materials are available that offer enhanced ratings and performance.

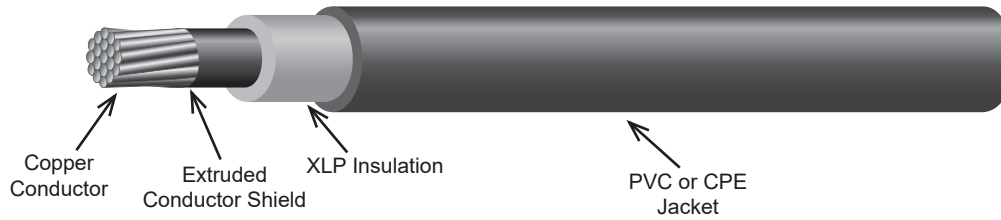
AVAILABLE OPTIONS:

- a) Four conductor cables.
- b) With or without ground wire – insulated grounds – multiple grounds
- c) (-40°C) PVC jacket or LLD Polyethylene jacket.

**XLP POWER CABLE, NON-SHIELDED, 2400V (5000V*)
TYPE MV-90, WET OR DRY**

SPEC 2-21-1

Ver. 8.0
Revised: 07/04/13



90°C CONDUCTOR TEMPERATURE, WET OR DRY							
Conductor			Insulation in Mils	Jacket in Mils	Approximate O.D. in Inches	Ampacity* 40°C Ambient	Approximate Net Weight Lbs/Kft
Size AWG or KCMIL	No. of Strands	Nominal O.D in Inches					
SINGLE CONDUCTOR 2400 VOLT OR 5000 VOLT*, 100% OR 133% INSULATION LEVEL, NON-SHIELDED							
8*	7	0.14	125	80	0.62	55	205
6*	7	0.18	125	80	0.67	75	245
4*	7	0.23	125	80	0.72	97	310
2	7	0.27	125	80	0.76	130	405
1	19	0.30	125	80	0.79	155	470
1/0	19	0.34	125	80	0.83	180	550
2/0	19	0.38	125	80	0.87	205	650
3/0	19	0.42	125	95	0.97	240	830
4/0	19	0.48	125	95	1.03	280	985
250	37	0.52	140	110	1.10	315	1145
350	37	0.62	140	110	1.20	385	1500
500	37	0.74	140	110	1.32	475	2015
750	61	0.91	155	125	1.56	600	2955
1000*	61	1.12	155	125	1.79	690	3860

Note: **Based on three single conductor cables in isolated conduit in air per NEC.

*Compressed conductors.

*ICEA voltage class.

The above data is approximate and subject to normal manufacturing tolerances.

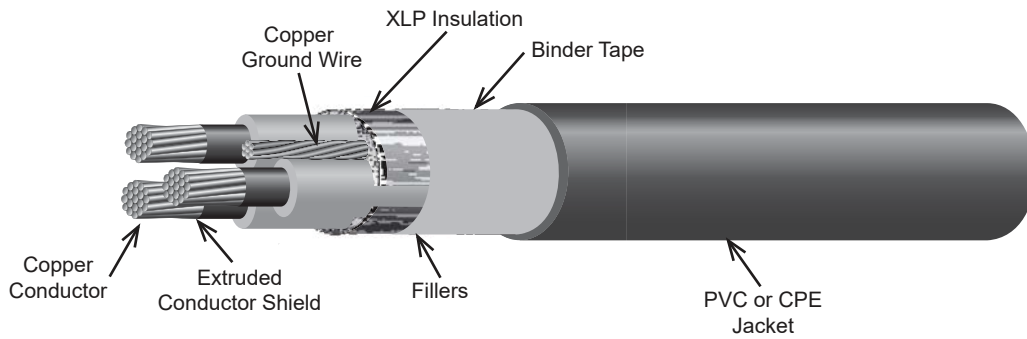
STANDARDS AND RATINGS:

1. Listed by UL as Type MV-90 per Standard 1072 (PVC and CPE jacketed cable only)
2. Conforms to ICEA S-96-659/NEMA WC71 Nonshielded 2001V - 5KV Cables.
3. Sizes 500 KCMIL and larger are listed by UL For CT Use (CPE jacketed only).

**XLP POWER CABLE, NON-SHIELDED, 2400V (5000V*)
TYPE MV-90, WET OR DRY**

SPEC 2-21-1.3

Ver. 8.0
Revised: 07/04/13



90°C CONDUCTOR TEMPERATURE, WET OR DRY								
Conductor			Insulation in Mils	Overall Jacket in Mils	Size AWG Copper Ground Wire	Approximate O.D. in Inches	Ampacity** 40°C Ambient	Approximate Net Weight Lbs/Kft
Size AWG or KCMIL	No. of Strands	Nominal O.D in Inches						
THREE CONDUCTOR 2400 VOLT OR 5000 VOLT*, 100% OR 133% INSULATION LEVEL, NON-SHIELDED								
8*	7	0.14	90	80	8	1.02	55	535
6*	7	0.18	90	80	6	1.10	75	695
4*	7	0.23	90	80	6	1.20	97	895
2	7	0.27	90	80	6	1.29	130	1175
1	19	0.30	90	80	4	1.36	155	1425
1/0	19	0.34	90	80	4	1.44	180	1675
2/0	19	0.38	90	80	4	1.53	205	1985
3/0	19	0.42	90	80	3	1.63	240	2405
4/0	19	0.48	90	80	3	1.74	280	2885
250	37	0.52	90	110	3	1.88	315	3375
350	37	0.62	90	110	2	2.08	385	4505
500	37	0.74	90	110	1	2.34	475	6155
750	61	0.91	90	110	1/0	2.72	600	8860
1000*	61	1.12	90	140	1/0	3.27	690	11850

Note: **Based on three single conductor cables in isolated conduit in air per NEC.

*Compressed conductors.

*ICEA voltage class.

The above data is approximate and subject to normal manufacturing tolerances.

STANDARDS AND RATINGS:

1. Listed by UL as Type MV-90 per Standard 1072.
2. Conforms to ICEA S-96-659/NEMA WC71 Nonshielded 2001V - 5KV Cables.
3. Listed by UL as Sunlight Resistant.



POWER CABLE, SHIELDED, 5000 TO 35000 VOLT CROSS-LINKED POLYETHYLENE INSULATION (TR-XLP) TYPE MV-90, AEIC CS8 SINGLE AND MULTI-CONDUCTOR

SCOPE:

This specification covers Aetna Insulated Wire's standard construction for single and multi-conductor shielded power cables, Type MV-90, insulated with solid dielectric cross-linked polyethylene (TR-XLP), a copper tape shield and an overall jacket of polyvinylchloride (PVC), chlorinated polyethylene (CPE) or low smoke halogen free (LSHF) polyolefin.

PRODUCT SPECIFICATIONS AND RATINGS:

- i) National Fire Protection Association (NFPA 70), National Electric Code (NEC)
- ii) Underwriters Laboratories 1072 for Medium Voltage Power Cables
- iii) ICEA S-93-639/NEMA WC74 Shielded Power Cable 5 - 46KV
- iv) See individual product sheets for specific listings and ratings.

APPLICATION:

All power cables manufactured under this specification are in accordance with the NEC specifications and as such are suitable under the code for 5 kV to 35 kV applications, at both the 100% and 133% insulation levels. All these cables are suitable for use in wet or dry locations at a continuous conductor operating temperature of 90°C, at an emergency overload conductor temperature of 130°C and at a short circuit conductor temperature of 250°C. These cables may be installed in duct or conduit or properly supported aurally and may be used in direct burial applications. Cables that are rated for use in cable tray applications are shown on the individual product specification sheets.

(Note: Unlike UL/ICEA/NEC, where AEIC or ICEA S-94-649 is the governing specification, for the 5 kV voltage class there is a difference in insulation thickness between the 100% and 133% insulation levels. Users must therefore specify 5 kV 100 or 133% per AEIC when ordering.)

CONSTRUCTION DATA:

Conductors - The conductor consists of uncoated soft, copper strands meeting the requirements of ASTM B3. Unless otherwise specified the conductors are supplied as compact round per ASTM B496.

Conductor Shield - The conductor shield consists of an extruded semi-conducting layer meeting the requirements of the governing specifications above.

Insulation - The insulation is cross-linked polyethylene (XLP) extruded in a single pass with the conductor and insulation shields to the wall thickness as specified in the governing specifications listed and as shown on the individual product specification sheets. Tree retardant cross-linked polyethylene (TR-XLP) is offered as standard.

Insulation Shield - Insulation shield consists of a semi-conducting extruded compound and a 5 mil bare copper metallic tape overlapped a minimum of 12½ %.

Conductor Coding - Phase identification for multi conductor cables is provided by a colored stripe on the insulation shield of each of the conductors (red, black, blue).

Ground Wire - Standard multi conductor cables include one stranded bare copper ground in one of the outer cable interstices. The ground wire is sized per UL requirements, however custom ground wire sizes and configurations are available upon request.

Assembly - The assembly of multi conductor cables is done by cabling together the required number of insulated shielded conductors and the ground wires with a left hand lay. Suitable fillers are used in the interstices to round out the cable cross section. A mylar binder tape is applied overall.

Jacket - A sunlight and ozone resistant polyvinylchloride (PVC), chlorinated polyethylene (CPE) or low smoke halogen free (LSHF) Polyolefin jacket is extruded over the single and multi conductor assembly. Optional jacket materials are available that offer other ratings and performance.

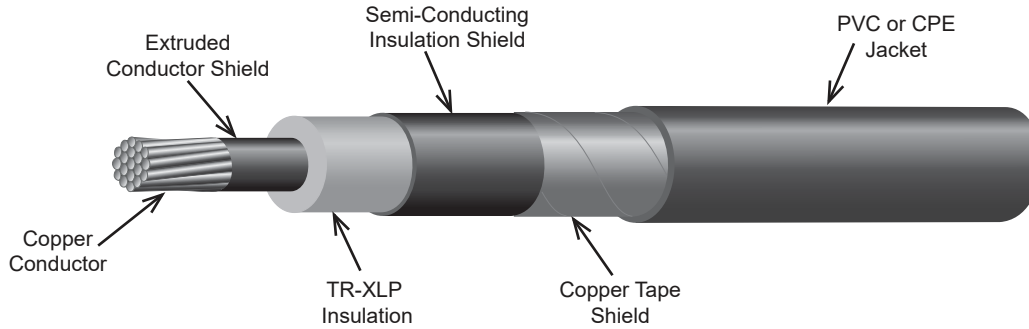
AVAILABLE OPTIONS:

- a) Four conductor cables.
- b) With or without ground wire – insulated grounds – multiple grounds
- c) Alternate shielding constructions – coated copper tape shield or tape plus wires
- d) (-40°C) PVC jacket or LLD Polyethylene jacket.

**TR-XLP POWER CABLE, SHIELDED, 5000 VOLT, TYPE MV-90
AEIC CS8**

SPEC 2-31-1

Ver. 8.0
Revised: 07/04/13



90°C CONDUCTOR TEMPERATURE, WET OR DRY								
Conductor			Insulation in Mils	Jacket in Mils	Approximate O.D. in Inches		Ampacity** 40°C Ambient	Approximate Net Weight Lbs/Kft
Size AWG or KCMIL	No. of Strands	Nominal O.D in Inches			Over Insulation	Overall		
SINGLE CONDUCTOR 5000 VOLT, 100% OR 133% INSULATION LEVEL, SHIELDED								
8*	7	0.14	90	60	0.38	0.61	55	215
6*	7	0.18	90	60	0.42	0.64	75	260
4*	7	0.23	90	60	0.47	0.69	97	325
2	7	0.27	90	60	0.51	0.73	130	420
1*	19	0.30	90	60	0.54	0.76	155	485
1/0	19	0.34	90	60	0.58	0.80	180	570
2/0	19	0.38	90	60	0.62	0.84	205	670
3/0	19	0.42	90	80	0.66	0.89	240	795
4/0	19	0.48	90	80	0.72	0.98	280	990
250	37	0.52	90	80	0.76	1.02	315	1130
350	37	0.62	90	80	0.86	1.12	385	1480
500	37	0.74	90	80	0.98	1.24	475	2000
750	61	0.91	90	80	1.15	1.41	600	2845
1000*	61	1.12	90	80	1.38	1.64	690	3740

Note: **Based on three single conductor cables in isolated conduit in air per NEC.

*Compressed conductors.

*AEIC CS8 for 133% insulation level use specification 2-31-2.

The above data is approximate and subject to normal manufacturing tolerances.

STANDARDS AND RATINGS:

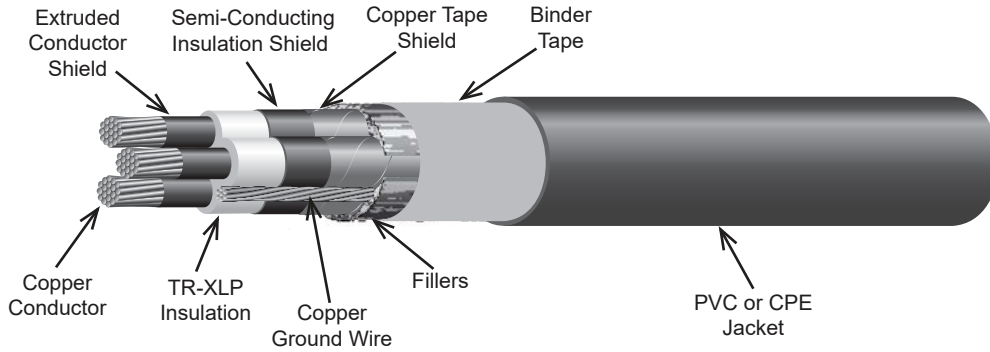
1. Listed by UL as Type MV-90 per Standard 1072.
2. Conforms to ICEA S-93-639/NEMA WC74 Shielded Power Cable 5 - 46KV.
3. Conforms to ICEA S-97-682 Utility Shielded Power Cables 5 - 46KV.
4. All sizes are listed by UL as Sunlight Resistant and sizes 1/0 AWG & larger are listed For CT Use.
5. Sizes 1/0AWG & larger are listed by UL for IEEE 1202 (PVC jacketed only).
6. Conforms to AEIC CS8 (5kV 100% only).



TR-XLP POWER CABLE, SHIELDED, 5000 VOLT, TYPE MV-90

SPEC 2-31-1.3

Ver. 8.0
Revised: 07/04/13



90°C CONDUCTOR TEMPERATURE, WET OR DRY								
Conductor			Insulation in Mils	Jacket in Mils	Size AWG Copper Ground Wire	Approximate O.D. in Inches	Ampacity** 40°C Ambient	Approximate Net Weight Lbs/Kft
Size AWG or KCMIL	No. of Strands	Nominal O.D in Inches						
THREE CONDUCTOR 5000 VOLT, 100% OR 133% INSULATION LEVEL SHIELDED								
8*	7	0.14	90	80	8	1.21	59	765
6*	7	0.18	90	80	6	1.29	79	940
4*	7	0.23	90	80	6	1.39	105	1160
2	7	0.27	90	80	6	1.48	140	1460
1	19	0.30	90	80	4	1.55	160	1720
1/0	19	0.34	90	80	4	1.63	185	1990
2/0	19	0.38	90	80	4	1.71	215	2320
3/0	19	0.42	90	110	3	1.82	250	2735
4/0	19	0.48	90	110	3	1.97	285	3335
250	37	0.52	90	110	3	2.06	320	3780
350	37	0.62	90	110	2	2.27	395	4950
500	37	0.74	90	110	1	2.53	485	6655
750	61	0.91	90	140	1/0	2.96	615	9605
1000*	61	1.12	90	140	1/0	3.46	705	12540

Note: **Based on one three conductor cable isolated in air per NEC. For other installations refer to the NEC.
*Compressed conductors.

The above data is approximate and subject to normal manufacturing tolerances.

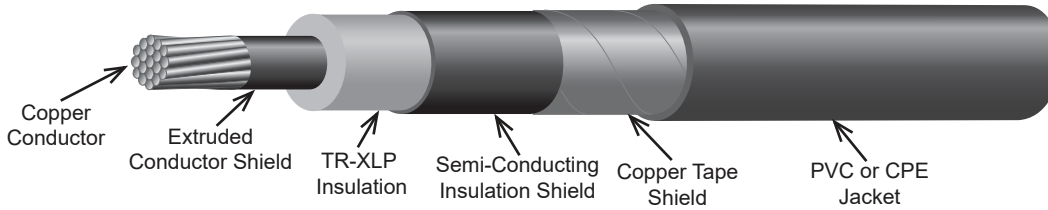
STANDARDS AND RATINGS:

1. Listed by UL as Type MV-90 per Standard 1072.
2. Conforms to ICEA S-93-639/NEMA WC74 Shielded Power Cable 5 - 46KV.
3. Listed by UL as Sunlight Resistant, for Direct Burial and For CT Use.
4. Listed by UL as IEEE 1202 (PVC jacketed only).

**TR-XLP POWER CABLE, SHIELDED, 5000/8000 VOLT, TYPE MV-90
AEIC CS8**

SPEC 2-31-2

Ver. 8.0
Revised: 07/04/13



90°C CONDUCTOR TEMPERATURE, WET OR DRY								
Conductor			Insulation in Mils	Jacket in Mils	Approximate O.D. in Inches		Ampacity** 40°C Ambient	Approximate Net Weight Lbs/Kft
Size AWG or KCMIL	No. of Strands	Nominal O.D in Inches			Over Insulation	Overall		
SINGLE CONDUCTOR 5000 VOLT 133% or 8000 VOLT 100% INSULATION LEVEL, SHIELDED								
6*	7	0.18	115	60	0.47	0.69	75	285
4*	7	0.23	115	60	0.52	0.74	97	355
2	7	0.27	115	60	0.56	0.78	130	450
1	19	0.30	115	60	0.59	0.81	155	515
1/0	19	0.34	115	60	0.63	0.85	180	600
2/0	19	0.38	115	60	0.67	0.89	205	705
3/0	19	0.42	115	80	0.71	0.98	240	870
4/0	19	0.48	115	80	0.77	1.03	280	1030
250	37	0.52	115	80	0.81	1.07	315	1170
350	37	0.62	115	80	0.91	1.17	385	1525
500	37	0.74	115	80	1.03	1.29	475	2045
750	61	0.91	115	80	1.20	1.46	600	2900
1000*	61	1.12	115	80	1.43	1.69	690	3800
SINGLE CONDUCTOR 8000 VOLT 133% INSULATION LEVEL, SHIELDED								
6*	7	0.18	140	60	0.52	0.74	83	315
4*	7	0.23	140	60	0.57	0.79	110	385
2	7	0.27	140	60	0.61	0.83	150	480
1	19	0.30	140	60	0.64	0.86	170	550
1/0	19	0.34	140	60	0.68	0.90	195	635
2/0	19	0.38	140	80	0.72	0.98	225	775
3/0	19	0.42	140	80	0.76	1.03	260	905
4/0	19	0.48	140	80	0.82	1.08	295	1065
250	37	0.52	140	80	0.86	1.12	330	1210
350	37	0.62	140	80	0.96	1.22	395	1565
500	37	0.74	140	80	1.08	1.34	480	2090
750	61	0.91	140	80	1.25	1.51	585	2950
1000*	61	1.12	140	80	1.48	1.74	675	3860

Note: **Based on three single conductor cables in isolated conduit in air per NEC. *Compressed conductors.

The above data is approximate and subject to normal manufacturing tolerances.

STANDARDS AND RATINGS:

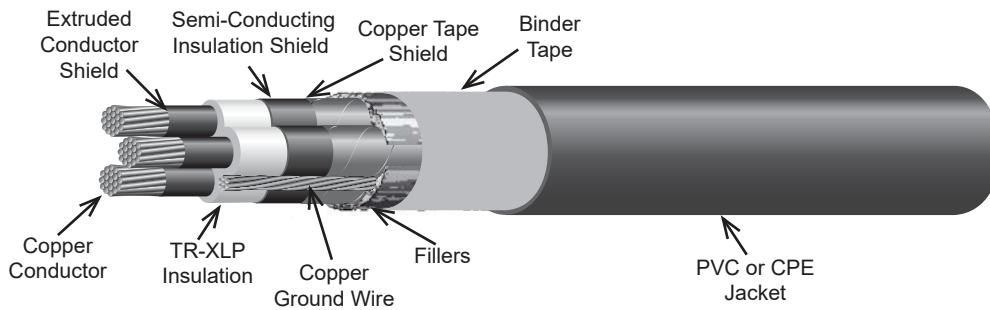
1. Listed by UL as Type MV-90 per Standard 1072.
2. Conforms to ICEA S-93-639/NEMA WC74 Shielded Power Cable 5 - 46KV.
3. Conforms to ICEA S-97-682 Utility Shielded Power Cables 5 - 46KV.
4. All sizes are listed by UL as Sunlight Resistant and sizes 1/0 AWG & larger are listed For CT Use.
5. Sizes 1/0AWG & larger are listed by UL for IEEE 1202 (PVC jacketed only).
6. Conforms to AEIC CS8.



TR-XLP POWER CABLE, SHIELDED, 5000/8000 VOLT, TYPE MV-90

SPEC 2-31-2.3

Ver. 8.0
Revised: 07/04/13



90°C CONDUCTOR TEMPERATURE, WET OR DRY								
Conductor			Insulation in Mils	Jacket in Mils	Size AWG Copper Ground Wire	Approximate O.D. in Inches	Ampacity** 40°C Ambient	Approximate Net Weight Lbs/Kft
Size AWG or KCMIL	No. of Strands	Nominal O.D in Inches						
THREE CONDUCTOR 5000 VOLT 133% OR 8000 VOLT 100% INSULATION LEVEL, SHIELDED								
6*	7	0.18	115	80	6	1.39	79	1035
4*	7	0.23	115	80	6	1.50	105	1260
2	7	0.27	115	80	6	1.59	140	1570
1	19	0.30	115	80	4	1.66	160	1830
1/0	19	0.34	115	80	4	1.74	185	2105
2/0	19	0.38	115	80	4	1.82	215	2435
3/0	19	0.42	115	110	3	1.96	250	2955
4/0	19	0.48	115	110	3	2.08	285	3470
250	37	0.52	115	110	3	2.17	320	3920
350	37	0.62	115	110	2	2.38	395	5105
500	37	0.74	115	110	1	2.64	485	6825
750	61	0.91	115	140	1/0	3.07	615	9800
1000*	61	1.12	115	140	1/0	3.57	705	12760
THREE CONDUCTOR 8000 VOLT 133% INSULATION LEVEL, SHIELDED								
6*	7	0.18	140	80	6	1.50	93	1135
4*	7	0.23	140	80	6	1.60	120	1370
2	7	0.27	140	80	6	1.70	165	1680
1	19	0.30	140	110	4	1.76	185	1950
1/0	19	0.34	140	110	4	1.88	215	2295
2/0	19	0.38	140	110	4	1.97	245	2635
3/0	19	0.42	140	110	3	2.07	285	3090
4/0	19	0.48	140	110	3	2.18	325	3610
250	37	0.52	140	110	3	2.28	360	4070
350	37	0.62	140	110	2	2.49	435	5265
500	37	0.74	140	110	1	2.75	535	6995
750	61	0.91	140	140	1/0	3.18	670	10000
1000*	61	1.12	140	140	1/0	3.67	770	12990

Note:**Based on one three conductor cable isolated in air per NEC. For other installations refer to the NEC.
*Compressed conductors.

The above data is approximate and subject to normal manufacturing tolerances.

STANDARDS AND RATINGS:

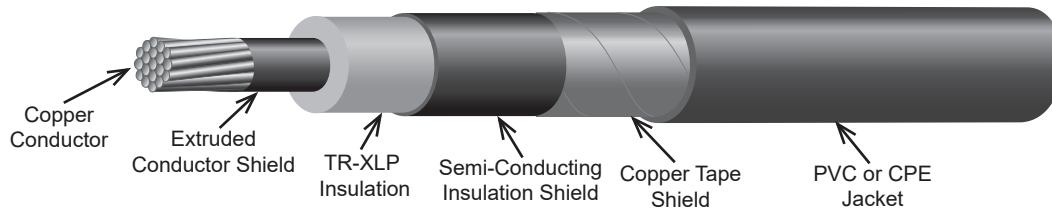
1. Listed by UL as Type MV-90 per Standard 1072.
2. Conforms to ICEA S-93-639/NEMA WC74 Shielded Power Cable 5 - 46KV.
3. Listed by UL as Sunlight Resistant, for Direct Burial and For CT Use.
4. Listed by UL as IEEE 1202 (PVC jacketed only).



TR-XLP POWER CABLE, SHIELDED, 15000 VOLT, TYPE MV-90 AEIC CS8

SPEC 2-31-3

Ver. 8.0
Revised: 07/04/13



90°C CONDUCTOR TEMPERATURE, WET OR DRY								
Conductor			Insulation in Mils	Jacket in Mils	Approximate O.D. in Inches		Ampacity** 40°C Ambient	Approxi- mate Net Weight Lbs/Kft
Size AWG or KCMIL	No. of Strands	Nominal O.D in Inches			Over Insulation	Overall		
SINGLE CONDUCTOR 15000 VOLT, 100% INSULATION LEVEL, SHIELDED								
2	7	0.27	175	60	0.68	0.90	150	525
1	19	0.30	175	80	0.71	0.97	170	630
1/0	19	0.34	175	80	0.75	1.01	195	720
2/0	19	0.38	175	80	0.79	1.05	225	830
3/0	19	0.42	175	80	0.83	1.10	260	960
4/0	19	0.48	175	80	0.89	1.15	295	1125
250	37	0.52	175	80	0.93	1.19	330	1270
350	37	0.62	175	80	1.03	1.29	395	1630
500	37	0.74	175	80	1.15	1.41	480	2160
750	61	0.91	175	80	1.32	1.58	585	3025
1000*	61	1.12	175	110	1.55	1.85	675	4015
SINGLE CONDUCTOR 15000 VOLT, 133% INSULATION LEVEL, SHIELDED								
2	7	0.27	220	80	0.77	1.03	150	630
1	19	0.30	220	80	0.80	1.06	170	700
1/0	19	0.34	220	80	0.84	1.10	195	790
2/0	19	0.38	220	80	0.88	1.14	225	900
3/0	19	0.42	220	80	0.92	1.19	260	1035
4/0	19	0.48	220	80	0.98	1.24	295	1205
250	37	0.52	220	80	1.02	1.28	330	1350
350	37	0.62	220	80	1.12	1.38	395	1715
500	37	0.74	220	80	1.24	1.50	480	2255
750	61	0.91	220	80	1.41	1.67	585	3130
1000*	61	1.12	220	110	1.64	1.94	675	4135

Note: **Based on three single conductor cables in isolated conduit in air per NEC.

*Compressed conductors.

The above data is approximate and subject to normal manufacturing tolerances.

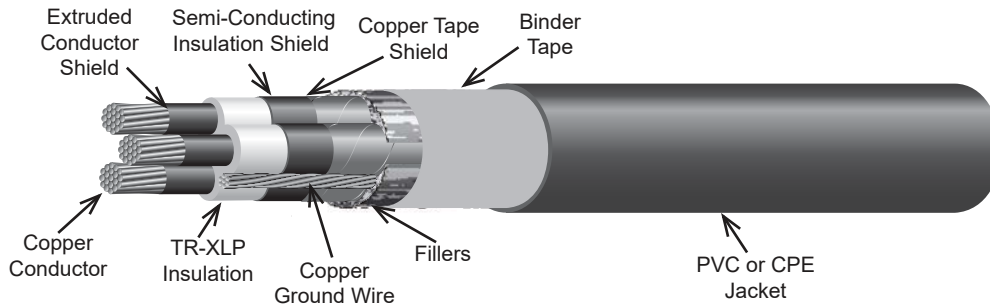
STANDARDS AND RATINGS:

1. Listed by UL as Type MV-90 per Standard 1072.
2. Conforms to ICEA S-93-639/NEMA WC74 Shielded Power Cable 5 - 46KV.
3. Conforms to ICEA S-97-682 Utility Shielded Power Cables 5 - 46KV.
4. All sizes are listed by UL as Sunlight Resistant and sizes 1/0 AWG & larger are listed For CT Use.
5. Sizes 1/0AWG & larger are listed by UL for IEEE 1202 (PVC jacketed only).
6. Conforms to AEIC CS8.

TR-XLP POWER CABLE, SHIELDED, 15000 VOLT, TYPE MV-90

SPEC 2-31-3.3

Ver. 8.0
Revised: 07/04/13



90°C CONDUCTOR TEMPERATURE, WET OR DRY								
Conductor			Insulation in Mils	Jacket in Mils	Size AWG Copper Ground Wire	Approximate O.D. in Inches	Ampacity** 40°C Ambient	Approximate Net Weight Lbs/Kft
Size AWG or KCMIL	No. of Strands	Nominal O.D in Inches						
THREE CONDUCTOR 15000 VOLT, 100% INSULATION LEVEL, SHIELDED								
2	7	0.27	175	110	6	1.89	165	1920
1	19	0.30	175	110	4	1.95	185	2195
1/0	19	0.34	175	110	4	2.03	215	2480
2/0	19	0.38	175	110	4	2.12	245	2825
3/0	19	0.42	175	110	3	2.22	285	3290
4/0	19	0.48	175	110	3	2.33	325	3820
250	37	0.52	175	110	3	2.43	360	4285
350	37	0.62	175	110	2	2.64	435	5495
500	37	0.74	175	140	1	2.96	535	7415
750	61	0.91	175	140	1/0	3.33	670	10290
1000*	61	1.12	175	140	1/0	3.82	770	13320
THREE CONDUCTOR 15000 VOLT, 133% INSULATION LEVEL, SHIELDED								
2	7	0.27	220	110	6	2.08	165	2160
1	19	0.30	220	110	4	2.14	185	2440
1/0	19	0.34	220	110	4	2.22	215	2735
2/0	19	0.38	220	110	4	2.31	245	3090
3/0	19	0.42	220	110	3	2.41	285	3565
4/0	19	0.48	220	110	3	2.52	325	4105
250	37	0.52	220	110	3	2.62	360	4580
350	37	0.62	220	110	2	2.83	435	5811
500	37	0.74	220	140	1	3.15	535	7770
750	61	0.91	220	140	1/0	3.52	670	10685
1000*	61	1.12	220	140	1/0	4.01	770	13760

Note: **Based on one three conductor cable isolated in air per NEC.
For other installations refer to the NEC.
*Compressed conductors.

The above data is approximate and subject to normal manufacturing tolerances.

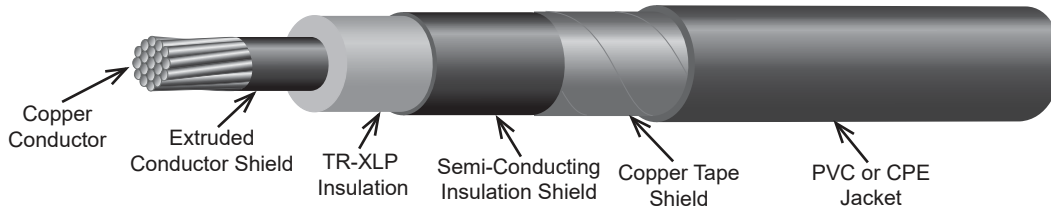
STANDARDS AND RATINGS:

1. Listed by UL as Type MV-90 per Standard 1072.
2. Conforms to ICEA S-93-639/NEMA WC74 Shielded Power Cable 5 - 46KV.
3. Listed by UL as Sunlight Resistant, for Direct Burial and For CT Use.
4. Listed by UL as IEEE 1202 (PVC jacketed only).

TR-XLP POWER CABLE, SHIELDED, 25000 VOLT, TYPE MV-90 AEIC CS8

SPEC 2-31-4

Ver. 8.0
Revised: 08/08/13



90°C CONDUCTOR TEMPERATURE, WET OR DRY								
Conductor			Insulation in Mils	Jacket in Mils	Approximate O.D. in Inches		Ampacity** 40°C Ambient	Approximate Net Weight Lbs/Kft
Size AWG or KCMIL	No. of Strands	Nominal O.D in Inches			Over Insulation	Overall		
SINGLE CONDUCTOR 25000 VOLT, 100% INSULATION LEVEL, SHIELDED								
1	19	0.30	260	80	0.86	1.12	170	750
1/0	19	0.34	260	80	0.90	1.16	195	840
2/0	19	0.38	260	80	0.94	1.20	225	950
3/0	19	0.42	260	80	0.98	1.25	260	1090
4/0	19	0.48	260	80	1.04	1.30	295	1260
250	37	0.52	260	80	1.08	1.34	330	1405
300	37	0.57	260	80	1.13	1.39	362	1595
350	37	0.62	260	80	1.18	1.44	395	1780
500	37	0.74	260	80	1.30	1.56	480	2320
750	61	0.91	260	80	1.47	1.73	585	3200
1000*	61	1.12	260	110	1.70	2.00	675	4215
SINGLE CONDUCTOR 25000 VOLT, 133% INSULATION LEVEL, SHIELDED								
1	19	0.30	320	80	0.99	1.25	170	865
1/0	19	0.34	320	80	1.03	1.29	195	955
2/0	19	0.38	320	80	1.07	1.33	225	1070
3/0	19	0.42	320	80	1.11	1.38	260	1215
4/0	19	0.48	320	80	1.17	1.43	295	1385
250	37	0.52	320	80	1.21	1.47	330	1535
300	37	0.57	320	80	1.26	1.52	362	1730
350	37	0.62	320	80	1.31	1.57	395	1915
500	37	0.74	320	80	1.43	1.69	480	2465
750	61	0.91	320	110	1.60	1.90	585	3435
1000*	61	1.12	320	110	1.83	2.13	675	4400

Note: **Based on three single conductor cables in isolated conduit in air per NEC.
*Compressed conductors.

The above data is approximate and subject to normal manufacturing tolerances.

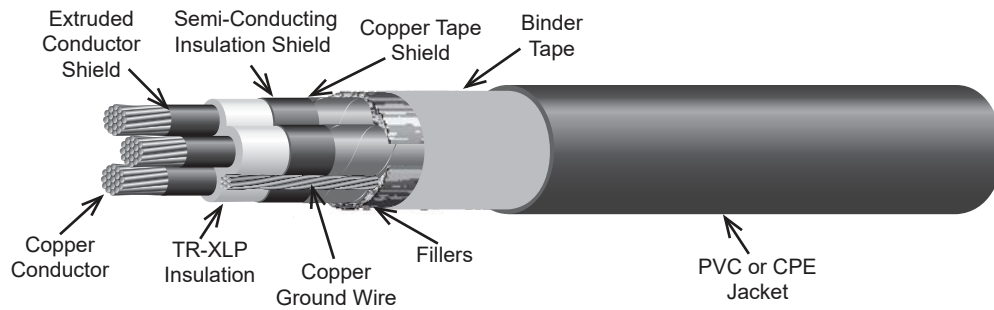
STANDARDS AND RATINGS:

1. Listed by UL as Type MV-90 per Standard 1072.
2. Conforms to ICEA S-93-639/NEMA WC74 Shielded Power Cable 5 - 46KV.
3. Conforms to ICEA S-97-682 Utility Shielded Power Cables 5 - 46KV.
4. All sizes are listed by UL as Sunlight Resistant and sizes 1/0 AWG & larger are listed For CT Use.
5. Sizes 1/0AWG & larger are listed by UL for IEEE 1202 (PVC jacketed only).
6. Conforms to AEIC CS8.

TR-XLP POWER CABLE, SHIELDED, 25000 VOLT, TYPE MV-90

SPEC 2-31-4.3

Ver. 8.0
Revised: 07/04/13



90°C CONDUCTOR TEMPERATURE, WET OR DRY								
Conductor			Insulation in Mils	Jacket in Mils	Size AWG Copper Ground Wire	Approximate O.D. in Inches	Ampacity** 40°C Ambient	Approximate Net Weight Lbs/Kft
Size AWG or KCMIL	No. of Strands	Nominal O.D in Inches						
THREE CONDUCTOR 25000 VOLT, 100% INSULATION LEVEL, SHIELDED								
1	19	0.30	260	110	4	2.28	185	2615
1/0	19	0.34	260	110	4	2.36	215	2915
2/0	19	0.38	260	110	4	2.44	245	3280
3/0	19	0.42	260	110	3	2.55	285	3760
4/0	19	0.48	260	110	3	2.66	325	4305
250	37	0.52	260	110	3	2.76	360	4790
350	37	0.62	260	140	2	3.02	435	6205
500	37	0.74	260	140	1	3.28	535	8015
750	61	0.91	260	140	1/0	3.65	670	10955
1000*	61	1.12	260	140	1/0	4.15	770	14065
THREE CONDUCTOR 25000 VOLT, 133% INSULATION LEVEL, SHIELDED								
1	19	0.30	320	110	4	2.56	185	3025
1/0	19	0.34	320	110	4	2.64	215	3340
2/0	19	0.38	320	110	4	2.73	245	3710
3/0	19	0.42	320	110	3	2.83	285	4210
4/0	19	0.48	320	140	3	3.00	325	4945
250	37	0.52	320	140	3	3.10	360	5445
350	37	0.62	320	140	2	3.30	435	6730
500	37	0.74	320	140	1	3.56	535	8580
750	61	0.91	320	140	1/0	3.93	670	11575
1000*	61	1.12	320	140	1/0	4.43	770	14755

Note:**Based on one three conductor cable isolated in air per NEC.
For other installations refer to the NEC.
*Compressed conductors.

The above data is approximate and subject to normal manufacturing tolerances.

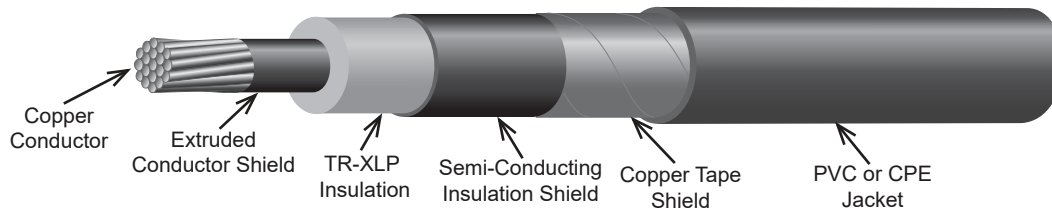
STANDARDS AND RATINGS:

1. Listed by UL as Type MV-90 per Standard 1072.
2. Conforms to ICEA S-93-639/NEMA WC74 Shielded Power Cable 5 - 46KV.
3. Listed by UL as Sunlight Resistant, for Direct Burial and For CT Use.
4. Listed by UL as IEEE 1202 (PVC jacketed only).

**TR-XLP POWER CABLE, SHIELDED, 28000 VOLT,
TYPE MV-90, AEIC CS8**

SPEC 2-31-5

Ver. 8.0
Revised: 07/04/13



90°C CONDUCTOR TEMPERATURE, WET OR DRY								
Conductor			Insulation in Mils	Jacket in Mils	Approximate O.D. in Inches		Ampacity** 40°C Ambient	Approximate Net Weight Lbs/Kft
Size AWG or KCMIL	No. of Strands	Nominal O.D. in Inches			Over Insulation	Overall		
SINGLE CONDUCTOR 28000 VOLT, 100% INSULATION LEVEL, SHIELDED								
1	19	0.30	280	80	0.90	1.16	170	785
1/0	19	0.34	280	80	0.94	1.20	195	875
2/0	19	0.38	280	80	0.98	1.24	225	990
3/0	19	0.42	280	80	1.02	1.29	260	1125
4/0	19	0.48	280	80	1.08	1.34	295	1295
250	37	0.52	280	80	1.12	1.38	330	1445
350	37	0.62	280	80	1.22	1.48	395	1820
500	37	0.74	280	80	1.34	1.60	480	2365
750	61	0.91	280	110	1.51	1.81	585	3320
1000*	61	1.12	280	110	1.74	2.04	675	4270
SINGLE CONDUCTOR 28000 VOLT, 133% INSULATION LEVEL, SHIELDED								
1	19	0.30	345	80	1.04	1.30	170	910
1/0	19	0.34	345	80	1.08	1.34	195	1005
2/0	19	0.38	345	80	1.12	1.38	225	1120
3/0	19	0.42	345	80	1.16	1.43	260	1265
4/0	19	0.48	345	80	1.22	1.48	295	1435
250	37	0.52	345	80	1.26	1.52	330	1590
350	37	0.62	345	80	1.36	1.62	395	1970
500	37	0.74	345	80	1.48	1.74	480	2525
750	61	0.91	345	110	1.65	1.95	585	3505
1000*	61	1.12	345	110	1.88	2.18	675	4475

Note: **Based on three single conductor cables in isolated conduit in air per NEC.

*Compressed conductors.

The above data is approximate and subject to normal manufacturing tolerances.

STANDARDS AND RATINGS:

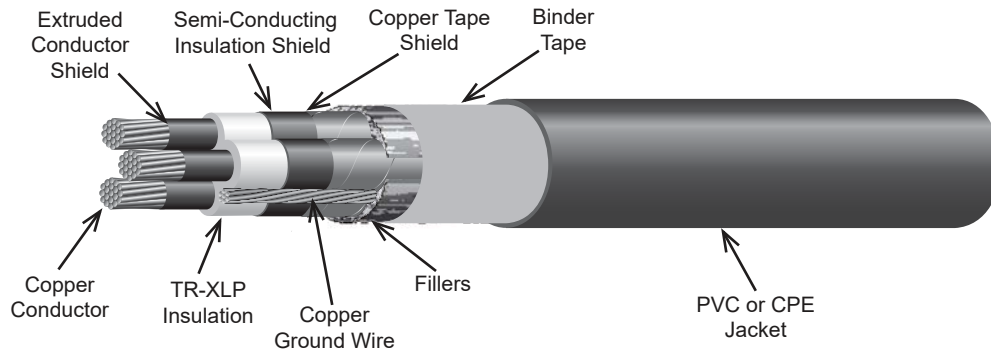
1. Listed by UL as Type MV-90 per Standard 1072.
2. Conforms to ICEA S-93-639/NEMA WC74 Shielded Power Cable 5 - 46KV.
3. Conforms to ICEA S-97-682 Utility Shielded Power Cables 5 - 46KV.
4. All sizes are listed by UL as Sunlight Resistant and sizes 1/0 AWG & larger are listed For CT Use.
5. Sizes 1/0AWG & larger are listed by UL for IEEE 1202 (PVC jacketed only).
6. Conforms to AEIC CS8.



TR-XLP POWER CABLE, SHIELDED, 28000 VOLT, TYPE MV-90

SPEC 2-31-5.3

Ver. 8.0
Revised: 07/04/13



90°C CONDUCTOR TEMPERATURE, WET OR DRY								
Conductor			Insulation in Mils	Jacket in Mils	Size AWG Copper Ground Wire	Approximate O.D. in Inches	Ampacity** 40°C Ambient	Approximate Net Weight Lbs/Kft
Size AWG or KCMIL	No. of Strands	Nominal O.D in Inches						
THREE CONDUCTOR 28000 VOLT, SHIELDED, 100% INSULATION LEVEL								
1	19	0.30	280	110	4	2.36	185	2740
1/0	19	0.34	280	110	4	2.44	215	3040
2/0	19	0.38	280	110	4	2.53	245	3405
3/0	19	0.42	280	110	3	2.63	285	3895
4/0	19	0.48	280	110	3	2.75	325	4445
250	37	0.52	280	110	3	2.84	360	4930
350	37	0.62	280	140	2	3.11	435	6360
500	37	0.74	280	140	1	3.37	535	8185
750	61	0.91	280	140	1/0	3.74	670	11140
1000*	61	1.12	280	140	1/0	4.23	770	14275
THREE CONDUCTOR 28000 VOLT, SHIELDED, 133% INSULATION LEVEL								
1	19	0.30	345	110	4	2.67	185	3195
1/0	19	0.34	345	110	4	2.75	215	3510
2/0	19	0.38	345	110	4	2.93	245	3890
3/0	19	0.42	345	140	3	3.00	285	4560
4/0	19	0.48	345	140	3	3.11	325	5140
250	37	0.52	345	140	3	3.20	360	5645
350	37	0.62	345	140	2	3.41	435	6945
500	37	0.74	345	140	1	3.67	535	8810
750	61	0.91	345	140	1/0	4.04	670	11820

Note:**Based on one three conductor cable isolated in air per NEC.
For other installations refer to the NEC.
*Compressed conductors.

The above data is approximate and subject to normal manufacturing tolerances.

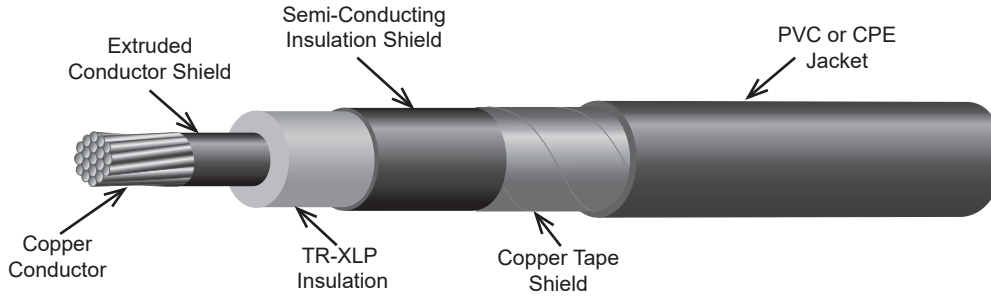
STANDARDS AND RATINGS:

1. Listed by UL as Type MV-90 per Standard 1072.
2. Conforms to ICEA S-93-639/NEMA WC74 Shielded Power Cable 5 - 46KV.
3. Listed by UL as Sunlight Resistant, for Direct Burial and For CT Use.
4. Listed by UL as IEEE 1202 (PVC jacketed only).

**TR-XLP POWER CABLE, SHIELDED, 35000 VOLT,
TYPE MV-90, AEIC CS8**

SPEC 2-31-6

Ver. 8.0
Revised: 07/04/13



90°C CONDUCTOR TEMPERATURE, WET OR DRY								
Conductor			Insulation in Mils	Jacket in Mils	Approximate O.D. in Inches		Ampacity** 40°C Ambient	Approximate Net Weight Lbs/Kft
Size AWG or KCMIL	No. of Strands	Nominal O.D. in Inches			Over Insulation	Overall		
SINGLE CONDUCTOR 35000 VOLT, 100% INSULATION LEVEL, SHIELDED								
1/0	19	0.34	345	80	1.08	1.34	195	1005
2/0	19	0.38	345	80	1.12	1.38	225	1120
3/0	19	0.42	345	80	1.16	1.43	260	1265
4/0	19	0.48	345	80	1.22	1.48	295	1435
250	37	0.52	345	80	1.26	1.52	330	1590
350	37	0.62	345	80	1.36	1.62	395	1970
500	37	0.74	345	80	1.48	1.74	480	2525
750	61	0.91	345	110	1.65	1.97	585	3540
1000*	61	1.12	345	110	1.88	2.20	675	4520
SINGLE CONDUCTOR 35000 VOLT, 133% INSULATION LEVEL, SHIELDED								
1/0	19	0.34	420	80	1.23	1.49	195	1155
2/0	19	0.38	420	80	1.27	1.53	225	1275
3/0	19	0.42	420	80	1.31	1.58	260	1425
4/0	19	0.48	420	80	1.37	1.63	295	1600
250	37	0.52	420	80	1.41	1.67	330	1760
350	37	0.62	420	80	1.51	1.77	395	2150
500	37	0.74	420	110	1.63	1.95	480	2825
750	61	0.91	420	110	1.80	2.12	585	3755
1000*	61	1.12	420	110	2.03	2.35	675	4755

Note: **Based on three single conductor cables in isolated conduit in air per NEC.

*Compressed conductors.

The above data is approximate and subject to normal manufacturing tolerances.

STANDARDS AND RATINGS:

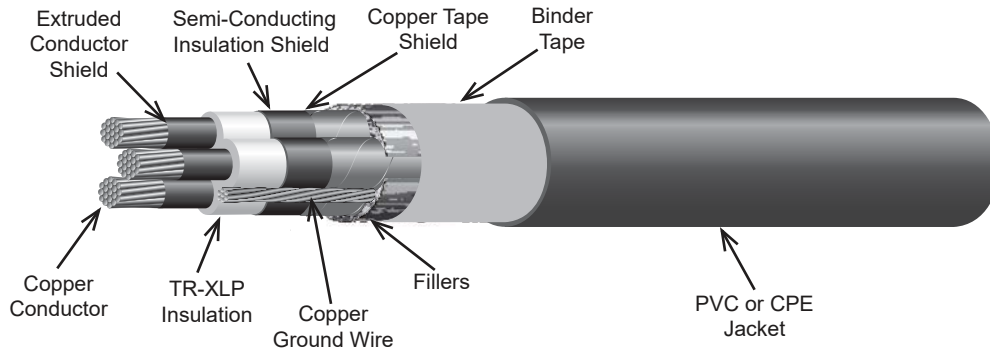
1. Listed by UL as Type MV-90 per Standard 1072.
2. Conforms to ICEA S-93-639/NEMA WC74 Shielded Power Cable 5 - 46KV.
3. Conforms to ICEA S-97-682 Utility Shielded Power Cables 5 - 46KV.
4. All sizes are listed by UL as Sunlight Resistant and sizes 1/0 AWG & larger are listed For CT Use.
5. Sizes 1/0AWG & larger are listed by UL for IEEE 1202 (PVC jacketed only).
6. Conforms to AEIC CS8.



TR-XLP POWER CABLE, SHIELDED, 35000 VOLT, TYPE MV-90

SPEC 2-31-6.3

Ver. 8.0
Revised: 07/04/13



90°C CONDUCTOR TEMPERATURE, WET OR DRY								
Conductor			Insulation in Mils	Jacket in Mils	Size AWG Copper Ground Wire	Approximate O.D. in Inches	Ampacity** 40°C Ambient	Approximate Net Weight Lbs/Kft
Size AWG or KCMIL	No. of Strands	Nominal O.D in Inches						
THREE CONDUCTOR 35000 VOLT, 100% INSULATION LEVEL, SHIELDED								
1/0	19	0.34	345	110	4	2.75	215	3510
2/0	19	0.38	345	110	4	2.83	245	3890
3/0	19	0.42	345	140	3	3.00	285	4560
4/0	19	0.48	345	140	3	3.11	325	5140
250	37	0.52	345	140	3	3.20	360	5645
350	37	0.62	345	140	2	3.41	435	6945
500	37	0.74	345	140	1	3.67	535	8810
750	61	0.91	345	140	1/0	4.04	670	11820
THREE CONDUCTOR 35000 VOLT, 133% INSULATION LEVEL, SHIELDED								
1/0	19	0.34	420	140	4	3.13	215	4245
2/0	19	0.38	420	140	4	3.22	245	4645
3/0	19	0.42	420	140	3	3.32	285	5170
4/0	19	0.48	420	140	3	3.43	325	5765
250	37	0.52	420	140	3	3.53	360	6285
350	37	0.62	420	140	2	3.74	435	7620
500	37	0.74	420	140	1	4.00	535	9530
750	61	0.91	420	140	1/0	4.37	670	12605

Note:**Based on one three conductor cable isolated in air per NEC. For other installations refer to the NEC.

The above data is approximate and subject to normal manufacturing tolerances.

STANDARDS AND RATINGS:

1. Listed by UL as Type MV-90 per Standard 1072.
2. Conforms to ICEA S-93-639/NEMA WC74 Shielded Power Cable 5 - 46KV.
3. Listed by UL as Sunlight Resistant, for Direct Burial and For CT Use.
4. Listed by UL as IEEE 1202 (PVC jacketed only).



ETHYLENE-PROPYLENE RUBBER INSULATION (EPR) POWER CABLE, NON-SHIELDED, 2400V (5000V*) TYPE MV-90 DRY, SINGLE CONDUCTOR

SCOPE:

This specification covers Aetna Insulated Wire's standard construction for single conductor non-shielded power cables, Type MV-90, insulated with solid dielectric ethylene-propylene rubber (EPR) to the 2400V level and with an optional jacket overall and a "dry" rating.

*Note: NEC does not recognize a non-shielded 5000V cable in this construction and only recognizes 2400V non-shielded cables with the specific construction attributes included in this specification. These cables do however, meet the current relevant ICEA standards for 5000 V non-shielded cables.

PRODUCT SPECIFICATIONS AND RATINGS:

- i) National Fire Protection Association (NFPA 70), National Electric Code (NEC)
- ii) Underwriters Laboratories 1072 for Medium Voltage Power Cables
- iii) ICEA S-96-659/NEMA WC71 Nonshielded 2001V - 5KV Cables
- iv) See individual product sheets for specific listings and ratings.

APPLICATION:

These cables comply with the requirements of NEC Article 310.10 (E) and the exceptions No.1 and No. 2 with respect to non-shielded cables above 2000V and NEC Table 310.104(D) for Dry Locations. Consequently where NEC requirements permit, this cable is suitable for use in dry locations at a continuous conductor operating temperature of 90°C, at an emergency overload conductor temperature of 130°C and at a short circuit conductor temperature of 250°C. Respecting the requirements for a "dry" location, these cables may be installed in duct or conduit or properly supported aerially.

CONSTRUCTION DATA:

Conductors - The conductor consists of uncoated soft, copper strands meeting the requirements of ASTM B3. Unless otherwise specified the conductors are supplied as compact round per ASTM B496.

Conductor Shield - The conductor shielding consists of an extruded semi-conducting layer meeting the requirements of the governing specifications above.

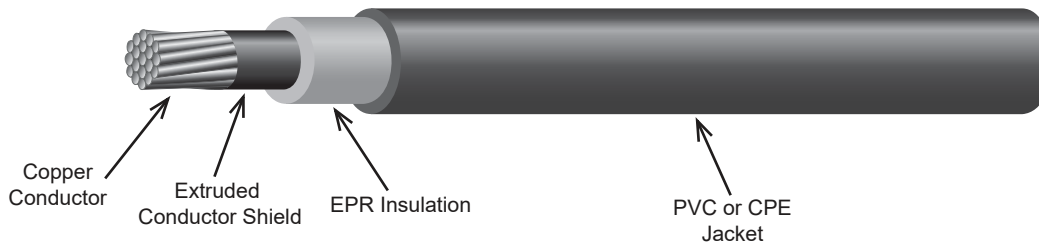
Insulation - The insulation is ethylene-propylene rubber (EPR) extruded concentrically and simultaneously over the conductor shield to the wall thickness as specified in the governing specifications listed and as shown on the individual product specification sheets.

Jacket - A sunlight and ozone resistant polyvinylchloride (PVC), chlorinated polyethylene (CPE) or low smoke halogen free (LSHF) jacket is extruded over the insulation.

**EPR POWER CABLE, NON-SHIELED, 2400V (5000V+)
TYPE MV-90**

SPEC 2-41-1

Ver. 8.0
Revised: 07/04/13



90°C CONDUCTOR TEMPERATURE, DRY							
Conductor			Insulation in Mils	Jacket in Mils	Approximate O.D. in Inches	Ampacity* 40°C Ambient	Approximate Net Weight Lbs/Kft
Size AWG or KCMIL	No. of Strands	Nominal O.D in Inches					
SINGLE CONDUCTOR 2400 VOLT OR 5000 VOLT+, 100% INSULATION LEVEL, NON-SHIELED							
8*	7	0.14	90	30	0.52	55	160
6*	7	0.18	90	30	0.56	75	205
4*	7	0.23	90	45	0.61	97	270
2	7	0.27	90	45	0.65	130	360
1	19	0.30	90	45	0.68	155	420
1/0	19	0.34	90	45	0.72	180	500
2/0	19	0.38	90	45	0.76	205	600
3/0	19	0.42	90	65	0.84	240	755
4/0	19	0.48	90	65	0.90	280	910
250	37	0.52	90	65	0.94	315	1045
350	37	0.62	90	65	1.04	385	1385
500	37	0.74	90	65	1.16	475	1895
750	61	0.91	90	65	1.33	600	2730
1000*	61	1.12	90	65	1.56	690	3605

Note: **Based on three single conductor cables in isolated conduit in air per NEC.

*Compressed conductors.

*ICEA voltage class.

The above data is approximate and subject to normal manufacturing tolerances.

STANDARDS AND RATINGS:

1. Listed by UL as Type MV-90 per Standard 1072.
2. Conforms to ICEA S-96-659/NEMA WC71 Nonshielded 2001V - 5KV Cables.
3. Listed by UL For CT Use (Sizes 1/0 AWG and larger for CPE jacketed).

POWER CABLE, NON-SHIELDED, 2400V (5000V*) ETHYLENE-PROPYLENE RUBBER INSULATION (EPR) TYPE MV-90 SINGLE / MV-105 MULTI-CONDUCTOR, WET OR DRY

SCOPE:

This specification covers Aetna Insulated Wire's standard construction for single and multi conductor non-shielded power cables, Type MV-90, insulated with solid dielectric ethylene-propylene rubber (EPR) to the 2400V level, with an overall jacket and a wet or dry rating.

*Note: The NEC does not recognize a non-shielded 5000 V cable in this construction and only recognizes 2400 V non-shielded with the specific construction attributes included in this specification. These cables do however meet the current relevant ICEA standards for 5000 V non-shielded cables.

PRODUCT SPECIFICATIONS AND RATINGS:

- i) National Fire Protection Association (NFPA 70), National Electric Code (NEC)
- ii) Underwriters Laboratories 1072 for Medium Voltage Power Cables
- iii) ICEA S-96-659/NEMA WC71 Nonshielded 2001V - 5KV Cables
- iv) See individual product sheets for specific listings and ratings.

APPLICATION:

These cables comply with the requirements of NEC Article 310.10 (E) and the exceptions No.1 and No. 2 with respect to non-shielded cables above 2000V and NEC Table 310.104(D) for wet and dry locations. Consequently, where NEC requirements apply, this cable is suitable for use in wet and dry locations at a continuous conductor operating temperature of 90°C, at an emergency overload conductor temperature of 130°C and at a short circuit conductor temperature of 250°C. These cables may be installed in duct or conduit or properly supported aerially. Cables that are rated for use in cable tray applications are shown on the individual product specification sheets.

CONSTRUCTION DATA:

Conductors - The conductor is made up of uncoated soft, copper strands meeting the requirements of ASTM B3. Unless otherwise specified the conductors are supplied as compact round per ASTM B496.

Conductor Shield - The conductor shield consists of an extruded semi-conducting layer meeting the requirements of the governing specifications above.

Insulation - The insulation is ethylene-propylene rubber (EPR) extruded concentrically over the conductor to the wall thickness as specified in the governing specifications listed and as shown on the individual product specification sheets.

Conductor Coding - Phase identification for multi conductor cables is provide by an ink stripe on each of the conductors (red, black, blue).

Ground Wire - Standard multi conductor cables include one stranded bare copper ground in one of the outer cable interstices. The ground wire is sized per UL requirements however, custom ground wire sizes and configurations are available upon request.

Assembly - The assembly of multi conductor cables is done by cabling together the required number of insulated non-shielded conductors and the ground wires (if applicable) with a left hand lay. Suitable fillers will be used in the interstices to round out the cable cross section. A mylar binder is applied over the assembly.

Jacket - A sunlight and ozone resistant of polyvinylchloride (PVC), chlorinated polyethylene (CPE) or low smoke halogen free (LSHF) Polyolefin jacket is extruded over the single and multi conductor assembly. Optional jacket materials are available that offer enhanced ratings and performance.

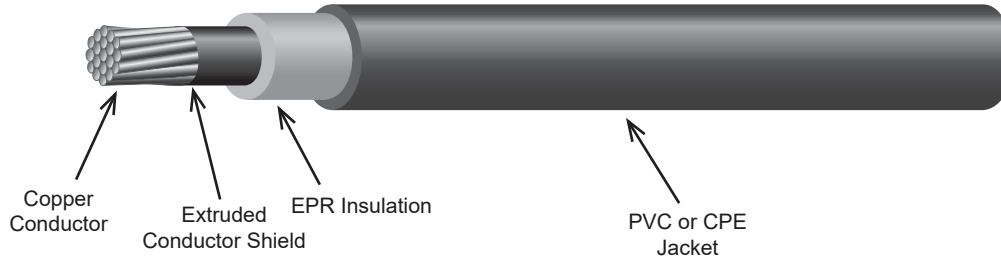
AVAILABLE OPTIONS:

- a) Four conductor cables.
- b) With or without ground wire – insulated grounds – multiple grounds
- c) (-40°C) PVC jacket or LLD Polyethylene jacket (multi-conductor cables only).

**EPR POWER CABLE, NON-SHIELDED, 2400V (5000V+)
TYPE MV-90**

SPEC 2-51-1

Ver. 8.0
Revised: 07/04/13



90°C CONDUCTOR TEMPERATURE, WET OR DRY							
Conductor			Insulation in Mils	Jacket in Mils	Approximate O.D. in Inches	Ampacity* 40°C Ambient	Approximate Net Weight Lbs/Kft
Size AWG or KCMIL	No. of Strands	Nominal O.D in Inches					
SINGLE CONDUCTOR 2400 VOLT OR 5000 VOLT*, 100% OR 133% INSULATION LEVEL , NON-SHIELDED							
8*	7	0.14	125	80	0.63	55	220
6*	7	0.18	125	80	0.67	75	265
4*	7	0.23	125	80	0.72	97	330
2	7	0.27	125	80	0.76	130	425
1	19	0.30	125	80	0.79	155	495
1/0	19	0.34	125	80	0.83	180	575
2/0	19	0.38	125	80	0.87	205	680
3/0	19	0.42	125	95	0.97	240	860
4/0	19	0.48	125	95	1.03	280	1020
250	37	0.52	140	110	1.10	315	1185
350	37	0.62	140	110	1.20	385	1545
500	37	0.74	140	110	1.32	475	2070
750	61	0.91	155	125	1.56	600	3025
1000*	61	1.12	155	125	1.79	690	3945

Note: **Based on three single conductor cables in isolated conduit in air per NEC.

*Compressed conductors.

*ICEA voltage class.

The above data is approximate and subject to normal manufacturing tolerances.

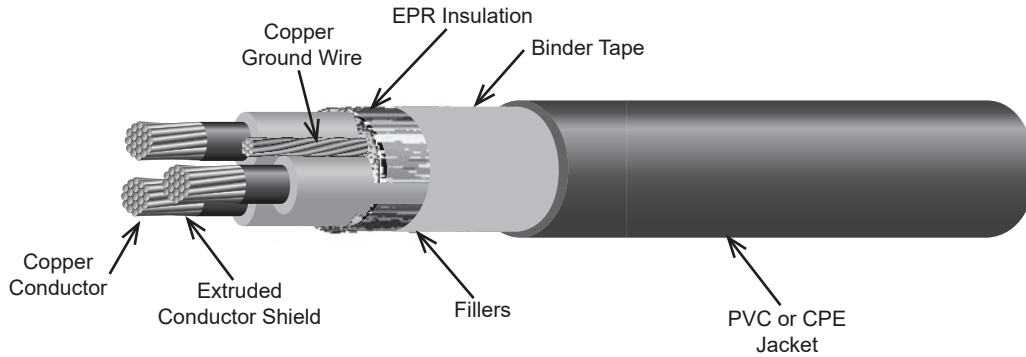
STANDARDS AND RATINGS:

1. Listed by UL as Type MV-90 per Standard 1072.
2. Conforms to ICEA S-96-659/NEMA WC71 NonShielded 2001V - 5KV Cables.
3. Listed by UL For CT Use (Sizes 1/0 AWG and larger for CPE jacketed).

**EPR POWER CABLE, NON-SHIELDED, 2400V (5000V+)
TYPE MV-105**

SPEC 2-51-1.3

Ver. 8.0
Revised: 07/04/13



105°C CONDUCTOR TEMPERATURE, WET OR DRY								
Conductor			Insulation in Mils	Overall Jacket in Mils	Size AWG Copper Ground Wire	Approximate O.D. in Inches	Ampacity** 40°C Ambient	Approximate Net Weight Lbs/Kft
Size AWG or KCMIL	No. of Strands	Nominal O.D in Inches						
THREE CONDUCTOR 2400 VOLT OR 5000 VOLT+, 100% OR 133% INSULATION LEVEL , NON-SHIELDED								
8*	7	0.14	90	80	8	1.02	66	565
6*	7	0.18	90	80	6	1.10	88	730
4*	7	0.23	90	80	6	1.20	115	935
2	7	0.27	90	80	6	1.29	154	1225
1	19	0.30	90	80	4	1.36	180	1475
1/0	19	0.34	90	80	4	1.44	205	1730
2/0	19	0.38	90	80	4	1.53	240	2045
3/0	19	0.42	90	80	3	1.63	280	2470
4/0	19	0.48	90	80	3	1.74	320	2955
250	37	0.52	90	110	2	1.88	355	3495
350	37	0.62	90	110	2	2.08	440	4595
500	37	0.74	90	110	1	2.34	545	6260
750	61	0.91	90	110	1/0	2.72	685	8985
1000*	61	1.12	90	140	2/0	3.27	790	12085

Note:** Based on one three conductor cable isolated in air per NEC.
For other installations refer to the NEC.
*Compressed conductors.
*ICEA voltage class.

The above data is approximate and subject to normal manufacturing tolerances.

STANDARDS AND RATINGS:

1. Listed by UL as Type MV-105 per Standard 1072.
2. Conforms to ICEA S-96-659/NEMA WC71 Nonshielded 2001V - 5KV Cables.
3. Listed by UL as Sunlight Resistant.





POWER CABLE, SHIELDED, 5000 TO 35000 VOLT ETHYLENE-PROPYLENE RUBBER INSULATION (EPR) TYPE MV-105, AEIC CS8 SINGLE AND MULTI-CONDUCTOR

SCOPE:

This specification covers Aetna Insulated Wire's standard construction for single and multi-conductor shielded power cables, Type MV-105, insulated with solid dielectric ethylene-propylene Rubber (EPR), a copper tape shield and an overall jacket of polyvinylchloride (PVC), chlorinated polyethylene (CPE) or low smoke halogen free (LSHF) polyolefin.

PRODUCT SPECIFICATIONS AND RATINGS:

- i) National Fire Protection Association (NFPA 70), National Electric Code (NEC)
- ii) Underwriters Laboratories 1072 for Medium Voltage Power Cables
- iii) ICEA S-93-639/NEMA WC74 Shielded Power Cable 5 - 46KV
- iv) ICEA S-97-682 Utility Shielded Power Cable 4 - 46KV
- v) AEIC CS8 Specification for Extruded Dielectric Shielded Power Cables Rated 5 through 46 kV
- vi) See individual product sheets for specific listings and ratings.

APPLICATION:

All power cables manufactured under this specification are in accordance with the NEC requirements and as such are suitable under the code for 5 kV to 35 kV applications, at both the 100% and 133% insulation levels. All these cables are suitable for use in wet or dry locations at a continuous conductor operating temperature of 105°C, at an emergency overload conductor temperature of 140°C and at a short circuit conductor temperature of 250°C. These cables may be installed in duct or conduit or properly supported aerial installations and may be used in direct burial applications. Cables that are rated for use in cable tray applications are shown on the individual product specification sheets.

(Note: Unlike UL/ICEA/NEC, where AEIC or ICEA S-97-682 is the governing specification, for the 5 KV voltage class there is a difference in insulation thickness between the 100% and 133% insulation levels. Users must therefore specify 5 kV 100 or 133% per AEIC when ordering.)

CONSTRUCTION DATA:

Conductors - The conductor consists of uncoated soft copper strands meeting the requirements of ASTM B3. Unless otherwise specified the conductors are supplied as compact round per ASTM B496.

Conductor Shield - The conductor shield consists of an extruded semi-conducting layer meeting the requirements of the governing specifications above.

Insulation - The insulation is ethylene-propylene rubber (EPR) extruded in a single pass with the conductor and insulation shields to the wall thickness as specified in the governing specifications listed and as shown on the individual product specification sheets.

Insulation Shield - Insulation shield consists of a semi-conducting extruded compound and a 5 mil bare copper metallic tape shield overlapped a minimum of 12 ½ %.

Conductor Coding - Phase identification for multi conductor cables is provided by an ink stripe on the insulation shield of each of the conductors (red, black, blue).

Ground Wire - Standard multi conductor cables include one stranded bare copper ground in one of the outer cable interstices. The ground wire is sized per UL requirements, however custom ground wire sizes and configurations are available upon request.

Assembly - The assembly of multi conductor cables is done by cabling together the required number of insulated shielded conductors and the ground wires with a suitable left hand lay. Suitable fillers are used in the interstices to round out the cable cross section. A binder is applied overall.

Jacket - A sunlight and ozone resistant polyvinylchloride (PVC), chlorinated polyethylene (CPE) or low smoke halogen free (LSHF) polyolefin is extruded over the single and multi conductor assembly. Optional jacket materials are available that offer other ratings and performance.

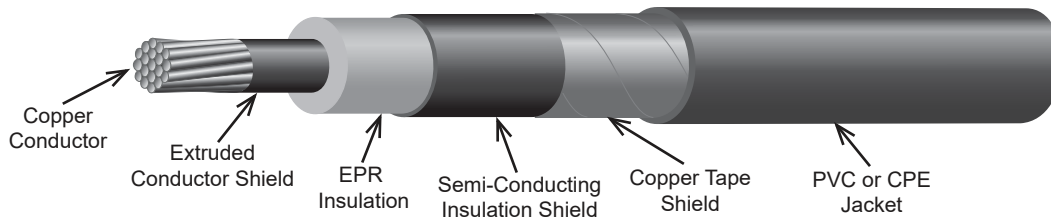
AVAILABLE OPTIONS:

- a) Four conductor cables.
- b) With or without ground wire – insulated grounds – multiple grounds.
- c) Alternate shielding constructions – coated copper tape shield or tape plus wires.
- d) (-40°C) PVC jacket or LLD Polyethylene jacket.

EPR POWER CABLE, SHIELDED, 5000 VOLT, TYPE MV-105, AEIC CS8

SPEC 2-61-1

Ver. 8.0
Revised: 07/04/13



105°C CONDUCTOR TEMPERATURE, WET OR DRY								
Conductor			Insulation in Mils	Jacket in Mils	Approximate O.D. in Inches		Ampacity** 40°C Ambient	Approximate Net Weight Lbs/Kft
Size AWG or KCMIL	No. of Strands	Nominal O.D in Inches			Over Insulation	Overall		
SINGLE CONDUCTOR 5000 VOLT, 100% OR 133% INSULATION LEVEL, SHIELDED								
8*	7	0.14	90	60	0.38	0.61	61	225
6*	7	0.18	90	60	0.42	0.64	84	270
4*	7	0.23	90	60	0.47	0.69	110	340
2	7	0.27	90	60	0.51	0.73	145	435
1	19	0.30	90	60	0.54	0.76	175	505
1/0	19	0.34	90	60	0.58	0.80	200	590
2/0	19	0.38	90	60	0.62	0.84	225	690
3/0	19	0.42	90	60	0.66	0.89	270	820
4/0	19	0.48	90	80	0.72	0.98	305	1015
250	37	0.52	90	80	0.76	1.02	355	1155
350	37	0.62	90	80	0.86	1.12	430	1510
500	37	0.74	90	80	0.98	1.24	530	2030
750	61	0.91	90	80	1.15	1.41	665	2885
1000*	61	1.12	90	80	1.38	1.64	770	3790

Note: **Based on three single conductor cables in isolated conduit in air per NEC.

*Compressed conductors.

The above data is approximate and subject to normal manufacturing tolerances.

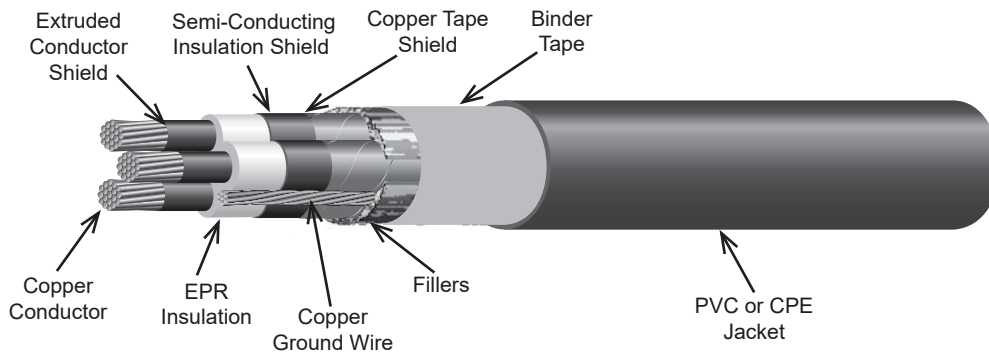
STANDARDS AND RATINGS:

1. Listed by UL as Type MV-105 per Standard 1072.
2. Conforms to ICEA S-93-639/NEMA WC74 Shielded Power Cable 5 - 46KV.
3. Conforms to ICEA S-97-682 Utility Shielded Power Cable 5 - 46KV (100% only).
4. All sizes are listed by UL as Sunlight Resistant and sizes 1/0 AWG & larger are listed For CT Use.
5. Sizes 1/0AWG & larger are listed by UL for IEEE 1202 (must be 2/0AWG & larger for CPE jacketed).
6. Conforms to AEIC CS8 (5kV 100% only).

EPR POWER CABLE, SHIELDED, 5000 VOLT, TYPE MV-105

SPEC 2-61-1.3

Ver. 8.0
Revised: 07/04/13



105°C CONDUCTOR TEMPERATURE, WET OR DRY								
Conductor			Insulation in Mils	Jacket in Mils	Size AWG Copper Ground Wire	Approximate O.D. in Inches	Ampacity** 40°C Ambient	Approximate Net Weight Lbs/Kft
Size AWG or KCMIL	No. of Strands	Nominal O.D. in Inches						
THREE CONDUCTOR 5000 VOLT 100% OR 133% INSULATION LEVEL, SHIELDED								
8*	7	0.14	90	80	8	1.21	66	795
6*	7	0.18	90	80	6	1.29	88	975
4*	7	0.23	90	80	6	1.39	115	1205
2	7	0.27	90	80	6	1.48	154	1510
1	19	0.30	90	80	4	1.55	180	1775
1/0	19	0.34	90	80	4	1.63	205	2045
2/0	19	0.38	90	80	4	1.71	240	2380
3/0	19	0.42	90	80	3	1.82	280	2825
4/0	19	0.48	90	110	3	1.97	320	3410
250	37	0.52	90	110	2	2.06	355	3900
350	37	0.62	90	110	2	2.27	440	5040
500	37	0.74	90	110	1	2.53	545	6760
750	61	0.91	90	140	1/0	2.96	685	9730
1000*	61	1.12	90	140	2/0	3.46	790	12775

Note: **Based on one three conductor cable isolated in air per NEC. For other installations refer to the NEC.
*Compressed conductors.

The above data is approximate and subject to normal manufacturing tolerances.

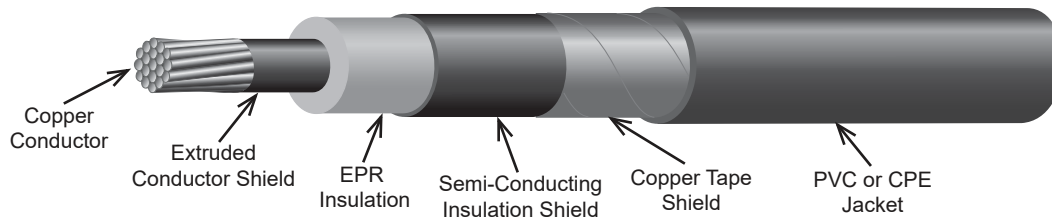
STANDARDS AND RATINGS:

1. Listed by UL as Type MV-105 per Standard 1072.
2. Conforms to ICEA S-93-639/NEMA WC74 Shielded Power Cable 5 - 46KV.
3. Listed by UL as Sunlight Resistant, for Direct Burial, For CT Use and IEEE 1202.

EPR POWER CABLE, SHIELDED, 5000/8000 VOLT, TYPE MV-105, AEIC CS8

SPEC 2-61-2

Ver. 8.0
Revised: 07/04/13



105°C CONDUCTOR TEMPERATURE, WET OR DRY								
Conductor			Insulation in Mils	Jacket in Mils	Approximate O.D. in Inches		Ampacity** 40°C Ambient	Approximate Net Weight Lbs/Kft
Size AWG or KCMIL	No. of Strands	Nominal O.D in Inches			Over Insulation	Overall		
SINGLE CONDUCTOR 5000 VOLT 133% or 8000 VOLT 100% INSULATION LEVEL, SHIELDED								
6*	7	0.18	115	60	0.47	0.69	84	305
4*	7	0.23	115	60	0.52	0.74	110	375
2	7	0.27	115	60	0.56	0.78	145	470
1	19	0.30	115	60	0.59	0.81	175	540
1/0	19	0.34	115	60	0.63	0.85	200	625
2/0	19	0.38	115	60	0.67	0.89	225	730
3/0	19	0.42	115	80	0.71	0.98	270	895
4/0	19	0.48	115	80	0.77	1.03	305	1060
250	37	0.52	115	80	0.81	1.07	355	1200
350	37	0.62	115	80	0.91	1.17	430	1560
500	37	0.74	115	80	1.03	1.29	530	2085
750	61	0.91	115	80	1.20	1.46	665	2950
1000*	61	1.12	115	80	1.43	1.69	770	3860
SINGLE CONDUCTOR 8000 VOLT 133% INSULATION LEVEL, SHIELDED								
6*	7	0.18	140	60	0.52	0.74	93	335
4*	7	0.23	140	60	0.57	0.79	120	410
2	7	0.27	140	60	0.61	0.83	165	505
1	19	0.30	140	60	0.64	0.86	190	575
1/0	19	0.34	140	60	0.68	0.90	215	665
2/0	19	0.38	140	80	0.72	0.98	255	805
3/0	19	0.42	140	80	0.76	1.03	290	940
4/0	19	0.48	140	80	0.82	1.08	330	1105
250	37	0.52	140	80	0.86	1.12	365	1250
350	37	0.62	140	80	0.96	1.22	440	1615
500	37	0.74	140	80	1.08	1.34	535	2145
750	61	0.91	140	80	1.25	1.51	655	3015
1000*	61	1.12	140	80	1.48	1.74	755	3935

Note: **Based on three single conductor cables in isolated conduit in air per NEC. *Compressed conductors.

The above data is approximate and subject to normal manufacturing tolerances.

STANDARDS AND RATINGS:

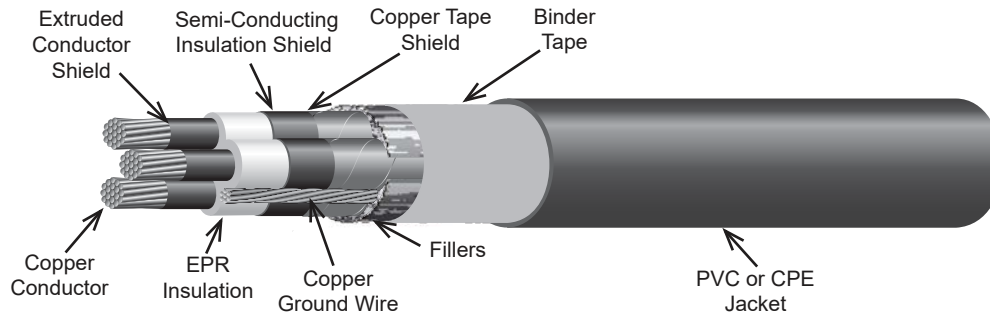
1. Listed by UL as Type MV-105 per Standard 1072.
2. Conforms to ICEA S-93-639/NEMA WC74 Shielded Power Cable 5 - 46KV.
3. Conforms to ICEA S-97-682 Utility Shielded Power Cables 5 - 46KV.
4. All sizes are listed by UL as Sunlight Resistant and sizes 1/0 AWG & larger are listed For CT Use.
5. Sizes 1/0AWG & larger are listed by UL for IEEE 1202 (must be 2/0AWG & larger for CPE jacketed).
6. Conforms to AEIC CS8.

EPR POWER CABLE, SHIELDED, 5000/8000 VOLT, TYPE MV-105

SPEC 2-61-2.3

Ver. 8.0

Revised: 07/04/13



105°C CONDUCTOR TEMPERATURE, WET OR DRY								
Conductor			Insulation in Mils	Jacket in Mils	Size AWG Copper Ground Wire	Approximate O.D. in Inches	Ampacity** 40°C Ambient	Approximate Net Weight Lbs/Kft
Size AWG or KCMIL	No. of Strands	Nominal O.D in Inches						
THREE CONDUCTOR 5000 VOLT 133% OR 8000 VOLT 100% INSULATION LEVEL, SHIELDED								
6*	7	0.18	115	80	6	1.39	105	1085
4*	7	0.23	115	80	6	1.50	135	1320
2	7	0.27	115	80	6	1.59	185	1630
1	19	0.30	115	80	4	1.66	210	1900
1/0	19	0.34	115	80	4	1.74	240	2180
2/0	19	0.38	115	80	4	1.82	275	2515
3/0	19	0.42	115	110	3	1.96	315	3045
4/0	19	0.48	115	110	3	2.08	360	3565
250	37	0.52	115	110	2	2.17	400	4065
350	37	0.62	115	110	2	2.38	490	5220
500	37	0.74	115	110	1	2.64	600	6955
750	61	0.91	115	140	1/0	3.07	745	9960
1000*	61	1.12	115	140	2/0	3.57	860	13035
THREE CONDUCTOR 8000 VOLT 133% INSULATION LEVEL, SHIELDED								
6*	7	0.18	140	80	6	1.50	105	1200
4*	7	0.23	140	80	6	1.60	135	1440
2	7	0.27	140	80	6	1.70	185	1760
1	19	0.30	140	80	4	1.76	210	2035
1/0	19	0.34	140	110	4	1.88	240	2390
2/0	19	0.38	140	110	4	1.97	275	2735
3/0	19	0.42	140	110	3	2.07	315	3200
4/0	19	0.48	140	110	3	2.18	360	3730
250	37	0.52	140	110	2	2.28	400	4235
350	37	0.62	140	110	2	2.49	490	5405
500	37	0.74	140	110	1	2.75	600	7160
750	61	0.91	140	140	1/0	3.18	745	10195
1000*	61	1.12	140	140	2/0	3.67	860	13305

Note:**Based on one three conductor cable isolated in air per NEC.
For other installations refer to the NEC.
*Compressed conductors.

The above data is approximate and subject to normal manufacturing tolerances.

STANDARDS AND RATINGS:

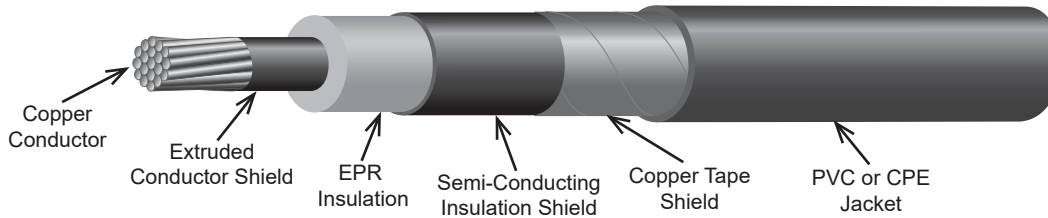
1. Listed by UL as Type MV-105 per Standard 1072.
2. Conforms to ICEA S-93-639/NEMA WC74 Shielded Power Cable 5 - 46KV.
3. Listed by UL as Sunlight Resistant, for Direct Burial, For CT Use and IEEE 1202.



EPR POWER CABLE, SHIELDED, 15000 VOLT, TYPE MV-105, AEIC CS8

SPEC 2-61-3

Ver. 8.0
Revised: 07/04/13



105°C CONDUCTOR TEMPERATURE, WET OR DRY								
Conductor			Insulation in Mils	Jacket in Mils	Approximate O.D. in Inches		Ampacity** 40°C Ambient	Approximate Net Weight Lbs/Kft
Size AWG or KCMIL	No. of Strands	Nominal O.D in Inches			Over Insulation	Overall		
SINGLE CONDUCTOR 15000 VOLT 100% INSULATION LEVEL, SHIELDED								
2	7	0.27	175	60	0.68	0.90	165	560
1	19	0.30	175	80	0.71	0.97	190	670
1/0	19	0.34	175	80	0.75	1.01	215	760
2/0	19	0.38	175	80	0.79	1.05	255	870
3/0	19	0.42	175	80	0.83	1.10	290	1005
4/0	19	0.48	175	80	0.89	1.15	330	1175
250	37	0.52	175	80	0.93	1.19	365	1320
350	37	0.62	175	80	1.03	1.29	440	1690
500	37	0.74	175	80	1.15	1.41	535	2230
750	61	0.91	175	80	1.32	1.58	655	3105
1000*	61	1.12	175	110	1.55	1.85	755	4110
SINGLE CONDUCTOR 15000 VOLT 133% INSULATION LEVEL, SHIELDED								
2	7	0.27	220	80	0.77	1.03	165	675
1	19	0.30	220	80	0.80	1.06	190	750
1/0	19	0.34	220	80	0.84	1.10	215	845
2/0	19	0.38	220	80	0.88	1.14	255	955
3/0	19	0.42	220	80	0.92	1.19	290	1095
4/0	19	0.48	220	80	0.98	1.24	330	1270
250	37	0.52	220	80	1.02	1.28	365	1420
350	37	0.62	220	80	1.12	1.38	440	1795
500	37	0.74	220	80	1.24	1.50	535	2340
750	61	0.91	220	80	1.41	1.67	655	3230
1000*	61	1.12	220	110	1.64	1.94	755	4255

Note: **Based on three single conductor cables in isolated conduit in air per NEC.

*Compressed conductors.

The above data is approximate and subject to normal manufacturing tolerances.

STANDARDS AND RATINGS:

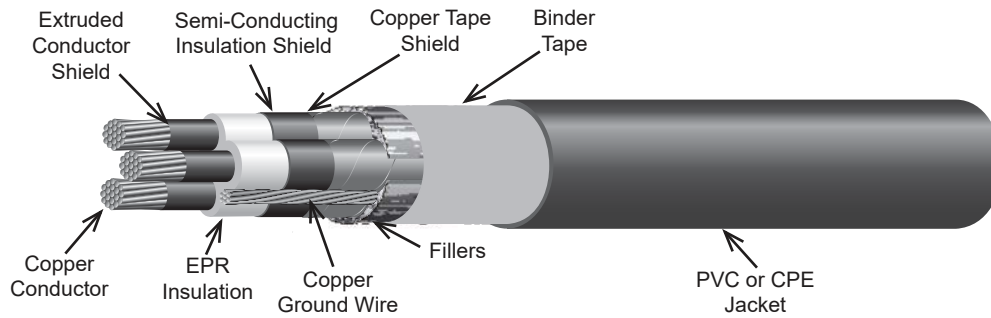
1. Listed by UL as Type MV-105 per Standard 1072.
2. Conforms to ICEA S-93-639/NEMA WC74 Shielded Power Cable 5 - 46KV.
3. Conforms to ICEA S-97-682 Utility Shielded Power Cables 5 - 46KV upon request.
4. All sizes are listed by UL as Sunlight Resistant and sizes 1/0 AWG & larger are listed For CT Use.
5. Sizes 1/0AWG & larger are listed by UL for IEEE 1202 (must be 2/0AWG & larger for CPE jacketed).
6. Conforms to AEIC CS8.

EPR POWER CABLE, SHIELDED, 15000 VOLT, TYPE MV-105

SPEC 2-61-3.3

Ver. 8.0

Revised: 07/04/13



105°C CONDUCTOR TEMPERATURE, WET OR DRY								
Conductor			Insulation in Mils	Jacket in Mils	Size AWG Copper Ground Wire	Approximate O.D. in Inches	Ampacity** 40°C Ambient	Approximate Net Weight Lbs/Kft
Size AWG or KCMIL	No. of Strands	Nominal O.D in Inches						
THREE CONDUCTOR 15000 VOLT 100% INSULATION LEVEL, SHIELDED								
2	7	0.27	175	110	6	1.89	185	2025
1	19	0.30	175	110	4	1.95	210	2310
1/0	19	0.34	175	110	4	2.03	240	2600
2/0	19	0.38	175	110	4	2.12	275	2960
3/0	19	0.42	175	110	3	2.22	315	3430
4/0	19	0.48	175	110	3	2.33	360	3975
250	37	0.52	175	110	2	2.43	400	4490
350	37	0.62	175	110	2	2.64	490	5680
500	37	0.74	175	140	1	2.96	600	7925
750	61	0.91	175	140	1/0	3.33	745	10540
1000*	61	1.12	175	140	2/0	3.82	860	13700
THREE CONDUCTOR 15000 VOLT 133% INSULATION LEVEL, SHIELDED								
2	7	0.27	220	110	6	2.08	185	2308
1	19	0.30	220	110	4	2.15	210	2595
1/0	19	0.34	220	110	4	2.23	240	2900
2/0	19	0.38	220	110	4	2.32	275	3265
3/0	19	0.42	220	110	3	2.42	315	3755
4/0	19	0.48	220	110	3	2.53	360	4310
250	37	0.52	220	110	2	2.63	400	4835
350	37	0.62	220	110	2	2.83	490	6050
500	37	0.74	220	140	1	3.15	600	8045
750	61	0.91	220	140	1/0	3.52	745	11000
1000*	61	1.12	220	140	2/0	4.02	860	14425

Note:**Based on one three conductor cable isolated in air per NEC. For other installations refer to the NEC.
*Compressed conductors.

The above data is approximate and subject to normal manufacturing tolerances.

STANDARDS AND RATINGS:

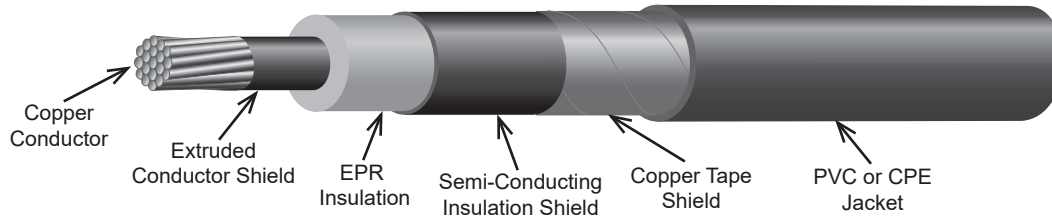
1. Listed by UL as Type MV-105 per Standard 1072.
2. Conforms to ICEA S-93-639/NEMA WC74 Shielded Power Cable 5 - 46KV.
3. Listed by UL as Sunlight Resistant, for Direct Burial, For CT Use and IEEE 1202.



EPR POWER CABLE, SHIELDED, 25000 VOLT, TYPE MV-105 AEIC CS8

SPEC 2-61-4

Ver. 8.0
Revised: 07/04/13



105°C CONDUCTOR TEMPERATURE, WET OR DRY								
Conductor			Insulation in Mils	Jacket in Mils	Approximate O.D. in Inches		Ampacity** 40°C Ambient	Approximate Net Weight Lbs/Kft
Size AWG or KCMIL	No. of Strands	Nominal O.D in Inches			Over Insulation	Overall		
SINGLE CONDUCTOR 25000 VOLT 100% INSULATION LEVEL, SHIELDED								
1	19	0.30	260	80	0.86	1.12	190	810
1/0	19	0.34	260	80	0.90	1.16	215	905
2/0	19	0.38	260	80	0.94	1.20	255	1020
3/0	19	0.42	260	80	0.98	1.25	290	1160
4/0	19	0.48	260	80	1.04	1.30	330	1335
250	37	0.52	260	80	1.08	1.34	365	1485
350	37	0.62	260	80	1.18	1.44	440	1870
500	37	0.74	260	80	1.30	1.56	535	2420
750	61	0.91	260	80	1.47	1.73	655	3320
1000*	61	1.12	260	110	1.70	2.00	755	4360
SINGLE CONDUCTOR 25000 VOLT 133% INSULATION LEVEL, SHIELDED								
1*	19	0.30	320	80	0.99	1.25	190	945
1/0	19	0.34	320	80	1.03	1.29	215	1045
2/0	19	0.38	320	80	1.07	1.33	255	1165
3/0	19	0.42	320	80	1.11	1.38	290	1310
4/0	19	0.48	320	80	1.17	1.43	330	1490
250	37	0.52	320	80	1.21	1.47	365	1645
350	37	0.62	320	80	1.31	1.57	440	2040
500	37	0.74	320	80	1.43	1.69	535	2605
750	61	0.91	320	110	1.60	1.90	655	3595
1000*	61	1.12	320	110	1.83	2.13	755	4590

Note: **Based on three single conductor cables in isolated conduit in air per NEC.

*Compressed conductors.

The above data is approximate and subject to normal manufacturing tolerances.

STANDARDS AND RATINGS:

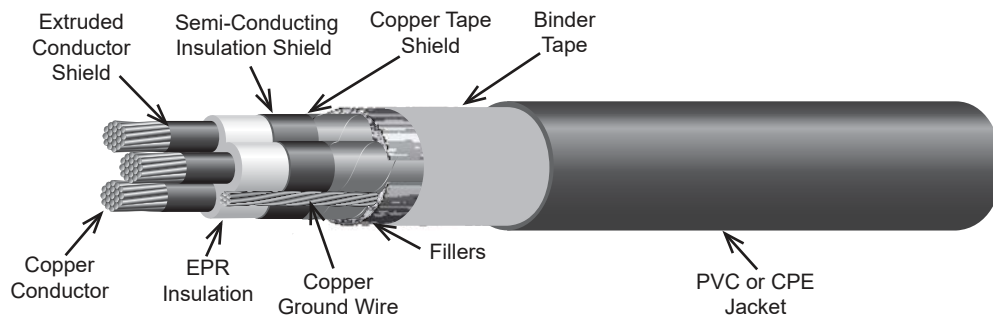
1. Listed by UL as Type MV-105 per Standard 1072.
2. Conforms to ICEA S-93-639/NEMA WC74 Shielded Power Cable 5 - 46KV.
3. Conforms to ICEA S-97-682 Utility Shielded Power Cables 5 - 46KV.
4. All sizes are listed by UL as Sunlight Resistant and sizes 1/0 AWG & larger are listed For CT Use.
5. Sizes 1/0AWG & larger are listed by UL for IEEE 1202 (must be 2/0AWG & larger for CPE jacket).
6. Conforms to AEIC CS8.

EPR POWER CABLE, SHIELDED, 25000 VOLT, TYPE MV-105

SPEC 2-61-4.3

Ver. 8.0

Revised: 07/04/13



105°C CONDUCTOR TEMPERATURE, WET OR DRY								
Conductor			Insulation in Mils	Jacket in Mils	Size AWG Copper Ground Wire	Approximate O.D. in Inches	Ampacity** 40°C Ambient	Approximate Net Weight Lbs/Kft
Size AWG or KCMIL	No. of Strands	Nominal O.D in Inches						
THREE CONDUCTOR 25000 VOLT 100% INSULATION LEVEL, SHIELDED								
1	19	0.30	260	110	4	2.28	210	2800
1/0	19	0.34	260	110	4	2.36	240	3110
2/0	19	0.38	260	110	4	2.44	275	3485
3/0	19	0.42	260	110	3	2.55	315	3980
4/0	19	0.48	260	110	3	2.66	360	4545
250	37	0.52	260	110	2	2.76	400	5080
350	37	0.62	260	140	2	3.02	490	6485
500	37	0.74	260	140	1	3.28	600	8335
750	61	0.91	260	140	1/0	3.65	745	11325
1000*	61	1.12	260	140	2/0	4.15	860	14590
THREE CONDUCTOR 25000 VOLT 133% INSULATION LEVEL, SHIELDED								
1	19	0.30	320	110	4	2.56	210	3280
1/0	19	0.34	320	110	4	2.64	240	3605
2/0	19	0.38	320	110	4	2.73	275	3995
3/0	19	0.42	320	140	3	2.83	315	4510
4/0	19	0.48	320	140	3	3.00	360	5265
250	37	0.52	320	140	2	3.10	400	5825
350	37	0.62	320	140	2	3.30	490	7105
500	37	0.74	320	140	1	3.56	600	9005
750	61	0.91	320	140	1/0	3.93	745	12060
1000*	61	1.12	320	140	2/0	4.43	860	15415

Note:**Based on one three conductor cable isolated in air per NEC. For other installations refer to the NEC.
*Compressed conductors.

The above data is approximate and subject to normal manufacturing tolerances.

STANDARDS AND RATINGS:

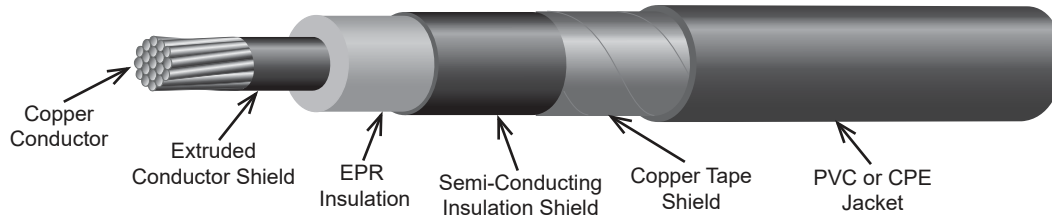
1. Listed by UL as Type MV-105 per Standard 1072.
2. Conforms to ICEA S-93-639/NEMA WC74 Shielded Power Cable 5 - 46KV.
3. Listed by UL as Sunlight Resistant, for Direct Burial, For CT Use and IEEE 1202.
4. Listed by CSA as Type Power Cable per Standard CSA C68.3 (with -40°C PVC jacket).



**EPR POWER CABLE, SHIELDED, 28000 VOLT,
TYPE MV-105, AEIC CS8**

SPEC 2-61-5

Ver. 8.0
Revised: 07/04/13



105°C CONDUCTOR TEMPERATURE, WET OR DRY								
Conductor			Insulation in Mils	Jacket in Mils	Approximate O.D. in Inches		Ampacity** 40°C Ambient	Approximate Net Weight Lbs/Kft
Size AWG or KCMIL	No. of Strands	Nominal O.D. in Inches			Over Insulation	Overall		
SINGLE CONDUCTOR 28000 VOLT 100% INSULATION LEVEL, SHIELDED								
1	19	0.30	280	80	0.90	1.16	190	850
1/0	19	0.34	280	80	0.94	1.20	215	945
2/0	19	0.38	280	80	0.98	1.24	255	1060
3/0	19	0.42	280	80	1.02	1.29	290	1205
4/0	19	0.48	280	80	1.08	1.34	330	1380
250	37	0.52	280	80	1.12	1.38	365	1535
350	37	0.62	280	80	1.22	1.48	440	1920
500	37	0.74	280	80	1.34	1.60	535	2475
750	61	0.91	280	110	1.51	1.81	655	3450
1000*	61	1.12	280	110	1.74	2.04	755	4425
SINGLE CONDUCTOR 28000 VOLT 133% INSULATION LEVEL, SHIELDED								
1	19	0.30	345	80	1.04	1.30	190	1000
1/0	19	0.34	345	80	1.08	1.34	215	1100
2/0	19	0.38	345	80	1.12	1.38	255	1222
3/0	19	0.42	345	80	1.16	1.43	290	1370
4/0	19	0.48	345	80	1.22	1.48	330	1555
250	37	0.52	345	80	1.26	1.52	365	1710
350	37	0.62	345	80	1.36	1.62	440	2105
500	37	0.74	345	80	1.48	1.74	535	2675
750	61	0.91	345	110	1.05	1.95	655	3675
1000*	61	1.12	345	110	1.88	2.18	755	4680

Note: **Based on three single conductor cables in isolated conduit in air per NEC.
*Compressed conductors.

The above data is approximate and subject to normal manufacturing tolerances.

STANDARDS AND RATINGS:

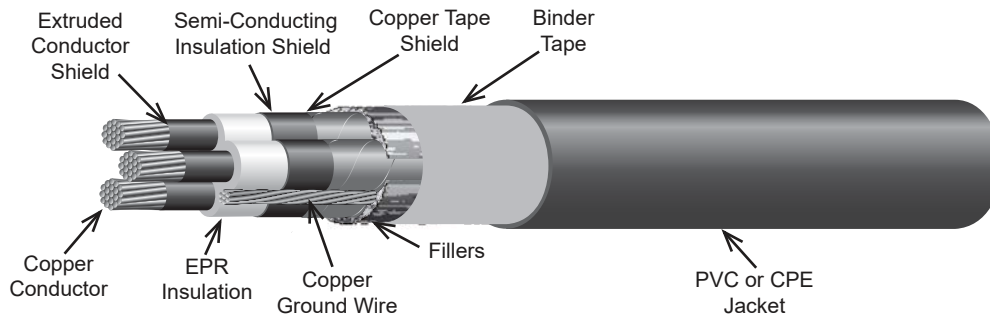
1. Listed by UL as Type MV-105 per Standard 1072.
2. Conforms to ICEA S-93-639/NEMA WC74 Shielded Power Cable 5 - 46KV.
3. Conforms to ICEA S-97-682 Utility Shielded Power Cables 5 - 46KV.
4. All sizes are listed by UL as Sunlight Resistant and sizes 1/0 AWG & larger are listed For CT Use.
5. Sizes 1/0AWG & larger are listed by UL for IEEE 1202 (must be 2/0AWG & larger for CPE jacketed).
6. Conforms to AEIC CS8.



EPR POWER CABLE, SHIELDED, 28000 VOLT, TYPE MV-105

SPEC 2-61-5.3

Ver. 8.0
Revised: 07/04/13



105°C CONDUCTOR TEMPERATURE, WET OR DRY								
Conductor			Insulation in Mils	Jacket in Mils	Size AWG Copper Ground Wire	Approximate O.D. in Inches	Ampacity** 40°C Ambient	Approximate Net Weight Lbs/Kft
Size AWG or KCMIL	No. of Strands	Nominal O.D in Inches						
THREE CONDUCTOR 28000 VOLT 100% INSULATION LEVEL, SHIELDED								
1	19	0.30	280	110	4	2.36	210	2945
1/0	19	0.34	280	110	4	2.44	240	3260
2/0	19	0.38	280	110	4	2.53	275	3635
3/0	19	0.42	280	110	3	2.63	315	4140
4/0	19	0.48	280	110	3	2.75	360	4710
250	37	0.52	280	110	2	2.84	400	5250
350	37	0.62	280	140	2	3.11	490	6670
500	37	0.74	280	140	1	3.37	600	8535
750	61	0.91	280	140	1/0	3.74	745	11545
1000*	61	1.12	280	140	2/0	4.23	860	14835
THREE CONDUCTOR 28000 VOLT 133% INSULATION LEVEL, SHIELDED								
1	19	0.30	345	110	4	2.67	210	3480
1/0	19	0.34	345	110	4	2.75	240	3810
2/0	19	0.38	345	110	4	2.83	275	4205
3/0	19	0.42	345	140	3	3.00	315	4895
4/0	19	0.48	345	140	3	3.11	360	5495
250	37	0.52	345	140	2	3.20	400	6065
350	37	0.62	345	140	2	3.41	490	7360
500	37	0.74	345	140	1	3.67	600	9275
750	61	0.91	345	140	1/0	4.04	745	12355

Note:**Based on one three conductor cable isolated in air per NEC.
For other installations refer to the NEC.
*Compressed conductors.

The above data is approximate and subject to normal manufacturing tolerances.

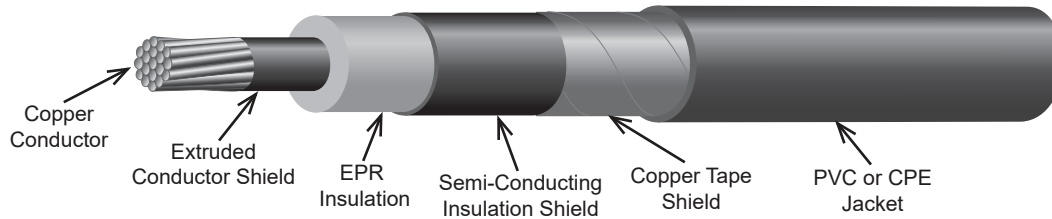
STANDARDS AND RATINGS:

1. Listed by UL as Type MV-105 per Standard 1072.
2. Conforms to ICEA S-93-639/NEMA WC74 Shielded Power Cable 5 - 46KV.
3. Listed by UL as Sunlight Resistant, for Direct Burial, For CT Use and IEEE 1202.

**EPR POWER CABLE, SHIELDED, 35000 VOLT,
TYPE MV-105, AEIC CS8**

SPEC 2-61-6

Ver. 8.0
Revised: 07/04/13



105°C CONDUCTOR TEMPERATURE, WET OR DRY								
Conductor			Insulation in Mils	Jacket in Mils	Approximate O.D. in Inches		Ampacity** 40°C Ambient	Approximate Net Weight Lbs/Kft
Size AWG or KCMIL	No. of Strands	Nominal O.D. in Inches			Over Insulation	Overall		
SINGLE CONDUCTOR 35000 VOLT 100% INSULATION LEVEL, SHIELDED								
1/0	19	0.34	345	80	1.08	1.34	215	1100
2/0	19	0.38	345	80	1.12	1.38	255	1220
3/0	19	0.42	345	80	1.16	1.43	290	1370
4/0	19	0.48	345	80	1.22	1.48	330	1555
250	37	0.52	345	80	1.26	1.52	365	1710
350	37	0.62	345	80	1.36	1.62	440	2105
500	37	0.74	345	80	1.48	1.74	535	2675
750	61	0.91	345	110	1.65	1.95	655	3775
1000*	61	1.12	345	110	1.88	2.18	755	4680
SINGLE CONDUCTOR 35000 VOLT 133% INSULATION LEVEL, SHIELDED								
1/0	19	0.34	420	80	1.23	1.49	215	1285
2/0	19	0.38	420	80	1.27	1.53	255	1410
3/0	19	0.42	420	80	1.31	1.58	290	1565
4/0	19	0.48	420	80	1.37	1.63	330	1755
250	37	0.52	420	80	1.41	1.67	365	1920
350	37	0.62	420	80	1.51	1.77	440	2325
500	37	0.74	420	110	1.63	1.93	535	3985
750	61	0.91	420	110	1.80	2.10	655	3935
1000*	61	1.12	420	110	2.03	2.33	755	4970

Note: **Based on three single conductor cables in isolated conduit in air per NEC.
*Compressed conductors.

The above data is approximate and subject to normal manufacturing tolerances.

STANDARDS AND RATINGS:

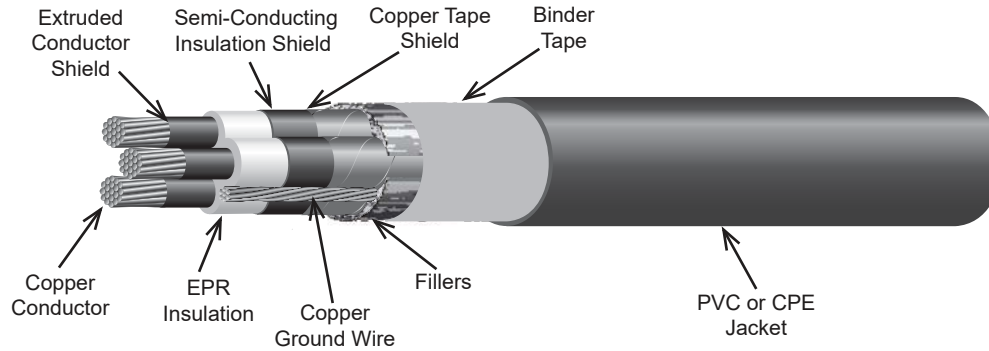
1. Listed by UL as Type MV-105 per Standard 1072.
2. Conforms to ICEA S-93-639/NEMA WC74 Shielded Power Cable 5 - 46KV.
3. Conforms to ICEA S-97-682 Utility Shielded Power Cables 5 - 46KV.
4. All sizes are listed by UL as Sunlight Resistant and sizes 1/0 AWG & larger are listed For CT Use.
5. Sizes 1/0AWG & larger are listed by UL for IEEE 1202 (must be 2/0AWG & larger for CPE jacketed).
6. Conforms to AEIC CS8.



EPR POWER CABLE, SHIELDED, 35000 VOLT, TYPE MV-105

SPEC 2-61-6.3

Ver. 8.0
Revised: 07/04/13



105°C CONDUCTOR TEMPERATURE, WET OR DRY								
Conductor			Insulation in Mils	Jacket in Mils	Size AWG Copper Ground Wire	Approximate O.D. in Inches	Ampacity** 40°C Ambient	Approximate Net Weight Lbs/Kft
Size AWG or KCMIL	No. of Strands	Nominal O.D in Inches						
THREE CONDUCTOR 35000 VOLT 100% INSULATION LEVEL, SHIELDED								
1/0	19	0.34	345	110	4	2.75	240	3810
2/0	19	0.38	345	110	4	2.83	275	4205
3/0	19	0.42	345	140	3	3.00	315	4895
4/0	19	0.48	345	140	3	3.11	360	5495
250	37	0.52	345	140	2	3.20	400	6065
350	37	0.62	345	140	2	3.41	490	7360
500	37	0.74	345	140	1	3.67	600	9275
750	61	0.91	345	140	1/0	4.04	745	12355
THREE CONDUCTOR 35000 VOLT 133% INSULATION LEVEL, SHIELDED								
1/0	19	0.34	420	140	4	3.13	240	4645
2/0	19	0.38	420	140	4	3.22	275	5065
3/0	19	0.42	420	140	3	3.32	315	5610
4/0	19	0.48	420	140	3	3.43	360	6235
250	37	0.52	420	140	2	3.53	400	6820
350	37	0.62	420	140	2	3.74	490	8160
500	37	0.74	420	140	1	4.00	600	10130
750	61	0.91	420	140	1/0	4.37	745	13290

Note:**Based on one three conductor cable isolated in air per NEC. For other installations refer to the NEC.

The above data is approximate and subject to normal manufacturing tolerances.

STANDARDS AND RATINGS:

1. Listed by UL as Type MV-105 per Standard 1072.
2. Conforms to ICEA S-93-639/NEMA WC74 Shielded Power Cable 5 - 46KV.
3. Listed by UL as Sunlight Resistant, for Direct Burial, For CT Use and IEEE 1202.



UNDERGROUND DISTRIBUTION POWER CABLE (URD) CROSS-LINKED POLYETHYLENE INSULATION (TR-XLP) 5000 TO 35000 VOLT

DESCRIPTION:

This specification covers Aetna Insulated Wire's standard construction for primary underground distribution power cable insulated with solid dielectric cross-linked polyethylene (XLP), applied concentric neutral and overall jacket.

PRODUCT SPECIFICATIONS AND RATINGS:

- i) ICEA S-94-649 Concentric Neutral Cables Rated 5-46 kV
- ii) AEIC CS8 Specification for Extruded Dielectric Shielded Power Cables Rated 5 through 46 kV
- iii) See individual product sheets for specific listings and ratings.

APPLICATION:

All power cables manufactured under this specification are intended for use in underground primary distribution systems. The cables may be used in wet or dry locations, installed underground in ducts or conduits, exposed to weather, in the presence of various chemicals, oils or ozone and are suitable for direct burial. Cables are designed for a continuous operating temperature of 90°C, an emergency overload temperature of 130°C and a short circuit temperature of 250°C.

CONSTRUCTION DATA AND SPECIFICATIONS:

Conductors - The conductor consists of uncoated soft, copper strands meeting the requirements of ASTM B3. Unless otherwise specified the conductors are supplied as compact round per ASTM B496.

Conductor Shield - The conductor shield consists of an extruded semi-conducting layer meeting the requirements of the governing specifications above.

Insulation - The insulation is cross-linked polyethylene (XLP) extruded in a single pass with the conductor and insulation shields to the wall thickness as specified in the governing specifications listed and as shown on the individual product specification sheets. Tree retardant cross-linked polyethylene (TR-XLP) is supplied as standard.

Insulation Shield - Insulation shield consists of an extruded semi-conducting material meeting the requirements of the governing specifications above.

Concentric Conductor - Applied spirally over the semi-conducting layer is a concentric neutral conductor consisting of annealed soft bare copper wires. The wires are approximately evenly spaced and are made available as either a full neutral having the same circular mil area as the central conductor, or a 1/3rd neutral having a circular mil area equal to one-third the area of the central conductor. The size and number of wires is as show in the individual product spec sheets. As appropriate, a binder is applied over the concentric wires.

Overall Jacket - A sunlight and ozone resistant jacket of polyvinylchloride (PVC) or linear low density polyethylene (LLDPE) is extruded overall.

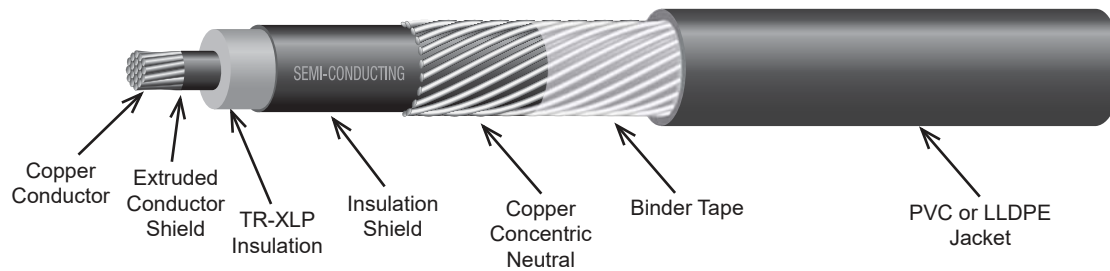
AVAILABLE OPTIONS:

- a) Reduced or enhanced concentric sizes.
- b) Encapsulating jackets with LLDPE.
- c) (-40°C) PVC jacket.
- d) Aetna 3742 non-halogen, flame resistant, low smoke, low corrosion, non toxic jacket.

**UNDERGROUND DISTRIBUTION POWER CABLE (UD/URD), 5000 VOLT
CROSS-LINKED POLYETHYLENE INSULATION (TR-XLP),
AEIC CS8**

SPEC 2-71-1

Ver. 8.0
Revised: 07/04/13



90°C CONDUCTOR TEMPERATURE, WET OR DRY											
Conductor			Insulation in Mils	Insulation Shield in Mils	Overall Jacket in Mils	Concentric Neutral Full No. x Size AWG	Concentric Neutral 1/3rd No. & Size AWG	Approximate O.D. F/N in Inches	Ampacity** 20°C Ambient Earth	Approximate Net Weight Full Neutral Lbs/Kft	Approximate Net Weight 1/3rd Neutral Lbs/Kft
Size AWG or KCMIL	No. of Strands	Nominal O.D in Inches									
SINGLE CONDUCTOR 5000 VOLT, 100% INSULATION LEVEL											
4*	7	0.23	90	30	60	10 x 14	6 x 14	0.83	110	450	395
2	7	0.27	90	30	60	16 x 14	6 x 14	0.88	145	615	490
1	19	0.30	90	30	80	13 x 12	7 x 14	0.98	170	785	565
1/0	19	0.34	90	30	80	16 x 12	9 x 14	1.01	195	925	710
2/0	19	0.38	90	30	80	13 x 10	11 x 14	1.10	220	1130	835
3/0	19	0.42	90	30	80	16 x 10	14 x 14	1.14	250	1350	1000
4/0	19	0.48	90	30	80	20 x 10	18 x 14	1.19	290	1640	1205
250	37	0.52	90	30	80	15 x 8	13 x 12	1.29	320	1910	1385
350	37	0.62	90	30	80	----	18 x 12	1.29-	385	----	1835
500	37	0.74	90	40	80	----	17 x 10	1.46-	470	----	2535
750	61	0.91	90	40	110	----	16 x 8	1.71-	585	----	3695
1000*	61	1.12	90	40	110	----	16 x 10	1.95	640	----	4375

Note: **Based on three cables in an underground duct, single circuit, earth 20°C, 100% load factor, RHO 90 per NEC, conductor temperature 90°C. No neutral current is considered.

*Compressed conductors.

*Approximate O.D. in Inches for 1/3rd Concentric Neutrals.

The above data is approximate and subject to normal manufacturing tolerances.

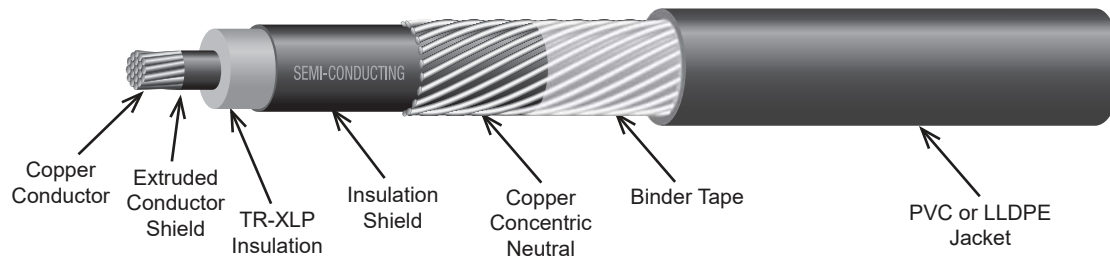
STANDARDS AND RATINGS:

1. Conforms to ANSI/ICEA S-94-649 Concentric Neutral Cables Rated 5-46 kV.
2. Conforms to AEIC CS8.

**UNDERGROUND DISTRIBUTION POWER CABLE (UD/URD),
5000/8000 VOLT, CROSS-LINKED POLYETHYLENE INSULATION (TR-XLP),
AEIC CS8**

SPEC 2-71-2

Ver. 8.0
Revised: 07/04/13



90°C CONDUCTOR TEMPERATURE, WET OR DRY											
Conductor			Insulation in Mils	Insulation Shield in Mils	Overall Jacket in Mils	Concentric Neutral Full No. & Size AWG	Concentric Neutral 1/3rd No. & Size AWG	Approximate O.D. F/N in Inches	Ampacity** 20°C Ambient Earth	Approximate Net Weight Full Neutral Lbs/Kft	Approximate Net Weight 1/3rd Neutral Lbs/Kft
Size AWG or KCMIL	No. of Strands	Nominal O.D in Inches									
SINGLE CONDUCTOR 5000 VOLT 133% or 8000 VOLT 100% INSULATION LEVEL											
4*	7	0.23	115	30	60	10 x 14	6 x 14	0.88	110	475	420
2	7	0.27	115	30	80	16 x 14	6 x 14	0.96	145	680	550
1	19	0.30	115	30	80	13 x 12	7 x 14	1.03	170	810	630
1/0	19	0.34	115	30	80	16 x 12	9 x 14	1.06	195	955	740
2/0	19	0.38	115	30	80	13 x 10	11 x 14	1.15	220	1160	865
3/0	19	0.42	115	30	80	16 x 10	14 x 14	1.19	250	1385	1035
4/0	19	0.48	115	30	80	20 x 10	18 x 14	1.24	290	1675	1240
250	37	0.52	115	30	80	15 x 8	13 x 12	1.34	320	1945	1420
350	37	0.62	115	30	80	----	18 x 12	1.44 ⁻	385	----	1875
500	37	0.74	115	40	80	----	17 x 10	1.54 ⁻	470	----	2610
750	61	0.91	115	40	110	----	16 x 8	1.76 ⁻	585	----	3745
1000*	61	1.12	115	40	110	----	21 x 8	2.05 ⁻	640	----	5010
SINGLE CONDUCTOR 8000 VOLT 133% INSULATION LEVEL											
4*	7	0.23	140	30	80	10 x 14	6 x 14	0.97	110	535	485
2	7	0.27	140	30	80	16 x 14	6 x 14	1.01	145	710	580
1	19	0.30	140	30	80	13 x 12	7 x 14	1.08	170	845	660
1/0	19	0.34	140	30	80	16 x 12	9 x 14	1.11	195	990	770
2/0	19	0.38	140	30	80	13 x 10	11 x 14	1.20	220	1195	900
3/0	19	0.42	140	30	80	16 x 10	14 x 14	1.24	250	1420	1070
4/0	19	0.48	140	30	80	20 x 10	18 x 14	1.29	290	1710	1280
250	37	0.52	140	30	80	15 x 8	13 x 12	1.39	320	1985	1460
350	37	0.62	140	30	80	----	18 x 12	1.39 ⁻	385	----	1915
500	37	0.74	140	40	80	----	17 x 10	1.59 ⁻	470	----	2655
750	61	0.91	140	40	110	----	16 x 8	1.87 ⁻	585	----	3900
1000*	61	1.12	140	40	110	----	21 x 8	2.10 ⁻	640	----	5070

Note: **Based on three cables in an underground duct, single circuit, earth 20°C, 100% load factor, RHO 90 per NEC, conductor temperature 90°C. No neutral current is considered.

*Compressed conductors.

⁻Approximate O.D. in Inches for 1/3rd Concentric Neutrals.

The above data is approximate and subject to normal manufacturing tolerances.

STANDARDS AND RATINGS:

1. Conforms to ANSI/ICEA S-94-649 Concentric Neutral Cables Rated 5-46 kV.
2. Conforms to AEIC CS8.

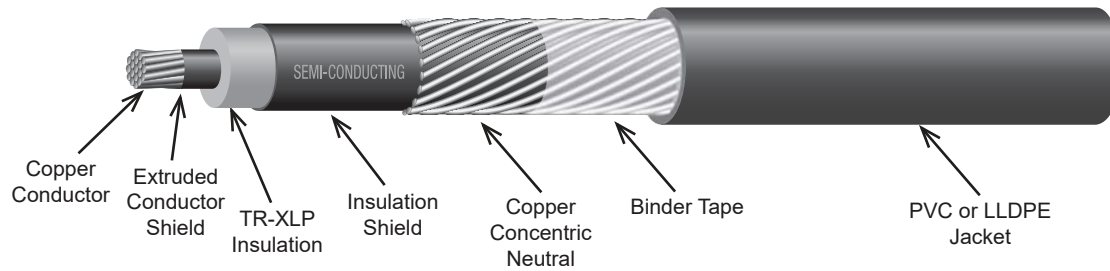
AETNA INSULATED WIRE, LLC
1537 AIR RAIL AVENUE, VIRGINIA BEACH, VA 23455
TELEPHONE: (800) 423-6505 FAX: (757) 605-2094
WWW.AETNAWIRE.COM



**UNDERGROUND DISTRIBUTION POWER CABLE (UD/URD), 15000 VOLT
CROSS-LINKED POLYETHYLENE INSULATION (TR-XLP),
AEIC CS8**

SPEC 2-71-3

Ver. 8.0
Revised: 07/04/13



90°C CONDUCTOR TEMPERATURE, WET OR DRY											
Conductor			Insulation in Mils	Insulation Shield in Mils	Overall Jacket in Mils	Concentric Neutral Full No. & Size AWG	Concentric Neutral 1/3rd No. & Size AWG	Approximate O.D. F/N in Inches	Ampacity** 20°C Ambient Earth	Approximate Net Weight Full Neutral Lbs/Kft	Approximate Net Weight 1/3rd Neutral Lbs/Kft
Size AWG or KCMIL	No. of Strands	Nominal O.D in Inches									
SINGLE CONDUCTOR 15000 VOLT, 100% INSULATION LEVEL											
2	7	0.27	175	30	80	16 x 14	6 x 14	1.08	155	755	625
1	19	0.30	175	30	80	13 x 12	7 x 14	1.15	175	890	710
1/0	19	0.34	175	30	80	16 x 12	9 x 14	1.18	200	1035	820
2/0	19	0.38	175	30	80	13 x 10	11 x 14	1.27	230	1245	950
3/0	19	0.42	175	30	80	16 x 10	14 x 14	1.31	260	1475	1120
4/0	19	0.48	175	30	80	20 x 10	18 x 14	1.36	295	1765	1335
250	37	0.52	175	30	80	15 x 8	13 x 12	1.46	325	2040	1515
350	37	0.62	175	40	80	21 x 8	18 x 12	1.59	390	2740	2005
500	37	0.74	175	40	110	30 x 8	17 x 10	1.71	465	3725	2725
750	61	0.91	175	40	110	----	16 x 8	1.94 ⁻	565	----	3980
1000*	61	1.12	175	40	110	----	21 x 8	2.20 ⁻	640	----	5205
SINGLE CONDUCTOR 15000 VOLT, 133% INSULATION LEVEL											
2	7	0.27	220	30	80	16 x 14	6 x 14	1.17	155	815	690
1	19	0.30	220	30	80	13 x 12	7 x 14	1.24	175	955	775
1/0	19	0.34	220	30	80	16 x 12	9 x 14	1.27	200	1105	885
2/0	19	0.38	220	30	80	13 x 10	11 x 14	1.36	230	1315	1020
3/0	19	0.42	220	30	80	16 x 10	14 x 14	1.40	260	1545	1190
4/0	19	0.48	220	30	80	20 x 10	18 x 14	1.45	295	1840	1405
250	37	0.52	220	40	80	15 x 8	13 x 12	1.58	325	2150	1625
350	37	0.62	220	40	80	21 x 8	18 x 12	1.68	390	2820	2090
500	37	0.74	220	40	110	30 x 8	17 x 10	1.86	465	3926	2815
750	61	0.91	220	40	110	----	16 x 8	2.03 ⁻	565	----	4085
1000*	61	1.12	220	40	110	----	21 x 8	2.29 ⁻	640	----	5330

Note: **Based on three cables in an underground duct, single circuit, earth 20°C, 100% load factor, RHO 90 per NEC, conductor temperature 90°C. No neutral current is considered.

*Compressed conductors.

⁻Approximate O.D. in Inches for 1/3rd Concentric Neutrals.

The above data is approximate and subject to normal manufacturing tolerances.

STANDARDS AND RATINGS:

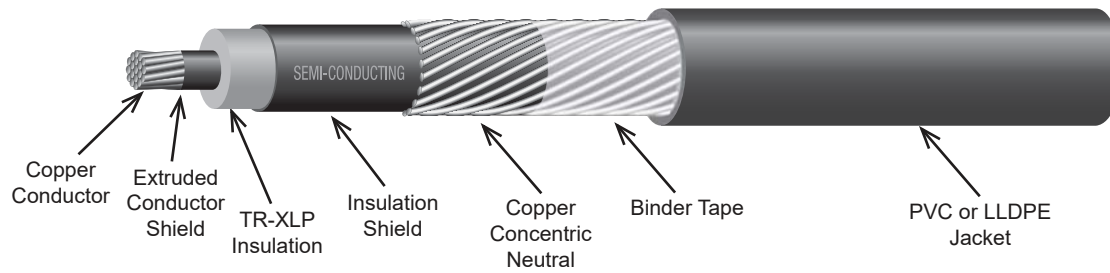
1. Conforms to ANSI/ICEA S-94-649 Concentric Neutral Cables Rated 5-46 kV.
2. Conforms to AEIC CS8.



**UNDERGROUND DISTRIBUTION POWER CABLE (UD/URD), 25000 VOLT
CROSS-LINKED POLYETHYLENE INSULATION (TR-XLP),
AEIC CS8**

SPEC 2-71-4

Ver. 8.0
Revised: 07/04/13



90°C CONDUCTOR TEMPERATURE, WET OR DRY											
Conductor			Insulation in Mils	Insulation Shield in Mils	Overall Jacket in Mils	Concentric Neutral Full No. & Size AWG	Concentric Neutral 1/3rd No. & Size AWG	Approximate O.D. F/N in Inches	Ampacity** 20°C Ambient Earth	Approximate Net Weight Full Neutral Lbs/Kft	Approximate Net Weight 1/3rd Neutral Lbs/Kft
Size AWG or KCMIL	No. of Strands	Nominal O.D. in Inches									
SINGLE CONDUCTOR 25000 VOLT, 100% INSULATION LEVEL											
1	19	0.30	260	30	80	13 x 12	7 x 14	1.30	175	1000	820
1/0	19	0.34	260	30	80	16 x 12	9 x 14	1.33	200	1150	935
2/0	19	0.38	260	30	80	13 x 10	11 x 14	1.42	230	1360	1070
3/0	19	0.42	260	40	80	16 x 10	14 x 14	1.46	260	1595	11240
4/0	19	0.48	260	40	80	20 x 10	18 x 14	1.54	295	1920	1490
250	37	0.52	260	40	80	15 x 8	13 x 12	1.64	325	2205	1680
350	37	0.62	260	40	80	21 x 8	18 x 12	1.74	390	2880	2150
500	37	0.74	260	40	110	30 x 8	17 x 10	1.92	465	3990	2985
750	61	0.91	260	55	110	----	16 x 8	2.09 ⁻	565	----	4160
1000*	61	1.12	260	55	110	----	21 x 8	2.35 ⁻	640	----	5410
SINGLE CONDUCTOR 25000 VOLT, 133% INSULATION LEVEL											
1	19	0.30	320	30	80	13 x 12	7 x 14	1.43	175	1105	925
1/0	19	0.34	320	30	80	16 x 12	9 x 14	1.49	200	1290	1075
2/0	19	0.38	320	40	80	13 x 10	11 x 14	1.58	230	1505	1215
3/0	19	0.42	320	40	80	16 x 10	14 x 14	1.62	260	1745	1390
4/0	19	0.48	320	40	80	20 x 10	18 x 14	1.67	295	2045	1615
250	37	0.52	320	40	80	15 x 8	13 x 12	1.77	325	2380	1805
350	37	0.62	320	40	80	21 x 8	18 x 12	1.93	390	3125	2285
500	37	0.74	320	40	110	30 x 8	17 x 10	2.05	465	4140	3135
750	61	0.91	320	55	110	----	16 x 8	2.25 ⁻	565	----	4370
1000*	61	1.12	320	55	110	----	21 x 8	2.48 ⁻	640	----	5600

Note: **Based on three cables in an underground duct, single circuit, earth 20°C, 100% load factor, RHO 90 per NEC, conductor temperature 90°C. No neutral current is considered.

*Compressed conductors.

⁻Approximate O.D. in Inches for 1/3rd Concentric Neutrals.

The above data is approximate and subject to normal manufacturing tolerances.

STANDARDS AND RATINGS:

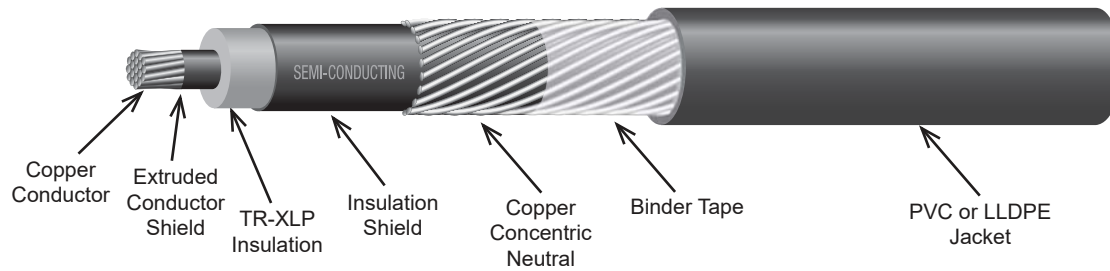
1. Conforms to ANSI/ICEA S-94-649 Concentric Neutral Cables Rated 5-46 kV.
2. Conforms to AEIC CS8.



**UNDERGROUND DISTRIBUTION POWER CABLE (UD/URD), 28000 VOLT
CROSS-LINKED POLYETHYLENE INSULATION (TR-XLP),
AEIC CS8**

SPEC 2-71-5

Ver. 8.0
Revised: 07/04/13



90°C CONDUCTOR TEMPERATURE, WET OR DRY											
Conductor			Insulation in Mils	Insulation Shield in Mils	Overall Jacket in Mils	Concentric Neutral Full No. & Size AWG	Concentric Neutral 1/3rd No. & Size AWG	Approximate O.D. F/N in Inches	Ampacity** 20°C Ambient Earth	Approximate Net Weight Full Neutral Lbs/Kft	Approximate Net Weight 1/3rd Neutral Lbs/Kft
Size AWG or KCMIL	No. of Strands	Nominal O.D in Inches									
SINGLE CONDUCTOR 28000 VOLT 100% INSULATION LEVEL											
1	19	0.30	280	30	80	13 x 12	7 x 14	1.34	175	1030	850
1/0	19	0.34	280	30	80	16 x 12	9 x 14	1.37	200	1185	965
2/0	19	0.38	280	40	80	13 x 10	11 x 14	1.46	230	1395	1100
3/0	19	0.42	280	40	80	16 x 10	14 x 14	1.53	260	1660	1310
4/0	19	0.48	280	40	80	20 x 10	18 x 14	1.58	295	1960	1530
250	37	0.52	280	40	80	15 x 8	13 x 12	1.68	325	2240	1715
350	37	0.62	280	40	110	21 x 8	18 x 12	1.84	390	3025	2190
500	37	0.74	280	40	110	30 x 8	17 x 10	1.96	465	4035	3030
750	61	0.91	280	55	110	----	16 x 8	2.16 ⁻	565	----	4255
1000*	61	1.12	280	55	110	----	21 x 8	2.39 ⁻	640	----	5470
SINGLE CONDUCTOR 28000 VOLT 133% INSULATION LEVEL											
1	19	0.30	345	30	80	13 x 12	7 x 14	1.51	175	1180	1000
1/0	19	0.34	345	40	80	16 x 12	9 x 14	1.54	200	1340	1120
2/0	19	0.38	345	40	80	13 x 10	11 x 14	1.63	230	1555	1260
3/0	19	0.42	345	40	80	16 x 10	14 x 14	1.67	260	1795	1440
4/0	19	0.48	345	40	80	20 x 10	18 x 14	1.72	295	2095	1665
250	37	0.52	345	40	110	15 x 8	13 x 12	1.88	325	2485	1860
350	37	0.62	345	40	110	21 x 8	18 x 12	1.98	390	3185	2445
500	37	0.74	345	55	110	30 x 8	17 x 10	2.10	465	4205	3195
750	61	0.91	345	55	110	----	16 x 8	2.30 ⁻	565	----	4440
1000*	61	1.12	345	55	110	----	21 x 8	2.53 ⁻	640	----	5675

Note: **Based on three cables in an underground duct, single circuit, earth 20°C, 100% load factor, RHO 90 per NEC, conductor temperature 90°C. No neutral current is considered.

*Compressed conductors.

⁻Approximate O.D. in Inches for 1/3rd Concentric Neutrals.

The above data is approximate and subject to normal manufacturing tolerances.

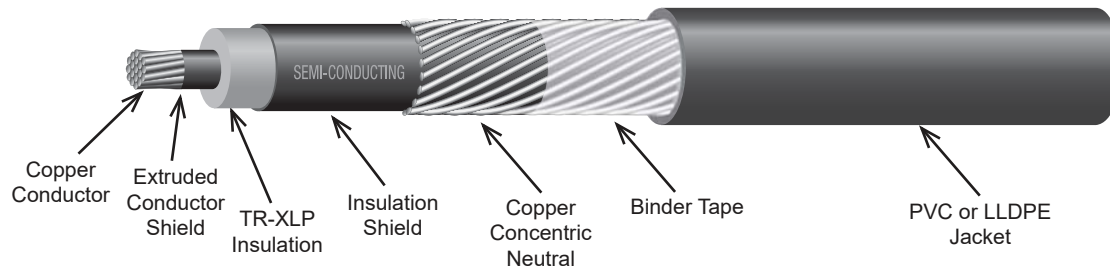
STANDARDS AND RATINGS:

1. Conforms to ANSI/ICEA S-94-649 Concentric Neutral Cables Rated 5-46 kV.
2. Conforms to AEIC CS8.

**UNDERGROUND DISTRIBUTION POWER CABLE (UD/URD), 35000 VOLT
CROSS-LINKED POLYETHYLENE INSULATION (TR-XLP),
AEIC CS8**

SPEC 2-71-6

Ver. 8.0
Revised: 07/04/13



90°C CONDUCTOR TEMPERATURE, WET OR DRY											
Conductor			Insulation in Mils	Insulation Shield in Mils	Overall Jacket in Mils	Concentric Neutral Full No. & Size AWG	Concentric Neutral 1/3rd No. & Size AWG	Approximate O.D. in Inches	Ampacity** 20°C Ambient Earth	Approximate Net Weight Full Neutral Lbs/Kft	Approximate Net Weight 1/3rd Neutral Lbs/Kft
Size AWG or KCML	No. of Strands	Nominal O.D. in Inches									
SINGLE CONDUCTOR 35000 VOLT, 100% INSULATION LEVEL											
1/0	19	0.34	345	40	80	16 x 12	9 x 14	1.54	200	1340	1120
2/0	19	0.38	345	40	80	13 x 10	11 x 14	1.63	230	1555	1260
3/0	19	0.42	345	40	80	16 x 10	14 x 14	1.67	260	1795	1440
4/0	19	0.48	345	40	80	20 x 10	18 x 14	1.72	295	2095	1665
250	37	0.52	345	40	110	15 x 8	13 x 12	1.88	325	2490	1860
350	37	0.62	345	40	110	21 x 8	18 x 12	1.98	390	3180	2445
500	37	0.74	345	55	110	30 x 8	17 x 10	2.10	465	4205	3195
750	61	0.91	345	55	110	----	16 x 8	2.30 ⁻	565	----	4440
1000*	61	1.12	345	55	110	----	21 x 8	2.53 ⁻	640	----	5675
SINGLE CONDUCTOR 35000 VOLT, 133% INSULATION LEVEL											
1/0	19	0.34	420	40	80	16 x 12	9 x 14	1.69	200	1485	1270
2/0	19	0.38	420	40	80	13 x 10	11 x 14	1.78	230	1705	1415
3/0	19	0.42	420	40	110	16 x 10	14 x 14	1.88	260	2055	1595
4/0	19	0.48	420	40	110	20 x 10	18 x 14	1.93	295	2365	1930
250	37	0.52	420	40	110	15 x 8	13 x 12	2.03	325	2660	2135
350	37	0.62	420	40	110	21 x 8	18 x 12	2.16	390	3410	2675
500	37	0.74	420	55	110	30 x 8	17 x 10	2.28	465	4445	3440
750	61	0.91	420	55	110	----	16 x 8	2.45 ⁻	565	----	4655
1000*	61	1.12	420	55	110	----	21 x 8	2.68 ⁻	640	----	5910

Note: **Based on three cables in an underground duct, single circuit, earth 20°C, 100% load factor, RHO 90 per NEC, conductor temperature 90°C. No neutral current is considered.

*Compressed conductors.

⁻Approximate O.D. in Inches for 1/3rd Concentric Neutrals.

The above data is approximate and subject to normal manufacturing tolerances.

STANDARDS AND RATINGS:

1. Conforms to ANSI/ICEA S-94-649 Concentric Neutral Cables Rated 5-46 kV.
2. Conforms to AEIC CS8.





UNDERGROUND DISTRIBUTION POWER CABLE (UD/URD) ETHYLENE-PROPYLENE RUBBER INSULATION (EPR) 5000 TO 35000 VOLT

SCOPE:

This specification covers Aetna Insulated Wire's standard construction for primary underground distribution power cable insulated with solid dielectric ethylene-propylene rubber (EPR), applied concentric neutral and overall jacket.

PRODUCT SPECIFICATIONS AND RATINGS:

- i) ICEA S-94-649 Concentric Neutral Cables Rated 5-46 kV
- ii) AEIC CS8 Specification for Extruded Dielectric Shielded Power Cables Rated 5 through 46 kV
- iii) See individual product sheets for specific listings and ratings.

APPLICATION:

All power cables manufactured under this specification are intended for use in underground primary distribution systems. The cables may be used in wet or dry locations, installed underground in ducts or conduits, exposed to weather, in the presence of various chemicals, oils or ozone and are suitable for direct burial. Cables with polyvinyl chloride (PVC) jackets are designed for a continuous operating temperature of 105°C, an emergency overload temperature of 140°C and a short circuit temperature of 250°C. Cables with LLDPE jackets are designed for a continuous operating temperature of 90°C, an emergency overload temperature of 130°C and a short circuit temperature of 250°C.

CONSTRUCTION DATA:

Conductors - The conductor consists of uncoated soft, copper strands meeting the requirements of ASTM B3. Unless otherwise specified the conductors are supplied as compact round per ASTM B496.

Conductor Shield - The conductor shield consists of an extruded semi-conducting layer meeting the requirements of the governing specifications above.

Insulation - The insulation is ethylene-propylene rubber (EPR) extruded in a single pass with the conductor and insulation shields to the wall thickness as specified in the governing specifications listed and as shown on the individual product specification sheets.

Insulation Shield - The insulation shield consists of an extruded semi-conducting layer meeting the requirements of the governing specifications above.

Concentric Conductor - Applied spirally over the semi-conducting layer is a concentric neutral conductor consisting of annealed soft bare copper wires. The wires are approximately evenly spaced and are made available as either a full neutral having the same circular mil area as the central conductor, or a 1/3rd neutral having a circular mil area equal to one-third the area of the central conductor. The size and number of wires is as show in the individual product spec sheets. As appropriate, a binder is applied over the concentric wires.

Overall Jacket - A sunlight and ozone resistant jacket of polyvinylchloride (PVC) or linear low density polyethylene (LLDPE) is extruded overall.

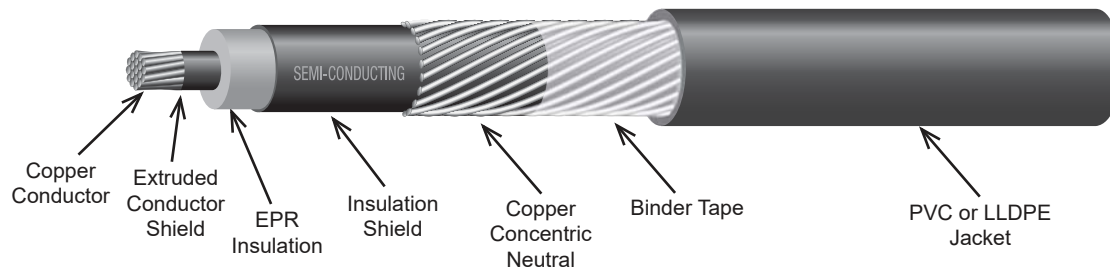
AVAILABLE OPTIONS:

- a) Reduced or enhanced concentric sizes.
- b) Encapsulating jackets with LLDPE.
- c) (-40°C) PVC jacket.
- d) Aetna 3742 non-halogen, flame resistant, low smoke, low corrosion, non toxic jacket.

**UNDERGROUND DISTRIBUTION POWER CABLE (UD/URD), 5000 VOLT
ETHYLENE-PROPYLENE RUBBER INSULATION (EPR),
CS8**

SPEC 2-81-1

Ver.8.0
Revised: 07/04/13



²90°/105°C CONDUCTOR TEMPERATURE, WET OR DRY											
Conductor			Insulation in Mils	Insulation Shield in Mils	Overall Jacket in Mils	Concentric Neutral Full No. & Size AWG	Concentric Neutral 1/3rd No. & Size AWG	Approximate O.D. F/N in Inches	Ampacity** 20°C Ambient Earth	Approximate Net Weight Full Neutral Lbs/Kft	Approximate Net Weight 1/3rd Neutral Lbs/Kft
Size AWG or KCMIL	No. of Strands	Nominal O.D in Inches									
SINGLE CONDUCTOR 5000 VOLT 100% INSULATION LEVEL											
4*	7	0.23	90	30	60	10 x 14	6 x 14	0.83	110	460	410
2	7	0.27	90	30	60	16 x 14	6 x 14	0.87	145	630	505
1	19	0.30	90	30	80	13 x 12	7 x 14	0.98	170	800	585
1/0	19	0.34	90	30	80	16 x 12	9 x 14	1.01	195	945	725
2/0	19	0.38	90	30	80	13 x 10	11 x 14	1.10	220	1150	855
3/0	19	0.42	90	30	80	16 x 10	14 x 14	1.14	250	1375	1120
4/0	19	0.48	90	30	80	20 x 10	18 x 14	1.19	290	1660	1230
250	37	0.52	90	30	80	15 x 8	13 x 12	1.29	320	1935	1410
350	37	0.62	90	30	80	----	18 x 12	1.29 ⁻	385	----	1860
500	37	0.74	90	40	80	----	17 x 10	1.46 ⁻	470	----	2560
750	61	0.91	90	40	110	----	16 x 8	1.71 ⁻	585	----	3735
1000*	61	1.12	90	40	110	----	21 x 8	2.00 ⁻	640	----	5000

Note: **Based on three cables in an underground duct, single circuit, earth 20°C, 100% load factor, RHO 90 per NEC, conductor temperature 90°C. No neutral current is considered.

The above data is approximate and subject to normal manufacturing tolerances.

*Compressed conductors.

²90°C conductor temperature with LLDPE jacket and 105°C conductor temperature with PVC jacket.

⁻Approximate O.D. in Inches for 1/3rd Concentric Neutrals.

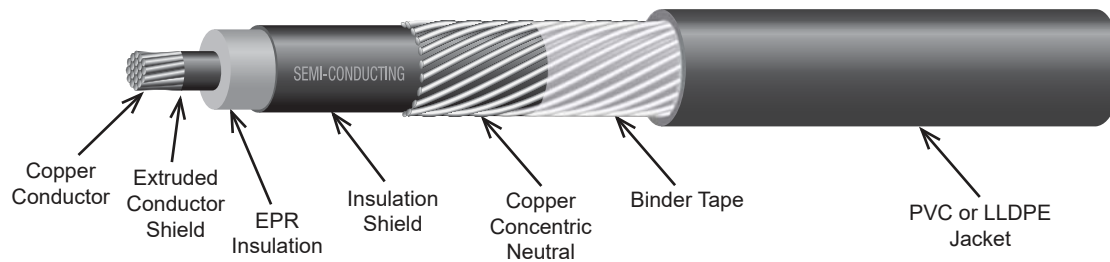
STANDARDS AND RATINGS:

1. Conforms to ANSI/ICEA S-94-649 Concentric Neutral Cables Rated 5-46 kV.
2. Conforms to AEIC CS8.

UNDERGROUND DISTRIBUTION POWER CABLE (UD/URD), 5000/8000 VOLT, ETHYLENE-PROPYLENE RUBBER INSULATION (EPR), AEIC CS8

SPEC 2-81-2

Ver. 8.0
Revised: 07/04/13



90°/105°C CONDUCTOR TEMPERATURE, WET OR DRY											
Conductor			Insulation in Mils	Insulation Shield in Mils	Overall Jacket in Mils	Concentric Neutral Full No. & Size AWG	Concentric Neutral 1/3rd No. & Size AWG	Approximate O.D. F/N in Inches	Ampacity** 20°C Ambient Earth	Approximate Net Weight Full Neutral Lbs/Kft	Approximate Net Weight 1/3rd Neutral Lbs/Kft
Size AWG or KCMIL	No. of Strands	Nominal O.D. in Inches									
SINGLE CONDUCTOR 5000 VOLT 133% or 8000 VOLT 100% INSULATION LEVEL											
4*	7	0.23	115	30	60	10 x 14	6 x 14	0.88	115	490	440
2	7	0.27	115	30	80	16 x 14	6 x 14	0.96	155	700	570
1	19	0.30	115	30	80	13 x 12	7 x 14	1.03	175	835	655
1/0	19	0.34	115	30	80	16 x 12	9 x 14	1.06	200	980	765
2/0	19	0.38	115	30	80	13 x 10	11 x 14	1.15	230	1185	895
3/0	19	0.42	115	30	80	16 x 10	14 x 14	1.19	260	1415	1060
4/0	19	0.48	115	30	80	20 x 10	18 x 14	1.24	295	1705	1270
250	37	0.52	115	30	80	15 x 8	13 x 12	1.34	325	1980	1455
350	37	0.62	115	30	80	----	18 x 12	1.34 ⁻	390	----	1910
500	37	0.74	115	40	80	----	17 x 10	1.54 ⁻	465	----	2655
750	61	0.91	115	40	110	----	16 x 8	1.76 ⁻	565	----	3795
1000*	61	1.12	115	40	110	----	21 x 8	2.05 ⁻	640	----	5070
SINGLE CONDUCTOR 8000 VOLT 133% INSULATION LEVEL											
4*	7	0.23	140	30	80	10 x 14	6 x 14	0.97	115	560	510
2	7	0.27	140	30	80	16 x 14	6 x 14	1.01	155	735	610
1	19	0.30	140	30	80	13 x 12	7 x 14	1.08	175	870	690
1/0	19	0.34	140	30	80	16 x 12	9 x 14	1.11	200	1020	800
2/0	19	0.38	140	30	80	13 x 10	11 x 14	1.20	230	1225	935
3/0	19	0.42	140	30	80	16 x 10	14 x 14	1.24	260	1455	1105
4/0	19	0.48	140	30	80	20 x 10	18 x 14	1.29	295	1750	1315
250	37	0.52	140	30	80	15 x 8	13 x 12	1.39	325	2025	1500
350	37	0.62	140	30	80	----	18 x 12	1.39 ⁻	390	----	1960
500	37	0.74	140	40	80	----	17 x 10	1.59 ⁻	465	----	2710
750	61	0.91	140	40	110	----	16 x 8	1.87 ⁻	565	----	3965
1000*	61	1.12	140	40	110	----	21 x 8	2.10 ⁻	640	----	5145

Note: **Based on three cables in an underground duct, single circuit, earth 20°C, 100% load factor, RHO 90 per NEC, conductor temperature 90°C. No neutral current is considered.

*Compressed conductors.

90°C conductor temperature with LLDPE jacket and 105°C conductor temperature with PVC jacket.

⁻Approximate O.D. in Inches for 1/3rd Concentric Neutrals.

The above data is approximate and subject to normal manufacturing tolerances.

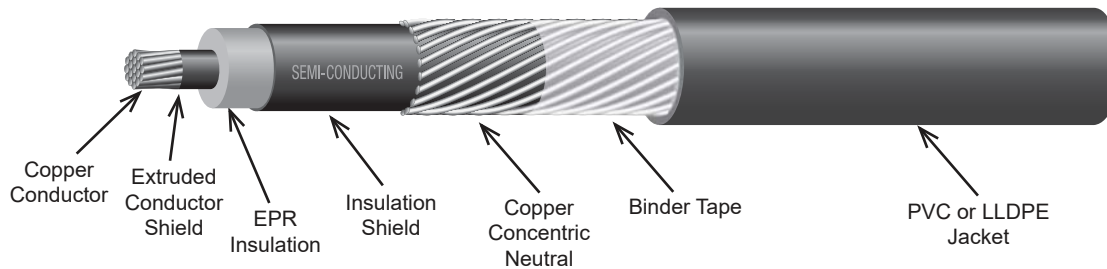
STANDARDS AND RATINGS:

1. Conforms to ANSI/ICEA S-94-649 Concentric Neutral Cables Rated 5-46 kV.
2. Conforms to AEIC CS8.

**UNDERGROUND DISTRIBUTION POWER CABLE (UD/URD),
15000 VOLT, ETHYLENE-PROPYLENE INSULATION (EPR),
AEIC CS8**

SPEC 2-81-3

Ver. 8.0
Revised: 07/04/13



90°/105°C CONDUCTOR TEMPERATURE, WET OR DRY											
Conductor			Insulation in Mils	Insulation Shield in Mils	Overall Jacket in Mils	Concentric Neutral Full No. & Size AWG	Concentric Neutral 1/3rd No. & Size AWG	Approximate O.D. F/N in Inches	Ampacity** 20°C Ambient Earth	Approximate Net Weight Full Neutral Lbs/Kft	Approximate Net Weight 1/3rd Neutral Lbs/Kft
Size AWG or KCMIL	No. of Strands	Nominal O.D in Inches									
SINGLE CONDUCTOR 15000 VOLT 100% INSULATION LEVEL											
2	7	0.27	175	30	80	16 x 14	6 x 14	1.08	155	790	660
1	19	0.30	175	30	80	13 x 12	7 x 14	1.15	175	925	745
1/0	19	0.34	175	30	80	16 x 12	9 x 14	1.18	200	1075	860
2/0	19	0.38	175	30	80	13 x 10	11 x 14	1.27	230	1285	995
3/0	19	0.42	175	30	80	16 x 10	14 x 14	1.31	260	1520	1165
4/0	19	0.48	175	30	80	20 x 10	18 x 14	1.36	295	1815	1380
250	37	0.52	175	30	80	15 x 8	13 x 12	1.46	325	2090	1570
350	37	0.62	175	40	80	21 x 8	18 x 12	1.59	390	2795	2065
500	37	0.74	175	40	80	30 x 8	17 x 10	1.71	465	3795	2790
750	61	0.91	175	40	110	----	16 x 8	1.94 ⁻	565	----	4060
1000*	61	1.12	175	40	110	----	21 x 8	2.20 ⁻	640	----	5305
SINGLE CONDUCTOR 15000 VOLT 133% INSULATION LEVEL											
2	7	0.27	220	30	80	16 x 14	6 x 14	1.17	155	865	735
1	19	0.30	220	30	80	13 x 12	7 x 14	1.24	175	1005	820
1/0	19	0.34	220	30	80	16 x 12	9 x 14	1.27	200	1155	940
2/0	19	0.38	220	30	80	13 x 10	11 x 14	1.36	230	1370	1075
3/0	19	0.42	220	30	80	16 x 10	14 x 14	1.40	260	1605	1250
4/0	19	0.48	220	30	80	20 x 10	18 x 14	1.45	295	1905	1470
250	37	0.52	220	40	80	15 x 8	13 x 12	1.58	325	2215	1695
350	37	0.62	220	40	80	21 x 8	18 x 12	1.68	390	2900	2170
500	37	0.74	220	40	110	30 x 8	17 x 10	1.86	465	4010	2905
750	61	0.91	220	40	110	----	16 x 8	2.03 ⁻	565	----	4190
1000*	61	1.12	220	40	110	----	21 x 8	2.29 ⁻	640	----	5450

Note: **Based on three cables in an underground duct, single circuit, earth 20°C, 100% load factor, RHO 90 per NEC, conductor temperature 90°C. No neutral current is considered.

*Compressed conductors.

²90°C conductor temperature with LLDPE jacket and 105°C conductor temperature with PVC jacket.

⁻Approximate O.D. in Inches for 1/3rd Concentric Neutrals.

The above data is approximate and subject to normal manufacturing tolerances.

STANDARDS AND RATINGS:

1. Conforms to ANSI/ICEA S-94-649 Concentric Neutral Cables Rated 5-46 kV.
2. Conforms to AEIC CS8.

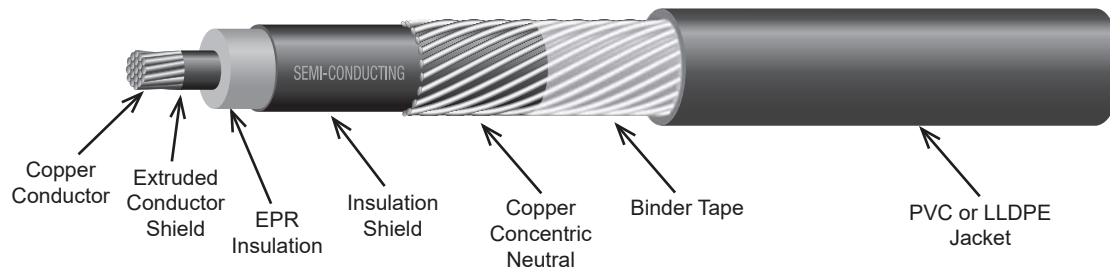
AETNA INSULATED WIRE, LLC
1537 AIR RAIL AVENUE, VIRGINIA BEACH, VA 23455
TELEPHONE: (800) 423-6505 FAX: (757) 605-2094
WWW.AETNAWIRE.COM



**UNDERGROUND DISTRIBUTION POWER CABLE (UD/URD), 25000 VOLT
ETHYLENE-PROPYLENE RUBBER INSULATION (EPR),
AEIC CS8**

SPEC 2-81-4

Ver. 8.0
Revised: 09/11/13



90°/105°C CONDUCTOR TEMPERATURE, WET OR DRY											
Conductor			Insulation in Mils	Insulation Shield in Mils	Overall Jacket in Mils	Concentric Neutral Full No. & Size AWG	Concentric Neutral 1/3rd No. & Size AWG	Approximate O.D. F/N in Inches	Ampacity** 20°C Ambient Earth	Approximate Net Weight Full Neutral Lbs/Kft	Approximate Net Weight 1/3rd Neutral Lbs/Kft
Size AWG or KCMIL	No. of Strands	Nominal O.D in Inches									
SINGLE CONDUCTOR 25000 VOLT, 100% INSULATION LEVEL											
1	19	0.30	260	30	80	13 x 12	7 x 14	1.30	175	1060	880
1/0	19	0.34	260	30	80	16 x 12	9 x 14	1.33	200	1215	995
2/0	19	0.38	260	30	80	13 x 10	11 x 14	1.42	230	1430	1135
3/0	19	0.42	260	40	80	16 x 10	14 x 14	1.46	260	1665	1315
4/0	19	0.48	260	40	80	20 x 10	18 x 14	1.54	295	2000	1570
250	37	0.52	260	40	80	15 x 8	13 x 12	1.64	325	2285	1760
350	37	0.62	260	40	80	21 x 8	18 x 12	1.74	390	2970	2240
500	37	0.74	260	40	110	30 x 8	17 x 10	1.92	465	4090	3085
750	61	0.91	260	55	110	----	16 x 8	2.09 ⁻	565	----	4280
1000*	61	1.12	260	55	110	----	21 x 8	2.35 ⁻	640	----	5555
SINGLE CONDUCTOR 25000 VOLT, 133% INSULATION LEVEL											
1	19	0.30	320	30	80	13 x 12	7 x 14	1.43	175	1190	1005
1/0	19	0.34	320	30	80	16 x 12	9 x 14	1.49	200	1380	1160
2/0	19	0.38	320	40	80	13 x 10	11 x 14	1.58	230	1600	1305
3/0	19	0.42	320	40	80	16 x 10	14 x 14	1.62	260	1840	1490
4/0	19	0.48	320	40	80	20 x 10	18 x 14	1.67	295	2150	1720
250	37	0.52	320	40	80	15 x 8	13 x 12	1.77	325	2440	1915
350	37	0.62	320	40	110	21 x 8	18 x 12	1.93	390	3245	2405
500	37	0.74	320	40	110	30 x 8	17 x 10	2.05	465	4280	3270
750	61	0.91	320	55	110	----	16 x 8	2.25 ⁻	565	----	4530
1000*	61	1.12	320	55	110	----	21 x 8	2.48 ⁻	640	----	5785

Note: **Based on three cables in an underground duct, single circuit, earth 20°C, 100% load factor, RHO 90 per NEC, conductor temperature 90°C. No neutral current is considered.

*Compressed conductors.

²90°C conductor temperature with LLDPE jacket and 105°C conductor temperature with PVC jacket.

⁻Approximate O.D. in Inches for 1/3rd Concentric Neutrals.

The above data is approximate and subject to normal manufacturing tolerances.

STANDARDS AND RATINGS:

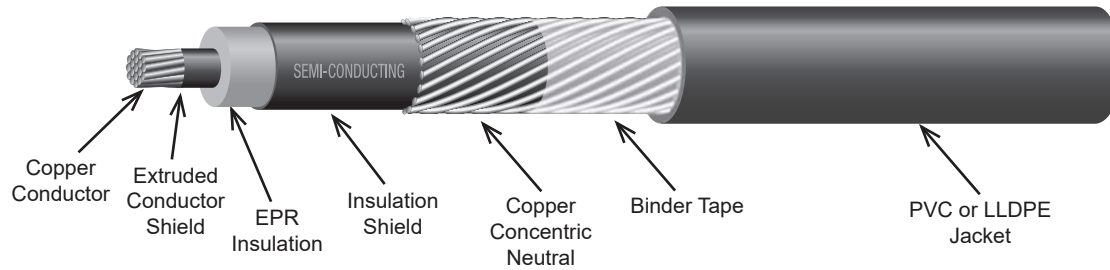
1. Conforms to ANSI/ICEA S-94-649 Concentric Neutral Cables Rated 5-46 kV.
2. Conforms to AEIC CS8.



**UNDERGROUND DISTRIBUTION POWER CABLE (UD/URD), 28000 VOLT
ETHYLENE-PROPYLENE RUBBER INSULATION (EPR),
AEIC CS8**

SPEC 2-81-5

Ver. 8.0
Revised: 09/11/13



90°/105°C CONDUCTOR TEMPERATURE, WET OR DRY											
Conductor			Insulation in Mils	Insulation Shield in Mils	Overall Jacket in Mils	Concentric Neutral Full No. & Size AWG	Concentric Neutral 1/3rd No. & Size AWG	Approximate O.D. F/N in Inches	Ampacity** 20°C Ambient Earth	Approximate Net Weight Full Neutral Lbs/Kft	Approximate Net Weight 1/3rd Neutral Lbs/Kft
Size AWG or KCMIL	No. of Strands	Nominal O.D in Inches									
SINGLE CONDUCTOR 28000 VOLT, 100% INSULATION LEVEL											
1	19	0.30	280	30	80	13 x 12	7 x 14	1.34	175	1100	915
1/0	19	0.34	280	30	80	16 x 12	9 x 14	1.37	200	1255	1035
2/0	19	0.38	280	40	80	13 x 10	11 x 14	1.46	230	1470	1175
3/0	19	0.42	280	40	80	16 x 10	14 x 14	1.53	260	1740	1385
4/0	19	0.48	280	40	80	20 x 10	18 x 14	1.58	295	2045	1615
250	37	0.52	280	40	80	15 x 8	13 x 12	1.68	325	2330	1805
350	37	0.62	280	40	110	21 x 8	18 x 12	1.84	390	3125	2290
500	37	0.74	280	40	110	30 x 8	17 x 10	1.96	465	4150	3140
750	61	0.91	280	55	110	----	16 x 8	2.16 ⁻	565	----	4385
1000*	61	1.12	280	55	110	----	21 x 8	2.39 ⁻	640	----	5625
SINGLE CONDUCTOR 28000 VOLT, 133% INSULATION LEVEL											
1	19	0.30	345	40	80	13 x 12	7 x 14	1.51	175	1275	1095
1/0	19	0.34	345	40	80	16 x 12	9 x 14	1.54	200	1435	1220
2/0	19	0.38	345	40	80	13 x 10	11 x 14	1.63	230	1655	1365
3/0	19	0.42	345	40	80	16 x 10	14 x 14	1.67	260	1900	1550
4/0	19	0.48	345	40	80	20 x 10	18 x 14	1.72	295	2210	1780
250	37	0.52	345	40	110	15 x 8	13 x 12	1.88	325	2610	1980
350	37	0.62	345	40	110	21 x 8	18 x 12	1.98	390	3315	2580
500	37	0.74	345	55	110	30 x 8	17 x 10	2.10	465	4355	3350
750	61	0.91	345	55	110	----	16 x 8	2.30 ⁻	565	----	4615
1000*	61	1.12	345	55	110	----	21 x 8	2.53 ⁻	640	----	5880

Note: **Based on three cables in an underground duct, single circuit, earth 20°C, 100% load factor, RHO 90 per NEC, conductor temperature 90°C. No neutral current is considered.

*Compressed conductors.

²90°C conductor temperature with LLDPE jacket and 105°C conductor temperature with PVC jacket.

⁻Approximate O.D. in Inches for 1/3rd Concentric Neutrals.

The above data is approximate and subject to normal manufacturing tolerances.

STANDARDS AND RATINGS:

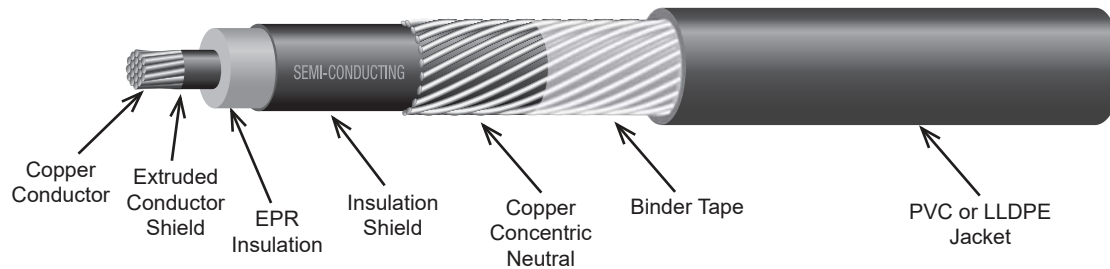
1. Conforms to ANSI/ICEA S-94-649 Concentric Neutral Cables Rated 5-46 kV.
2. Conforms to AEIC CS8.



**UNDERGROUND DISTRIBUTION POWER CABLE (UD/URD), 35000 VOLT
ETHYLENE-PROPYLENE RUBBER INSULATION (EPR),
AEIC CS8**

SPEC 2-81-6

Ver. 8.0
Revised: 09/11/13



290°/105°C CONDUCTOR TEMPERATURE, WET OR DRY											
Conductor			Insulation in Mils	Insulation Shield in Mils	Overall Jacket in Mils	Concentric Neutral Full No. & Size AWG	Concentric Neutral 1/3rd No. & Size AWG	Approximate O.D. F/N in Inches	Ampacity** 20°C Ambient Earth	Approximate Net Weight Full Neutral Lbs/Kft	Approximate Net Weight 1/3rd Neutral Lbs/Kft
Size AWG or KCMIL	No. of Strands	Nominal O.D. in Inches									
SINGLE CONDUCTOR 35000 VOLT, 100% INSULATION LEVEL											
1/0	19	0.34	345	40	80	16 x 12	9 x 14	1.54	200	1435	1220
2/0	19	0.38	345	40	80	13 x 10	11 x 14	1.63	230	1655	1365
3/0	19	0.42	345	40	80	16 x 10	14 x 14	1.67	260	1900	1550
4/0	19	0.48	345	40	80	20 x 10	18 x 14	1.72	295	2210	1780
250	37	0.52	345	40	110	15 x 8	13 x 12	1.88	325	2610	1980
350	37	0.62	345	40	110	21 x 8	18 x 12	1.98	390	3315	2580
500	37	0.74	345	55	110	30 x 8	17 x 10	2.10	465	4355	3350
750	61	0.91	345	55	110	----	16 x 8	2.30 ⁻	565	----	4615
1000*	61	1.12	345	55	110	----	21 x 8	2.53 ⁻	640	----	5880
SINGLE CONDUCTOR 35000 VOLT, 133% INSULATION LEVEL											
1/0	19	0.34	420	40	80	16 x 12	9 x 14	1.69	200	1615	1400
2/0	19	0.38	420	40	80	13 x 10	11 x 14	1.78	230	1845	1550
3/0	19	0.42	420	40	110	16 x 10	14 x 14	1.88	260	2200	1740
4/0	19	0.48	420	40	110	20 x 10	18 x 14	1.93	295	2520	2085
250	37	0.52	420	40	110	15 x 8	13 x 12	2.03	325	2820	2290
350	37	0.62	420	40	110	21 x 8	18 x 12	2.45	390	3585	2850
500	37	0.74	420	55	110	30 x 8	17 x 10	2.68	465	4640	3635
750	61	0.91	420	55	110	----	16 x 8	2.45 ⁻	565	----	4875
1000*	61	1.12	420	55	110	----	21 x 8	2.68 ⁻	640	----	6170

Note: **Based on three cables in an underground duct, single circuit, earth 20°C, 100% load factor, RHO 90 per NEC, conductor temperature 90°C. No neutral current is considered.

*Compressed conductors.

²90°C conductor temperature with LLDPE jacket and 105°C conductor temperature with PVC jacket.

⁻Approximate O.D. in Inches for 1/3rd Concentric Neutrals.

The above data is approximate and subject to normal manufacturing tolerances.

STANDARDS AND RATINGS:

1. Conforms to ANSI/ICEA S-94-649 Concentric Neutral Cables Rated 5-46 kV.
2. Conforms to AEIC CS8.