

TRAY CABLE, TYPE TC (14AWG)

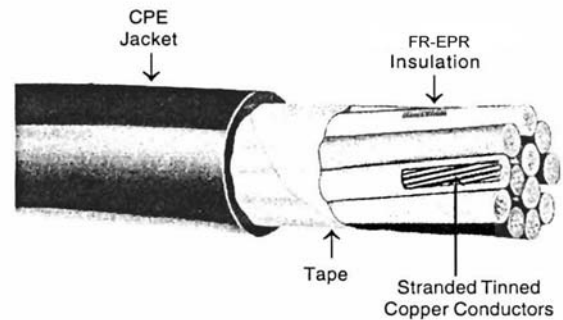
FR-EPR XHHW-2 Conductors, CPE Jacket, 600 Volts

APPLICATION: As superior flame-retardant multi-conductor control, signal or 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. Also approved for use in Class 1 remote-control and signaling circuits per Article 725 of the NEC. Type TC cable is suitable for use in Class I and II, Division 2 hazardous locations. Cables may be installed in air, in ducts or conduits, tray or trough, and are suitable for direct burial.

STANDARDS:

1. Listed by UL as Type TC per Standard 1277 for Tray Cables.
2. Individual conductors UL listed as Type XHHW-2.
3. Individual conductors pass UL VW-1 flame test.
4. Overall jacket UL listed as Sunlight Resistant and Oil Resistant II.
5. Cables UL listed for Direct Burial.
6. Cables pass IEEE 383 (70,000 BTU/hr) and ICEA T-29-520 (210,000 BTU/hr) cable tray flame tests.
7. Cables pass IEEE 1202/CSA FT4 (70,000 BTU/hr) cable tray flame test.
8. Cables meet requirements of ICEA S-73-532, NEMA WC57 for Control Cables.

CONSTRUCTION: Stranded tinned copper conductors, 30 mils FR-EPR flame-retardant ethylene-propylene-rubber insulation, color coded, two conductors flat, three or more conductors twisted with suitable fillers where necessary to make round, cable tape, CPE jacket overall, surface printed.



#14 AWG - 7 Strand

| USAWC Part # | No. of Condrs. | Overall CPE Jacket Mils | Nom. Diam. Inches | Approx. Net Wt. lbs/1000 ft | Copper Weight lbs/1000 ft |
|----------------|----------------|-------------------------|-------------------|-----------------------------|---------------------------|
| 14-02FREPCPETC | 2 | 45 | .23 x.37 | 65 | 26 |
| 14-03FREPCPETC | 3 | 45 | .39 | 90 | 39 |
| 14-04FREPCPETC | 4 | 45 | .43 | 113 | 53 |
| 14-05FREPCPETC | 5 | 45 | .47 | 137 | 66 |
| 14-06FREPCPETC | 6 | 45 | .51 | 160 | 78 |
| 14-07FREPCPETC | 7 | 45 | .51 | 180 | 92 |
| 14-08FREPCPETC | 8 | 60 | .59 | 220 | 104 |
| 14-09FREPCPETC | 9 | 60 | .63 | 250 | 118 |
| 14-10FREPCPETC | 10 | 60 | .69 | 270 | 130 |
| 14-11FREPCPETC | 11 | 60 | .69 | 290 | 143 |
| 14-12FREPCPETC | 12 | 60 | .70 | 310 | 158 |
| 14-13FREPCPETC | 13 | 60 | .72 | 335 | 169 |
| 14-14FREPCPETC | 14 | 60 | .74 | 360 | 182 |
| 14-15FREPCPETC | 15 | 60 | .78 | 380 | 195 |
| 14-16FREPCPETC | 16 | 60 | .78 | 400 | 208 |
| 14-17FREPCPETC | 17 | 60 | .82 | 420 | 221 |
| 14-18FREPCPETC | 18 | 60 | .82 | 440 | 234 |
| 14-19FREPCPETC | 19 | 60 | .82 | 460 | 250 |
| 14-20FREPCPETC | 20 | 80 | .90 | 525 | 260 |
| 14-23FREPCPETC | 23 | 80 | .95 | 595 | 299 |
| 14-25FREPCPETC | 25 | 80 | 1.00 | 640 | 323 |
| 14-27FREPCPETC | 27 | 80 | 1.02 | 680 | 351 |
| 14-29FREPCPETC | 29 | 80 | 1.03 | 720 | 377 |
| 14-31FREPCPETC | 31 | 80 | 1.07 | 760 | 403 |
| 14-32FREPCPETC | 32 | 80 | 1.10 | 780 | 416 |
| 14-37FREPCPETC | 37 | 80 | 1.14 | 890 | 466 |

NOTES: 1. All cables available with bare or covered grounding conductor.

2. Standard color coding is Method E-2 per ICEA S-73-532. This color coding method omits white and green from the color sequence.

A white or green conductor can be supplied on request, Method E-1

TRAY CABLE, TYPE TC (12AWG)

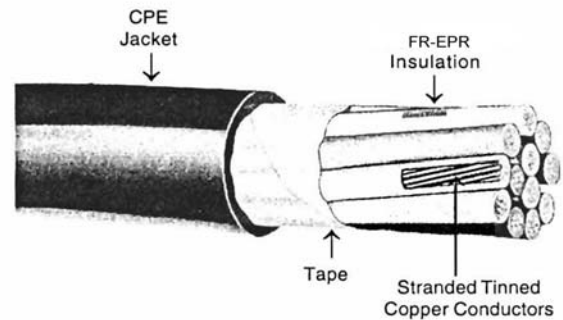
FR-EPR XHHW-2 Conductors, CPE Jacket, 600 Volts

APPLICATION: As superior flame-retardant multi-conductor control, signal or 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. Also approved for use in Class 1 remote-control and signaling circuits per Article 725 of the NEC. Type TC cable is suitable for use in Class I and II, Division 2 hazardous locations. Cables may be installed in air, in ducts or conduits, tray or trough, and are suitable for direct burial.

STANDARDS:

1. Listed by UL as Type TC per Standard 1277 for Tray Cables.
2. Individual conductors UL listed as Type XHHW-2.
3. Individual conductors pass UL VW-1 flame test.
4. Overall jacket UL listed as Sunlight Resistant and Oil Resistant II.
5. Cables UL listed for Direct Burial.
6. Cables pass IEEE 383 (70,000 BTU/hr) and ICEA T-29-520 (210,000 BTU/hr) cable tray flame tests.
7. Cables pass IEEE 1202/CSA FT4 (70,000 BTU/hr) cable tray flame test.
8. Cables meet requirements of ICEA S-73-532, NEMA WC57 for Control Cables.

CONSTRUCTION: Stranded tinned copper conductors, 30 mils FR-EPR flame-retardant ethylene-propylene-rubber insulation, color coded, two conductors flat, three or more conductors twisted with suitable fillers where necessary to make round, cable tape, CPE jacket overall, surface printed.



#12 AWG - 7 Strand

| USAWC Part # | No. of Condrs. | Overall CPE Jacket Mils | Nom. Diam. Inches | Approx. Net Wt. lbs/1000 ft | Copper Weight lbs/1000ft 1000 Ft. |
|----------------|----------------|-------------------------|-------------------|-----------------------------|-----------------------------------|
| 12-02FREPCPETC | 2 | 45 | .25 x.41 | 85 | 41 |
| 12-03FREPCPETC | 3 | 45 | .44 | 120 | 64 |
| 12-04FREPCPETC | 4 | 45 | .48 | 154 | 85 |
| 12-05FREPCPETC | 5 | 45 | .53 | 190 | 106 |
| 12-06FREPCPETC | 6 | 60 | .60 | 235 | 126 |
| 12-07FREPCPETC | 7 | 60 | .60 | 265 | 149 |
| 12-08FREPCPETC | 8 | 60 | .67 | 300 | 168 |
| 12-09FREPCPETC | 9 | 60 | .70 | 340 | 191 |
| 12-10FREPCPETC | 10 | 60 | .77 | 370 | 210 |
| 12-11FREPCPETC | 11 | 60 | .77 | 400 | 231 |
| 12-12FREPCPETC | 12 | 60 | .79 | 430 | 247 |
| 12-13FREPCPETC | 13 | 60 | .80 | 465 | 273 |
| 12-14FREPCPETC | 14 | 60 | .83 | 500 | 294 |
| 12-15FREPCPETC | 15 | 80 | .92 | 535 | 315 |
| 12-16FREPCPETC | 16 | 80 | .92 | 570 | 336 |
| 12-17FREPCPETC | 17 | 80 | .96 | 605 | 357 |
| 12-18FREPCPETC | 18 | 80 | .96 | 640 | 378 |
| 12-19FREPCPETC | 19 | 80 | .96 | 675 | 391 |
| 12-20FREPCPETC | 20 | 80 | 1.01 | 710 | 420 |
| 12-23FREPCPETC | 23 | 80 | 1.06 | 815 | 483 |
| 12-25FREPCPETC | 25 | 80 | 1.12 | 890 | 515 |
| 12-27FREPCPETC | 27 | 80 | 1.15 | 960 | 567 |
| 12-29FREPCPETC | 29 | 80 | 1.16 | 1030 | 609 |
| 12-31FREPCPETC | 31 | 80 | 1.21 | 1100 | 651 |
| 12-32FREPCPETC | 32 | 80 | 1.23 | 1135 | 672 |
| 12-37FREPCPETC | 37 | 80 | 1.28 | 1310 | 762 |

NOTES: 1. All cables available with bare or covered grounding conductor.

2. Standard color coding is Method E-2 per ICEA S-73-532. This color coding method omits white and green from the color sequence.

A white or green conductor can be supplied on request, Method E-1

TRAY CABLE, TYPE TC (10AWG)

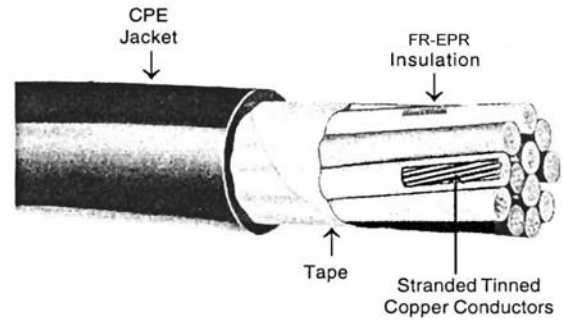
FR-EPR XHHW-2 Conductors, CPE Jacket, 600 Volts

APPLICATION: As superior flame-retardant multi-conductor control, signal or 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. Also approved for use in Class 1 remote-control and signaling circuits per Article 725 of the NEC. Type TC cable is suitable for use in Class I and II, Division 2 hazardous locations. Cables may be installed in air, in ducts or conduits, tray or trough, and are suitable for direct burial.

STANDARDS:

1. Listed by UL as Type TC per Standard 1277 for Tray Cables.
2. Individual conductors UL listed as Type XHHW-2.
3. Individual conductors pass UL VW-1 flame test.
4. Overall jacket UL listed as Sunlight Resistant and Oil Resistant II.
5. Cables UL listed for Direct Burial.
6. Cables pass IEEE 383 (70,000 BTU/hr) and ICEA T-29-520 (210,000 BTU/hr) cable tray flame tests.
7. Cables pass IEEE 1202/CSA FT4 (70,000 BTU/hr) cable tray flame test.
8. Cables meet requirements of ICEA S-73-532, NEMA WC57 for Control Cables.

CONSTRUCTION: Stranded tinned copper conductors, 30 mils FR-EPR flame-retardant ethylene-propylene-rubber insulation, color coded, two conductors flat, three or more conductors twisted with suitable fillers where necessary to make round, cable tape, CPE jacket overall, surface printed.



#10 AWG - 7 Strand

| USAWC Part # | No. of Condrs. | Overall CPE Jacket Mils | Nom. Diam. Inches | Approx. Net Wt. lbs/1000 ft | Copper Weight lbs/1000 ft |
|----------------|----------------|-------------------------|-------------------|-----------------------------|---------------------------|
| 10-02FREPCPETC | 2 | 45 | .28 x.46 | 117 | 65 |
| 10-03FREPCPETC | 3 | 45 | .49 | 167 | 100 |
| 10-04FREPCPETC | 4 | 60 | .57 | 230 | 134 |
| 10-05FREPCPETC | 5 | 60 | .62 | 280 | 167 |
| 10-06FREPCPETC | 6 | 60 | .67 | 325 | 192 |
| 10-07FREPCPETC | 7 | 60 | .67 | 370 | 234 |
| 10-08FREPCPETC | 8 | 60 | .74 | 415 | 256 |
| 10-09FREPCPETC | 9 | 60 | .79 | 455 | 295 |
| 10-10FREPCPETC | 10 | 80 | .90 | 550 | 320 |
| 10-11FREPCPETC | 11 | 80 | .90 | 595 | 352 |
| 10-12FREPCPETC | 12 | 80 | .93 | 640 | 402 |
| 10-13FREPCPETC | 13 | 80 | .95 | 685 | 416 |
| 10-14FREPCPETC | 14 | 80 | .97 | 725 | 448 |
| 10-15FREPCPETC | 15 | 80 | 1.03 | 775 | 480 |
| 10-16FREPCPETC | 16 | 80 | 1.03 | 820 | 512 |
| 10-17FREPCPETC | 17 | 80 | 1.08 | 865 | 544 |
| 10-18FREPCPETC | 18 | 80 | 1.08 | 905 | 576 |
| 10-19FREPCPETC | 19 | 80 | 1.08 | 965 | 608 |
| 10-20FREPCPETC | 20 | 80 | 1.14 | 1010 | 640 |
| 10-23FREPCPETC | 23 | 80 | 1.19 | 1145 | 736 |
| 10-25FREPCPETC | 25 | 80 | 1.26 | 1235 | 800 |
| 10-27FREPCPETC | 27 | 80 | 1.29 | 1325 | 864 |
| 10-29FREPCPETC | 29 | 80 | 1.31 | 1415 | 928 |
| 10-31FREPCPETC | 31 | 80 | 1.36 | 1505 | 992 |
| 10-32FREPCPETC | 32 | 80 | 1.39 | 1550 | 1024 |
| 10-37FREPCPETC | 37 | 80 | 1.44 | 1775 | 1184 |

- NOTES: 1. All cables available with bare or covered grounding conductor.
 2. Standard color coding is Method E-2 per ICEA S-73-532. This color coding method omits white and green from the color sequence.
 A white or green conductor can be supplied on request, Method E-1

Specification

TRAY CABLE, TYPE TC

FR-EPR XHHW-2 Conductors, CPE Jacket, 600 Volts

1. SCOPE

- 1.1 This specification describes multi-conductor Type TC Tray Cable insulated with FR-EPR flame-retardant ethylene-propylene-rubber and CPE 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 and may also be used in Class 1 remote-control and signaling circuits per Article 725 of the Code. Cables may be installed in air, in ducts or conduits, in tray or trough, and are also suitable for direct burial.

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-73-532, NEMA Pub. No. WC57, Control Cables.

3. CONDUCTORS

- 3.1 Conductors shall be Class B stranded tinned soft copper conforming to Part 2 of ICEA. Conductor sizes shall be 14 AWG through 10 AWG.

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 conductor shall be insulated with FR-EPR flame-retardant ethylene-propylene-rubber, meeting the requirements of ICEA S-73-532, Table 3-2 (Type II-EP Rubber) and Underwriters Laboratories requirements for Type XHHW-2, VW-1.
- 5.2 Thickness: The average thickness of insulation shall be 30 mils. The minimum thickness at any point shall be not less than 90% of the specified average thickness.

6. CIRCUIT IDENTIFICATION

- 6.1 Circuit identification shall consist of Method 1 color coding for National Electrical Code applications in accordance with ICEA S-73-532, Appendix E, Table E-2. Cables shall not contain a green or white conductor unless specifically ordered (TECH 1006 Option A).

7. ASSEMBLY

- 7.1 For three conductors or more, the insulated color coded conductors shall be cabled together with nonhygroscopic fillers, when necessary to make round. The cable assembly shall be covered with a suitable tape applied with a 10% minimum lap. Two conductor cable shall be flat without separator tape, unless otherwise specified.

8. OVERALL JACKET

- 8.1 Compound: Each cable shall have a Chlorinated Polyethylene (CPE) protective jacket applied over the assembly. The jacket shall meet the requirements of ICEA S-73-532, Table 4-2 (CPE-TP) and the Sunlight Resistant and Oil Resistant II requirements of UL Standard 1277.
- 8.2 Thickness: The average jacket thickness shall be in accordance with UL Standard 1277. The minimum thickness at any point shall be not less than 80% of the specified average thickness.

9. SURFACE MARKING

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

10. TESTS

- 10.1 Individual conductors and completed cables shall be tested in accordance with UL requirements for Type TC Power and Control Tray Cables having XHHW-2, VW-1 insulated conductors, and ICEA S-73-532.
- 10.2 Cables shall be capable of passing the ribbon burner cable tray flame test requirements of UL and IEEE 1202/CSA FT4.