

ROME-EPR LEAD SHEATH POWER CABLE, 15000 VOLTS

Single-Conductor, Shielded, 100% Insulation Level
AEIC CS8, MV-90

APPLICATION:

A. For general purpose applications in wet or dry locations, in circuits not exceeding 15000 volts, phase to phase, at conductor temperatures not exceeding 90°C for normal, 130°C for emergency overload, and 250°C for short-circuit conditions. Suitable for installation in conduit, trays, troughs, ducts, aerially, and direct burial applications. It is an excellent replacement or substitute for PILC cables.

B. Where NEC jurisdiction applies; as 15000-volt 100% insulation level shielded power cable, Type MV-90, for use at conductor temperatures not exceeding 90°C in wet or dry locations, when installed in accordance with the National Electrical Code.

STANDARDS:

1. Conforms to ICEA S-93-639, NEMA WC74 for 5-46 kV Shielded Power Cable.
2. Conforms to ICEA S-97-682 for Utility Shielded Power Cables Rated 5 Through 46 kV.
3. Conforms to AEIC CS8 for Extruded Dielectric, Shielded Power Cables Rated 5 Through 46 kV.
4. Listed by UL as Type MV-90, per Standard 1072.
5. Conforms to Federal Specification J-C-30B.

CONSTRUCTION: Annealed copper conductor, extruded conductor shield, Rome-EPR ethylene propylene rubber insulation, extruded insulation shield, lead sheath, optional black thermoplastic jacket overall.

The diagram shows a cross-section of the cable with the following layers from the outside in: an optional black thermoplastic jacket, an extruded insulation shield, an extruded conductor shield, Rome-EPR insulation, and a central copper conductor.

Conductor		Insulation			Lead Sheath			Lead Sheath and TP Jacket				Ampacity * in Duct	
Size AWG or kcmil	No. of Strands	Thickness Mils	Nominal Diameter Inches	Shield Thickness Mils	Thickness Mils	Diameter Over Sheath Inches	Approx. Net Wt. Lb./1000 Ft.	Lead Thickness Mils	Jacket Thickness Mils	Diameter Over Jacket Inches	Approx. Net Wt. Lb./1000	Open	Short
												2	7
1	19	175	0.72	30	80	0.98	1650	70	65	1.09	1590	197	197
1/0	19	175	0.76	30	80	1.02	1790	70	65	1.14	1720	224	224
2/0	19	175	0.81	30	80	1.06	1950	70	65	1.18	1890	254	253
3/0	19	175	0.86	30	80	1.12	2150	70	65	1.23	2070	289	288
4/0	19	175	0.91	30	80	1.18	2380	70	65	1.29	2300	328	327
250	37	175	0.97	30	80	1.23	2600	70	65	1.35	2520	360	307
350	37	175	1.07	40	95	1.39	3450	85	65	1.51	3360	443	437
500	37	175	1.20	40	95	1.52	4170	85	65	1.64	4070	535	525
750	61	175	1.40	40	95	1.73	5350	85	80	1.88	5270	659	640
1000	61	175	1.54	50	110	1.93	6940	95	80	2.07	6710	770	737

*Ampacities based on TP jacketed triplexed conductors in a PVC duct, buried 36" in depth, single circuit, 100% Load Factor, earth ambient of 20°C, conductor temperature 90°C, Rho = 90.

OPEN = open-circuited lead sheaths, grounded at only one point.

SHORT = short-circuited lead sheaths or multipoint grounding.

Ampacities of lead sheathed cable without a TP jacket are approximately 10 amps less than those shown for short-circuited sheaths with a TP jacket.

Information on this sheet subject to change without notice.



Specification

ROME-EPR LEAD SHEATH POWER CABLE, 15000 VOLTS

Single-Conductor, Shielded, 100% Insulation Level AEIC CS8, MV-90

1. SCOPE

- 1.1 This specification describes single-conductor, Rome-EPR (Ethylene-propylene-rubber) insulated, lead-sheathed power cables for use in grounded neutral circuits not exceeding 15,000 volts phase to phase at conductor temperatures of 90°C for continuous normal operation, 130°C for emergency overload conditions and 250°C for short-circuit conditions. Cables are intended for general purpose power cable applications, in wet or dry locations, including conduit, cable tray, duct, direct burial and aerial installation. Otherwise, they are intended for use as Type MV-90 in applications covered by the National Electrical Code.

2. STANDARDS

- 2.1 The following standards shall form a part of this specification to the extent specified herein:
 - 2.1.1 ICEA Pub. No. S-93-639, NEMA Pub. No. WC74 for 5-46 kV Shielded Power Cable.
 - 2.1.2 ICEA Pub. No. S-97-682 for Utility Shielded Power Cables Rated 5 Through 46 kV.
 - 2.1.3 AEIC CS8 for Extruded Dielectric, Shielded Power Cables Rated 5 Through 46 kV.
 - 2.1.4 Underwriters Laboratories Standard 1072 for Medium-Voltage Solid-Dielectric Cable.

3. CONDUCTORS

- 3.1 Class B stranded annealed uncoated copper per Part 2 of ICEA.

4. CONDUCTOR SHIELDING

- 4.1 Conductors shall be covered with a layer of extruded conducting thermosetting compound with thickness in accordance with Table 3-1 of ICEA S-97-682. The extruded layer shall be compatible with and firmly bonded to the cable insulation and shall be in accordance with Par. 3.1 and meet the resistivity requirements of Par. 3.6.1 of ICEA S-97-682.

5. INSULATION

- 5.1 Directly over the conductor shielding shall be applied a homogeneous wall of Rome-EPR insulation. The average thickness of insulation shall be 175 mils. Minimum thickness at any point shall be not less than 90% of the specified thickness. Physical and electrical properties of the insulation shall be in accordance with Part 4 of ICEA S-97-682 for a Class II insulation.

6. SHIELDING

- 6.1 Over the insulation shall be applied an extruded conducting thermosetting insulation shield. It shall be in intimate contact with the outer surface of the insulation and shall be free-stripping, leaving no conducting particles or other residue on the insulation surface. This layer shall be legibly identified as being conducting. The average thickness of this layer shall be in accordance with Table 5-1 of ICEA S-97-682. The insulation shield shall meet the requirements of Par. 5.5.1 of ICEA S-97-682.

7. SHEATH

- 7.1 A lead sheath shall be applied overall, conforming to the requirements of Par. 6.6 of ICEA S-97-682. The thickness of the lead sheath shall be in accordance with Table 6-1 (no overall jacket) or Table 6-2 (overall jacket) of ICEA S-97-682. A marker tape shall be placed under the lead sheath for manufacturer's identification.

8. JACKET

- 8.1 An optional thermoplastic jacket may be applied overall. This jacket shall meet the requirements of Part 7 of ICEA S-97-682. The average thickness of the jacket shall be as specified in UL 1072. The minimum thickness at any point shall be not less than 70% of that specified.

9. TESTS

- 9.1 Cable shall be tested in accordance with ICEA S-97-682, ICEA S-93-639, AEIC CS8 and UL Standard 1072.