Rome Cable
CORPORATION

SPEC 3606

January 1, 2002

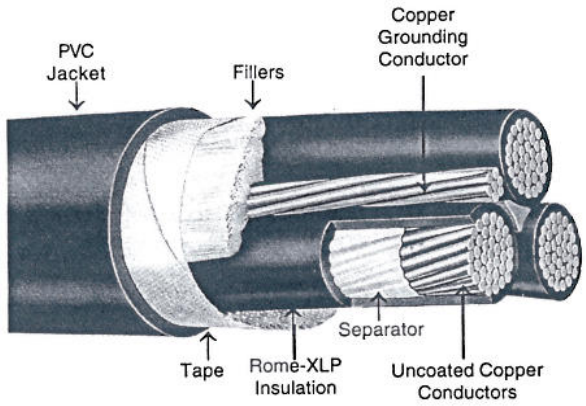
# ROME TRAY CABLE, TYPE TC

## Rome-XLP XHHW-2 Conductors, PVC Jacket, 600 Volts
## Three Conductor with Grounding Conductor

APPLICATION: As flame-retardant three conductor power cables rated 600 volts, 90°C in wet or dry locations. Specifically approved for installation in cable trays per Article 336 of the NEC. Type TC cables are approved for use in Class I and II, Division 2 hazardous locations. Cables may be installed in air, in ducts or conduits, in tray or trough, or direct buried.

STANDARDS:
1. Listed by UL as Type TC per Standard 1277 for Tray Cables.
2. Individual conductors UL listed as Type XHHW-2.
3. Overall jacket UL listed as Sunlight Resistant.
4. Cables pass UL and IEEE-383 ribbon burner flame tests.
5. Cables pass IEEE1202/CSA FT4 (70,000 BTU/hr) cable tray flame test (2AWG and larger).
6. Cables UL listed for Direct Burial.
7. Cables UL listed for Open Wiring.
8. Cables meet requirements of ICEA S-95-658/NEMA WC70.

CONSTRUCTION: Class B stranded uncoated copper conductor, Rome-XLP crosslinked polyethylene insulation, surface print phase identification. Three insulated conductors twisted with a Class B stranded uncoated copper grounding conductor and suitable fillers, cable tape, PVC jacket overall, surface printed.




**THREE CONDUCTORS WITH GROUNDING CONDUCTOR**

| Size AWG or kcmil | No. of Strands | Thickness in Mils | | Nominal Diameter Inches | Grounding Conductor Size[1] AWG | Approx. Net Wt. Lb./1000 Ft. | Ampacity* | |
|---|---|---|---|---|---|---|---|---|
| | | Insulation | Jacket | | | | 90°C | 75°C |
| 8 | 7 | 45 | 60 | .66 | 10 | 325 | 55 | 50 |
| 6 | 7 | 45 | 60 | .74 | 8 | 450 | 75 | 65 |
| 4 | 7 | 45 | 80 | .88 | 8 | 655 | 95 | 85 |
| 2 | 7 | 45 | 80 | 1.00 | 6 | 960 | 130 | 115 |
| 1 | 19 | 55 | 80 | 1.13 | 6 | 1170 | 150 | 130 |
| 1/0 | 19 | 55 | 80 | 1.22 | 6 | 1435 | 170 | 150 |
| 2/0 | 19 | 55 | 80 | 1.31 | 6 | 1730 | 195 | 175 |
| 3/0 | 19 | 55 | 80 | 1.42 | 4 | 2150 | 225 | 200 |
| 4/0 | 19 | 55 | 80 | 1.55 | 4 | 2620 | 260 | 230 |
| 250 | 37 | 65 | 110 | 1.76 | 4 | 3180 | 290 | 255 |
| 350 | 37 | 65 | 110 | 1.98 | 3 | 4290 | 350 | 310 |
| 500 | 37 | 65 | 110 | 2.26 | 2 | 5940 | 430 | 380 |
| 750 | 61 | 80 | 110 | 2.71 | 1 | 8660 | 535 | 475 |
| 1000 | 61 | 80 | 140 | 3.10 | 1/0 | 11700 | 615 | 545 |

*AMPACITY in accordance with the National Electrical Code for cables in uncovered cable tray without maintained spacing and for cable in raceway or directly buried; at the conductor temperature indicated, in wet or dry locations, 30°C ambient temperature.

NOTES: 1. Grounding conductor per UL Standard 1277 for Type TC Tray Cable.

**Information on this sheet subject to change without notice.**

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1-1-02

Specification

# ROME TRAY CABLE, TYPE TC

## Rome-XLP XHHW-2 Conductors, PVC Jacket, 600 Volts
## Three Conductor with Grounding Conductor

**1. SCOPE**

1.1 This specification describes three conductor Rome Type TC Tray Cable insulated with Rome-XLP crosslinked polyethylene and PVC jacketed overall, for use on circuits rated 600 volts. Cables are recommended for operation at 90°C maximum continuous conductor temperature in wet or dry locations. The cables are specifically approved for installation in cable trays in accordance with Article 336 of the NEC. They may be installed in air, in ducts or conduits, in tray or trough, in open wiring, or direct buried.

**2. APPLICABLE STANDARDS**

2.1 The following standards shall form a part of this specification to the extent specified herein:
- 2.1.1 Underwriters Laboratories Standard 1277 for Type TC Power and Control Tray Cables.
- 2.1.2 Underwriters Laboratories Standard 44 for Rubber Insulated Wires and Cables.
- 2.1.3 ICEA Pub. No. S-95-658 and NEMA Pub. No. WC70 for Nonshielded Power Cables Rated 2000 Volts or Less.

**3. CONDUCTORS**

3.1 Conductors shall be Class B stranded uncoated soft copper per Part 2 of ICEA S-95-658.

**4. SEPARATOR**

4.1 A suitable separator over the conductor may be used at the option of the manufacturer.

**5. INSULATION**

5.1 **Compound**: Each phase conductor shall be insulated with Rome-XLP chemically crosslinked polyethylene, meeting the requirements of ICEA S-95-658, Table 3-7, Class X-2 and Type XHHW-2 requirements of Underwriters Laboratories.

5.2 **Thickness**: The average thickness of insulation shall be as specified in UL Standard 44 for Type XHHW-2 conductors and in Table 3-4, Column B of ICEA. The minimum thickness at any point shall be not less than 90% of the specified average thickness.

**6. PHASE IDENTIFICATION**

6.1 The insulated phase conductors shall be black in color and shall be printed with the numerals "1", "2" and "3" on their surface.

**7. ASSEMBLY**

7.1 Three phase conductors shall be cabled together with a Class B stranded, uncoated copper grounding conductor and suitable nonhygroscopic fillers to make round. Length of lay shall not exceed 35 times the phase conductor diameter. The grounding conductor shall comply with the requirements of UL Standard 1277.

**8. CABLE TAPE**

8.1 The cable assembly shall be covered with a suitable tape applied with a 10% minimum lap.

**9. OVERALL JACKET**

9.1 **Compound**: Each cable shall have a PVC protective jacket applied over the taped assembly. The jacket shall meet the requirements of ICEA Table 4-1 and the Sunlight Resistant requirements of UL Standard 1277.

9.2 **Thickness**: The average jacket thickness shall be accordance with UL Standard 1277. The minimum thickness at any point shall be not less than 80% of the specified thickness.

**10. SURFACE MARKING**

10.1 Cables shall be identified by means of surface ink printing indicating manufacturer, number of conductors, size, voltage rating, and required UL information.

**11. TESTS**

11.1 Individual conductors and completed cables shall be tested in accordance with UL requirements for Type TC Power and Control Tray Cables having XHHW-2 conductors, and ICEA S-95-658.

11.2 Cables shall be capable of passing the ribbon burner cable tray flame test requirements of UL and IEEE.