Rome Cable
CORPORATION

SPEC 7165

January 1, 2002

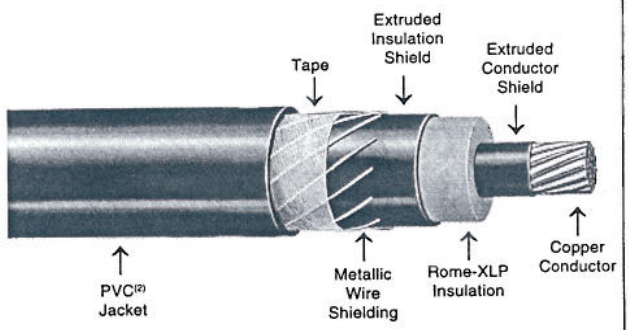
ROME-XLP POWER CABLE, 5000 VOLTS

Single Conductor, Shielded, 100% and 133% Insulation Levels
AEIC CS8, MV-90

APPLICATION: As medium voltage MV-90 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 5000 volts 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, trough, ducts, aerial and direct burial applications.

STANDARDS:
1. Conforms to ICEA S-93-639, NEMA WC74 for 5-46kV 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-XLP thermosetting chemically crosslinked polyethylene insulation, extruded insulation shield, #22 AWG metallic wire shielding, tape, black polyvinyl chloride jacket overall, surface printed.



Size AWG or kcmil	No.of Strands	Thickness in Mils		Nominal Diameter Over Ins. Inches	Nominal Diameter Inches	COPPER CONDUCTOR		
		Insulation	Jacket			Approx. Net Wt. Lb./1000 Ft.	Ampacity * Duct	Ampacity * Conduit
5000 VOLTS, SHIELDED, 100% and 133% INSULATION LEVELS (GROUNDED and UNGROUNDED NEUTRAL)								
4	7	90	60	.45	.71	290	110	97
2	7	90	60	.51	.77	385	145	130
1	19	90	60	.55	.81	440	170	155
1/0	19	90	80	.59	.89	565	195	180
2/0	19	90	80	.63	.94	665	220	205
3/0	19	90	80	.68	.99	790	250	240
4/0	19	90	80	.74	1.04	950	290	280
250	37	90	80	.80	1.10	1095	320	315
350	37	90	80	.90	1.21	1445	385	385
500	37	90	80	1.03	1.35	1960	470	475
750	61	90	80	1.22	1.54	2825	585	600
1000	61	90	80	1.37	1.69	3645	670	690

*DUCT: Three cables per duct, 90°C Conductor Temperature, 20°C Ambient, One Circuit, 100% Load Factor, Rho = 90. CONDUIT: Three cables in isolated conduit in air, 90°C Conductor Temperature, 40°C Ambient. 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) CPE jacket may also be supplied.
(3) Cables are rated 100% Insulation Level only in accordance with AEIC CS8 and ICEA S-97-682.

Information on this sheet subject to change without notice.

Specification

ROME-XLP POWER CABLE, 5000 VOLTS

Single Conductor, Shielded, 100% and 133% Insulation Levels
AEIC CS8, MV-90

1. SCOPE

1.1 This specification describes single conductor Rome-XLP (thermosetting crosslinked polyethylene) insulated, shielded power cables for use in circuits not exceeding 5000 volts 100% and 133% insulation levels 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 power cable applications, in wet or dry locations, including conduit, duct, direct burial, and aerial installation.

2. STANDARDS

2.1 The following standards 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 crosslinked polyethylene compound with thickness in accordance with Table 3-1 of ICEA S-97-682. The extruded layer shall be 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-XLP insulation. The average thickness of insulation shall be 90 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 unfilled XLPE.

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 of Par. 5.5.1 of ICEA S-97-682.

6.2 A serving of evenly spaced #22 AWG solid uncoated copper wires shall be applied concentrically over the extruded insulation shield. The metallic wire shielding shall meet the requirements of Par. 6.3 of ICEA.

7. SEPARATOR TAPE

7.1 A suitable separator tape shall be applied over the cable shielding system.

8. JACKET

8.1 A polyvinyl chloride jacket shall be applied overall. This jacket shall meet the requirements of Part 7 of ICEA S-97-682 and the Sunlight Resistant requirements of UL Standard 1072. The thickness of the jacket 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.

9. IDENTIFICATION

9.1 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.

10. TESTS

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