

# TRAY CABLE, TYPE TC

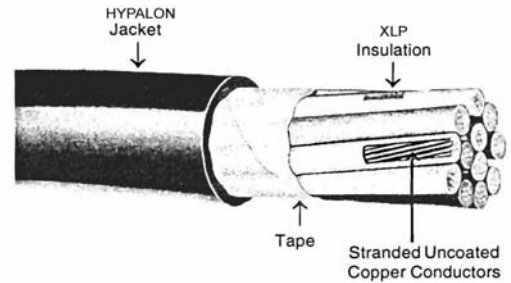
XLP Insulation, Hypalon<sup>®</sup> Jacket, 600 Volts

**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, Division 2 hazardous locations. Cables may be installed in air, in ducts or conduits, in tray or trough, and are suitable for direct burial.

**STANDARDS:**

1. Listed by UL as Type TC per Standard 1277 for Tray Cables.
2. Cables UL listed for Direct Burial (14-10 AWG).
3. Individual conductors pass UL VW-1 flame test.
4. Individual conductors UL listed as Type XHHW (14-10 AWG) or 90°C rated conductors (16 AWG).
5. Overall jacket UL listed as Sunlight Resistant and Oil Resistant II.
6. Cables pass IEEE Standard 383 ribbon burner test and ICEA 210,000 BTU/hour test.
7. Cables meet requirements of ICEA S-95-658, NEMA WC70 for Control Cables.

**CONSTRUCTION:** Stranded uncoated copper conductors, 30 mils FR-XLP flame-retardant crosslinked polyethylene insulation, color coded, two conductors flat, three or more conductors twisted with suitable fillers where necessary to make round, cable tape, Hypalon<sup>®</sup> jacket overall, surface printed.



**# 10 AWG-7 Strand**

USAWC Part #	No. of Condrs.	Overall Jacket Mils	Nom. Diam. Inches	Approx. Net Wt. lbs/1000 ft	Copper Weight lbs/1000 ft
10-02XHTC	2	45	.46	126	67
10-03XHTC	3	45	.49	176	100
10-04XHTC	4	60	.56	240	134
10-05XHTC	5	60	.62	291	167
10-07XHTC	7	60	.67	376	234
10-09XHTC	9	60	.77	456	302
10-12XHTC	12	80	.91	636	404

**# 12 AWG-7 Strand**

12-02XHTC	2	45	.41	98	51
12-03XHTC	3	45	.44	127	64
12-04XHTC	4	45	.48	160	85
12-05XHTC	5	45	.52	194	106
12-07XHTC	7	60	.60	264	168
12-09XHTC	9	60	.70	345	191
12-12XHTC	12	60	.78	435	255
12-19XHTC	19	80	.96	690	403
12-25XHTC	25	80	1.10	858	515
12-30XHTC	30	80	1.18	997	618
12-37XHTC	37	80	1.27	1393	741

**# 14 AWG-7 Strand**

14-02XHTC	2	45	.37	75	26
14-03XHTC	3	45	.39	95	39
14-04XHTC	4	45	.43	118	53
14-05XHTC	5	45	.47	143	66
14-07XHTC	7	45	.51	179	92
14-09XHTC	9	60	.62	249	118
14-12XHTC	12	60	.70	317	158
14-19XHTC	19	60	.82	467	250
14-25XHTC	25	80	1.00	632	330
14-30XHTC	30	80	1.05	731	398
14-37XHTC	37	80	1.13	899	490

- Notes: 1. All cables available with bare or covered grounding conductor.  
 2. Standard color coding is Method E-2 for NEC Applications 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-XLP Insulation, Hypalon® Jacket, 600 Volts

#### 1. SCOPE

- 1.1 This specification describes multi-conductor Type TC Tray Cable insulated with FR-XLP flame-retardant crosslinked polyethylene and Hypalon 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-95-658, NEMA Pub. No. WC70, Control Cables.

#### 3. CONDUCTORS

- 3.1 Conductors shall be Class B stranded uncoated soft copper conforming to Part 2 of ICEA. Conductor sizes shall be 16 AWG through 10 AWG. A nonhygroscopic separator may be used over the conductors at the option of the manufacturer.

#### 4. INSULATION

- 4.1 Compound: Each conductor shall be insulated with FR-XLP flame-retardant chemically crosslinked polyethylene, meeting the requirements of ICEA S-73-532, Table 3-2 (Type I-XLPE) and Type XHHW-2, VW-1 requirements of Underwriter's Laboratories.
- 4.2 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.

#### 5. CIRCUIT IDENTIFICATION

- 5.1 Circuit identification shall consist of Method 1 color coding for National Electric 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.

#### 6. ASSEMBLY

- 6.1 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.

#### 7. OVERALL JACKET

- 7.1 Compound: Each cable shall have a Hypalon (Chlorosulfonated Polyethylene) protective jacket applied over the assembly. The jacket shall meet the requirements of ICEA S-95-658 and the Sunlight Resistant and Oil II requirements of UL Standard 1277.
- 7.2 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.

#### 8. SURFACE MARKING

- 8.1 Cables shall be identified by means of surface ink printing indicating: Type TC, (UL), 600v, No. of conductors, Size, XHHW-2 (or 90°C) Condrs., Oil Res II, Sun. Res., Direct Burial, E57349.

#### 9. TESTS

- 9.1 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.
- 9.2 Cables shall be capable of passing the ribbon burner cable tray flame test requirements of UL and IEEE.