Rome Cable
CORPORATION

SPEC 7370

January 1, 2002

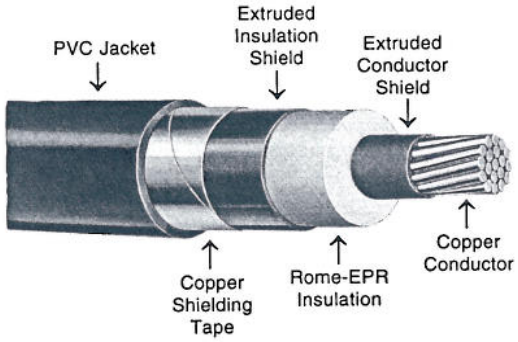
ROME-EPR POWER CABLE, 35000 VOLTS

Single Conductor, Shielded, 100% Insulation Level
AEIC CS8, MV-105, Sunlight Resistant, CT Use

APPLICATION: As medium voltage MV-105 power cable for use in main feeder, distribution and branch circuits in industrial, commercial and electric utility installations. Cables may be used in wet or dry locations in circuits not exceeding 35000 volts 100% insulation level, at conductor temperatures not exceeding 105°C for normal, 140°C for emergency overload and 250°C for short-circuit conditions. Suitable for installation in conduit, tray, trough, ducts, aerial and direct burial applications.

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-105, per Standard 1072.
5. Listed by UL as Sunlight Resistant.
6. Sizes 4/0 AWG and larger UL listed For CT Use (3).
7. Conforms to Federal Specification J-C-30B.

CONSTRUCTION: Annealed copper conductor, extruded conductor shield, Rome-EPR ethylene-propylene-rubber insulation, extruded insulation shield, 5 mil copper shielding tape, black polyvinyl chloride jacket, surface printed.



Size AWG or kcmil	No. of Strands	Thickness in Mils		Nominal Diameter Over Ins. Inches	Nominal Diameter Inches	Copper Conductor			
						Approx. Net Wt. Lb./1000 Ft.	Ampacity*		
		Insulation	Jacket				Tray	Conduit	Duct
35000 VOLTS, SHIELDED, 100% INSULATION LEVEL (GROUNDED NEUTRAL)									
1/0	19	345	80	1.11	1.39	1160	290	215	215
2/0	19	345	80	1.15	1.44	1290	330	255	245
3/0	19	345	80	1.20	1.49	1445	380	290	275
4/0	19	345	80	1.26	1.53	1635	445	330	315
250	37	345	80	1.34	1.59	1805	490	365	345
350	37	345	80	1.43	1.69	2205	605	440	415
500	37	345	110	1.56	1.90	2920	755	535	500
750	61	345	110	1.75	2.09	3895	970	655	610
1000	61	345	110	1.90	2.24	4840	1160	755	690

* TRAY: Single layer in uncovered cable tray with one cable diameter spacing, 105°C Conductor Temperature, 40°C Ambient. CONDUIT: Three cables in isolated conduit in air, 105°C Conductor Temperature, 40°C Ambient. DUCT: Three cables per duct, 105°C Conductor Temperature, 20°C Ambient, One Circuit, 100% Load Factor, Rho = 90. For other installation conditions, refer to the National Electrical Code.

NOTES: (1) Cables may be direct buried where NEC jurisdiction applies if the metallic shield is grounded through an effective grounding path meeting the requirements of 250.4(A)(5) or 250.4(B)(4).
(2) Also available with CPE jackets.
(3) Sizes 1/0 - 3/0 AWG with PVC jackets available with CT rating on request.

Information on this sheet subject to change without notice.

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1-1-02

Specification

ROME-EPR POWER CABLE, 35000 VOLTS

Single Conductor, Shielded, 100% Insulation Level
AEIC CS8, MV-105, Sunlight Resistant, CT Use

1. **SCOPE**
   1.1 This specification describes single conductor, Rome-EPR (Ethylene-propylene-rubber) insulated, shielded power cables for use in circuits not exceeding 35,000 volts 100% insulation level at conductor temperatures of 105°C for continuous normal operation, 140°C for emergency overload conditions and 250°C for short-circuit conditions. Cables are intended for power cable applications, in wet or dry locations, including conduit, cable tray, duct, direct burial and aerial installation.

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 UL Standard 1072 for Type MV-105.

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 insulation thickness shall be 345 mils and the 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 III 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 thickness of this layer shall be in accordance with Table 5-1 of ICEA S-97-682. The insulation shield shall meet the requirements Par. 5.5.1 of ICEA S-97-682.
   6.2 Directly over the extruded insulation shield shall be a helically applied 5 mil uncoated copper shielding tape with a minimum lap of 12.5%. This tape shall meet the requirements of Part 6 of ICEA S-97-682.

7. **JACKET**
   7.1 A polyvinyl chloride jacket shall be applied overall. The jacket shall meet the requirements of Part 7 of ICEA S-97-682 and UL 1072. The jacket shall meet the Sunlight Resistant requirements of UL Standard 1072. The jacket thickness shall be as specified in Part 7 of ICEA S-97-682 and UL 1072. The minimum thickness at any point shall be not less than 80% of the specified UL thickness.

8. **IDENTIFICATION**
   8.1 All cable shall be identified by means of surface ink printing indicating manufacturer, size, insulation type, insulation thickness, voltage rating, insulation level, year of manufacture and UL designations.

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.