

TRAY CABLE, TYPE TC (16AWG)

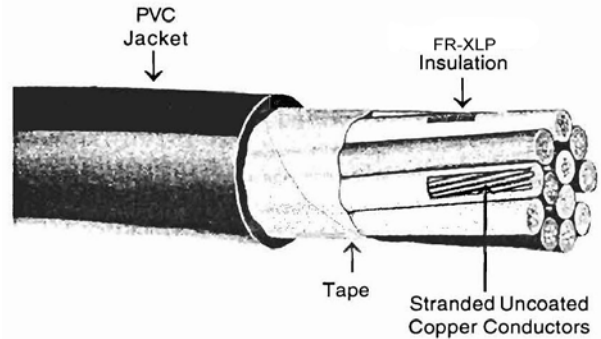
FR-XLP Insulation, PVC Jacket, 600 Volts

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 tray 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, 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.
3. Individual conductors pass UL VW-1 flame test.
4. Individual conductors UL listed as Type XHHW-2 (14-10 AWG) or 90°C rated conductors (16 AWG).
5. Overall jacket UL listed as Sunlight Resistant.
6. Cables with grounding conductor UL listed for Open Wiring.
7. Cables pass IEEE Standard 383 ribbon burner test and ICEA 210,000 BTU/hr test.
8. Cables pass IEEE-1202/CSA FT4 (70,000 BTU/hr) cable tray flame test (14-10 AWG).
9. Cables meet requirements of ICEA S-73-532, NEMA WC57 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, PVC jacket overall, surface printed.



16 AWG-7 Strand

USAWC Part #	No. of Condrs.	Overall PVC Jacket Mils	Nom. Diam. Inches	Approx. Net Wt. lbs/1000 ft	Copper Weight lbs/1000 ft
16-02XPTC	2	45	.23 x .35	65	16
16-03XPTC	3	45	.37	70	22
16-04XPTC	4	45	.39	87	29
16-05XPTC	5	45	.44	105	37
16-06XPTC	6	45	.48	120	44
16-07XPTC	7	45	.48	140	51
16-08XPTC	8	45	.51	155	59
16-09XPTC	9	45	.58	200	66
16-10XPTC	10	60	.63	230	74
16-11XPTC	11	60	.63	240	81
16-12XPTC	12	60	.67	255	88
16-13XPTC	13	60	.67	270	96
16-14XPTC	14	60	.68	290	103
16-15XPTC	15	60	.71	315	110
16-16XPTC	16	60	.71	325	118
16-17XPTC	17	60	.75	350	125
16-18XPTC	18	60	.75	360	132
16-19XPTC	19	60	.75	370	140
16-20XPTC	20	60	.79	400	147
16-23XPTC	23	60	.82	450	169
16-25XPTC	25	80	.91	530	184
16-27XPTC	27	80	.93	560	199
16-29XPTC	29	80	.94	585	213
16-31XPTC	31	80	.98	625	228
16-32XPTC	32	80	.99	650	235
16-37XPTC	37	80	1.03	720	272

Notes: 1. Cables designated (w/g) contain an additional bare copper grounding conductor, same size as circuit conductors, and are UL listed.
 2. Standard color coding is Method E-2 of ICEA S-72-532. 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 (14AWG)

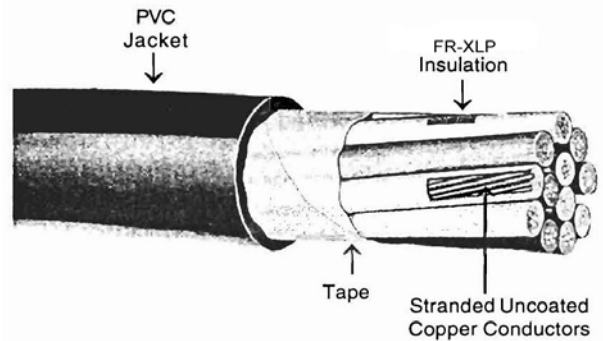
FR-XLP Insulation, PVC Jacket, 600 Volts

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 tray 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, 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.
3. Individual conductors pass UL VW-1 flame test.
4. Individual conductors UL listed as Type XHHW-2 (14-10 AWG) or 90°C rated conductors (16 AWG).
5. Overall jacket UL listed as Sunlight Resistant.
6. Cables with grounding conductor UL listed for Open Wiring.
7. Cables pass IEEE Standard 383 ribbon burner test and ICEA 210,000 BTU/hr test.
8. Cables pass IEEE-1202/CSA FT4 (70,000 BTU/hr) cable tray flame test (14-10 AWG).
9. Cables meet requirements of ICEA S-73-532, NEMA WC57 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, PVC jacket overall, surface printed.



14 AWG-7 Strand

USAWC Part #	No. of Condrs.	Overall PVC Jacket Mils	Nom. Diam. Inches	Approx. Net Wt. lbs/1000 ft	Copper Weight lbs/1000 ft
14-02XPTC	2	45	.23 x .37	65	25
14-03XPTC	3	45	.39	90	40
14-04XPTC	4	45	.43	113	53
14-05XPTC	5	45	.47	137	66
14-06XPTC	6	45	.51	160	78
14-07XPTC	7	45	.51	180	93
14-08XPTC	8	60	.59	220	104
14-09XPTC	9	60	.63	250	119
14-10XPTC	10	60	.69	270	130
14-11XPTC	11	60	.69	290	143
14-12XPTC	12	60	.70	310	159
14-13XPTC	13	60	.72	335	169
14-14XPTC	14	60	.74	360	182
14-15XPTC	15	60	.78	380	195
14-16XPTC	16	60	.78	400	208
14-17XPTC	17	60	.82	420	221
14-18XPTC	18	60	.82	440	234
14-19XPTC	19	60	.82	460	252
14-20XPTC	20	80	.90	525	260
14-23XPTC	23	80	.95	595	299
14-25XPTC	25	80	1.00	640	323
14-27XPTC	27	80	1.02	680	351
14-29XPTC	29	80	1.03	720	377
14-31XPTC	31	80	1.07	760	403
14-32XPTC	32	80	1.10	780	416
14-37XPTC	37	80	1.14	890	490

Notes: 1. Cables designated (w/g) contain an additional bare copper grounding conductor, same size as circuit conductors, and are UL listed.
 2. Standard color coding is Method E-2 of ICEA S-72-532. 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)

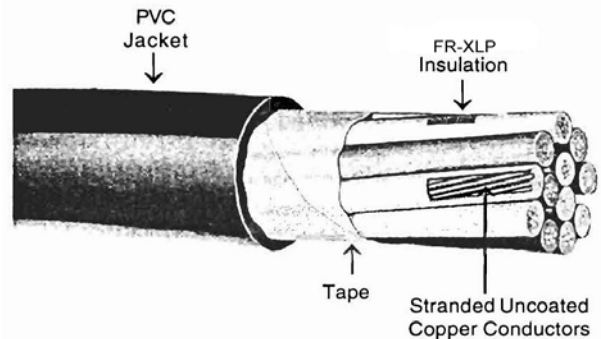
FR-XLP Insulation, PVC Jacket, 600 Volts

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 tray 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, 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.
3. Individual conductors pass UL VW-1 flame test.
4. Individual conductors UL listed as Type XHHW-2 (14-10 AWG) or 90°C rated conductors (16 AWG).
5. Overall jacket UL listed as Sunlight Resistant.
6. Cables with grounding conductor UL listed for Open Wiring.
7. Cables pass IEEE Standard 383 ribbon burner test and ICEA 210,000 BTU/hr test.
8. Cables pass IEEE-1202/CSA FT4 (70,000 BTU/hr) cable tray flame test (14-10 AWG).
9. Cables meet requirements of ICEA S-73-532, NEMA WC57 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, PVC jacket overall, surface printed.



12 AWG-7 Strand

USAWC Part #	No. of Condrs.	Overall PVC Jacket Mils	Nom. Diam. Inches	Approx. Net Wt. lbs/1000 ft	Copper Weight lbs/1000 ft
12-02XPTC	2	45	.25 x.41	85	41
12-03XPTC	3	45	.44	120	65
12-03XPBTC	3 w/g	45	.44	143	86
12-04XPTC	4	45	.48	154	86
12-05XPTC	5	45	.53	190	108
12-06XPTC	6	60	.60	235	126
12-07XPTC	7	60	.60	265	150
12-08XPTC	8	60	.67	300	168
12-09XPTC	9	60	.70	340	193
12-10XPTC	10	60	.77	370	210
12-11XPTC	11	60	.77	400	231
12-12XPTC	12	60	.79	430	258
12-13XPTC	13	60	.80	465	273
12-14XPTC	14	60	.83	500	294
12-15XPTC	15	80	.92	535	315
12-16XPTC	16	80	.92	570	336
12-17XPTC	17	80	.96	605	357
12-18XPTC	18	80	.96	640	378
12-19XPTC	19	80	.96	675	403
12-20XPTC	20	80	1.01	710	420
12-23XPTC	23	80	1.06	815	483
12-25XPTC	25	80	1.12	890	515
12-27XPTC	27	80	1.15	960	567
12-29XPTC	29	80	1.16	1030	609
12-31XPTC	31	80	1.21	1100	651
12-32XPTC	32	80	1.23	1135	672
12-37XPTC	37	80	1.28	1310	741

Notes: 1. Cables designated (w/g) contain an additional bare copper grounding conductor, same size as circuit conductors, and are UL listed.
 2. Standard color coding is Method E-2 of ICEA S-72-532. 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)

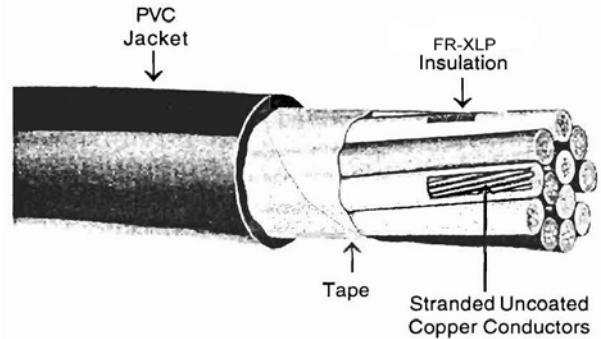
FR-XLP Insulation, PVC Jacket, 600 Volts

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 tray 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, 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.
3. Individual conductors pass UL VW-1 flame test.
4. Individual conductors UL listed as Type XHHW-2 (14-10 AWG) or 90°C rated conductors (16 AWG).
5. Overall jacket UL listed as Sunlight Resistant.
6. Cables with grounding conductor UL listed for Open Wiring.
7. Cables pass IEEE Standard 383 ribbon burner test and ICEA 210,000 BTU/hr test.
8. Cables pass IEEE-1202/CSA FT4 (70,000 BTU/hr) cable tray flame test (14-10 AWG).
9. Cables meet requirements of ICEA S-73-532, NEMA WC57 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, PVC jacket overall, surface printed.



10 AWG-7 Strand

USAWC Part #	No. of Condrs.	Overall PVC Jacket Mils	Nom. Diam. Inches	Approx. Net Wt. lbs/1000 ft	Copper Weight lbs/1000 ft
10-02XPTC	2	45	.28 x.46	117	67
10-03XPTC	3	45	.49	167	101
10-03XPGTC	3 w/g	45	.49	205	135
10-04XPTC	4	60	.57	230	135
10-05XPTC	5	60	.62	280	167
10-06XPTC	6	60	.67	325	192
10-07XPTC	7	60	.67	370	234
10-08XPTC	8	60	.74	415	256
10-09XPTC	9	60	.79	455	295
10-10XPTC	10	80	.90	550	320
10-11XPTC	11	80	.90	595	352
10-12XPTC	12	80	.93	640	402
10-13XPTC	13	80	.95	685	416
10-14XPTC	14	80	.97	725	448
10-15XPTC	15	80	1.03	775	480
10-16XPTC	16	80	1.03	820	512
10-17XPTC	17	80	1.08	865	544
10-18XPTC	18	80	1.08	905	576
10-19XPTC	19	80	1.08	965	608
10-20XPTC	20	80	1.14	1010	640
10-23XPTC	23	80	1.19	1145	736
10-25XPTC	25	80	1.26	1235	800
10-27XPTC	27	80	1.29	1325	864
10-29XPTC	29	80	1.31	1415	928
10-31XPTC	31	80	1.36	1505	992
10-32XPTC	32	80	1.39	1550	1024
10-37XPTC	37	80	1.44	1775	1184

Notes: 1. Cables designated (w/g) contain an additional bare copper grounding conductor, same size as circuit conductors, and are UL listed.

2. Standard color coding is Method E-2 of ICEA S-72-532. 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, PVC 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 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 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. (Cables with ground are UL listed as Open Wiring per NEC 336.10(6)).

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 uncoated soft copper conforming to Part 2 of ICEA. Conductor sizes shall be 14 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 Two conductor cable shall be flat without separator tape, unless otherwise specified. 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. Where indicated, a bare copper grounding conductor of the same size as the circuit conductors shall be included in the assembly.

7. OVERALL JACKET

- 7.1 Compound: Each cable shall have a PVC protective jacket applied over the assembly. The jacket shall meet the requirements of Part 4 of ICEA S-73-532, Table 4-2, and the Sunlight Resistant 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., Sun. Res., Direct Burial. Sizes 14-12 AWG with ground shall be printed Open Wiring.

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