

## ROME TECK-HV MINUS 40C, HL, FT4, 15kV 133% IL

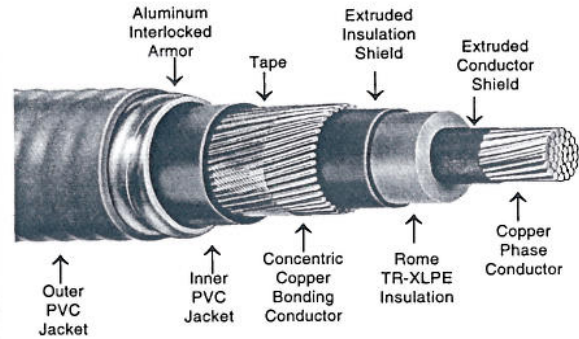
Single Conductor, Rome TR-XLPE Insulation  
 Inner PVC Jacket, Aluminum Armor, Outer PVC Jacket

**APPLICATION:** As flame retardant single conductor power cable rated 15kV 133% IL, 90°C in wet or dry locations. Widely used in the pulp and paper, petroleum, petrochemical, mining industries where cables with outstanding resistance to mechanical abuse, chemical attack and high reliability are required. Suitable for use in direct burial, open wiring, ventilated flexible cable ways, and in non-ventilated, ventilated or ladder type cable trays. Inner and outer PVC jacket have low acid gas evolution and low flame spread properties along with excellent low temperature properties.

**STANDARDS:**

1. Listed as Power Cable per CSA Std. C68.3.
2. Passes FT-4 70000 BTU/hr cable tray flame test of CSA Std. C22.2 No. 0.3.
3. Complies with Acid Gas Evolution Test of Ontario Hydro Provisional Spec L-891 SM-77. Less than 14% acid gas evolution.
4. HL approved for use in hazardous locations per CSA Std. C22.2 No. 174.

**CONSTRUCTION:** Single conductor Class B stranded uncoated compact copper, extruded conductor shield, Rome TR-XLPE (tree-retardant crosslinked polyethylene) insulation, extruded insulation shield, concentric bare copper bonding conductor, tape, PVC inner jacket, aluminum interlocked armor, PVC outer jacket, surface printed.



Size AWG or kcmil		Thickness		Diameters										Weight		AMP*
Phase	Bonding (Grounding) Conductor	Insul. Mils	Inner Jkt. Mils	Insulation		Insulation Shield		Inner Jkt.		Armor		Outer Jacket		lb/k ft.	kg/km	
				In.	mm	In.	mm	In.	mm	In.	mm	In.	mm			
1	4	220	80	.793	20.1	.863	21.9	1.13	28.7	1.33	33.8	1.44	36.6	1170	1741	225
1/0	4	220	80	.829	21.1	.899	22.8	1.17	29.7	1.37	34.8	1.48	37.6	1255	1868	259
2/0	4	220	80	.870	22.1	.940	23.9	1.21	30.7	1.41	35.8	1.52	38.6	1380	2054	298
3/0	3	220	80	.919	23.3	.989	25.1	1.26	32.0	1.46	37.1	1.57	39.9	1560	2322	343
4/0	3	220	80	.972	24.7	1.04	26.4	1.31	33.3	1.51	38.4	1.64	41.7	1740	2590	397
250	2	220	80	1.03	26.2	1.12	28.4	1.39	35.3	1.59	40.4	1.72	43.7	2000	2976	440
300	2	220	80	1.08	27.4	1.17	29.7	1.44	36.6	1.64	41.7	1.77	45.0	2240	3334	491
350	1	220	80	1.12	28.4	1.21	30.7	1.50	38.1	1.74	44.2	1.86	47.2	2480	3691	543
400	1	220	80	1.17	29.7	1.26	32.0	1.56	39.6	1.79	45.5	1.91	48.5	2750	4093	588
500	1/0	220	80	1.24	31.5	1.33	33.8	1.63	41.4	1.86	47.2	1.99	50.6	3170	4718	678
600	1/0	220	110	1.38	35.1	1.47	37.3	1.82	46.2	2.05	52.1	2.18	55.4	3690	5492	756
750	2/0	220	110	1.48	37.6	1.57	39.9	1.95	49.5	2.18	55.4	2.31	58.7	4390	6533	872
1000	2/0	220	110	1.63	41.4	1.74	44.2	2.12	53.8	2.35	59.7	2.51	63.8	5440	8096	1040

\*AMPACITY is based upon ICEA P-46-426/IEEE S135-1, 90°C, conductor temperature, 40°C ambient in free air or cable tray with a minimum of one cable diameter spacing and open circuited shield/armor. Agreement from the electrical inspection department is required for use of these ampacities. See CEC Part 1, Appendix B, Note to Rule 4-004.

- NOTES:**
1. Connectors used on single conductor cables must be non-magnetic.
  2. The bonding conductor consists of concentric bare copper wires applied over the insulation shield. Total area of the bonding conductor is equivalent to the size indicated in table.

Information on this sheet subject to change without notice.

## Specification

### ROME TECK- HV MINUS 40C, HL, FT4, 15kV 133% IL

#### Single Conductor, Rome TR-XLPE Insulation

#### Inner PVC Jacket, Aluminum Armor, Outer PVC Jacket

#### 1. SCOPE

- 1.1 This specification describes single conductor Rome TR-XLPE insulated, PVC inner jacketed, aluminum interlocked armored, PVC outer jacketed TECK-HV cable for use in circuits not exceeding 15kV 133% insulation level. The cables may be operated at conductor temperatures of 90°C for normal operation, 130°C for emergency overload conditions and 250°C for short circuit conditions. Cables are suitable for use indoors or outdoors, in open wiring, ventilated flexible cableways, cable trays and direct burial installations in commercial or industrial applications.

#### 2. STANDARDS

- 2.1 The following standards shall form a part of this specification to the extent specified herein:
  - 2.1.1 CSA Std C68.3 Power Cable.
  - 2.1.2 CSA Std C22.2 No. 0.3 Clause 4.11.4 FT-4 flame test.
  - 2.1.3 Ontario Hydro Provisional Spec L891SM-77.
  - 2.1.4 CSA Std C22.2 No. 174 Cables and Cable Glands for Use In Hazardous Locations.

#### 3. CONDUCTORS

- 3.1 Shall be Class B stranded annealed uncoated compact copper conforming to CSA C68.3.

#### 4. CONDUCTOR SHIELD

- 4.1 Shall be an extruded conducting crosslinked polyethylene compound with a thickness in accordance with CSA C68.3, Table 2.

#### 5. INSULATION

- 5.1 Shall be Rome TR-XLPE tree-retardant crosslinked polyethylene meeting the requirements of CSA C68.3. Average thickness shall be 220 mils. Minimum thickness at any point shall be not less than 90% of the specified average thickness.

#### 6. INSULATION SHIELD

- 6.1 Over the insulation shall be applied an extruded conducting thermosetting insulation shield. It shall be in intimate contact with the insulation and shall be free-stripping leaving no conducting particles or other residue on the insulation surface. The thickness of this layer shall comply with CSA C68.3, Table 6.

#### 7. BONDING CONDUCTOR

- 7.1 A bonding or grounding conductor consisting of concentric bare copper wires shall be helically applied over the insulation shield. The bonding conductor shall comply with Table 9 and Clause 4.5 of CSA C68.3. A nonhygroscopic cable tape shall be applied over the concentric wires.

#### 8. INNER PVC JACKET

- 8.1 Shall be PVC meeting the requirements of C68.3, including requirements for low temperature classification of -40C. Thickness of jacket shall be as specified in C68.3.

#### 9. INTERLOCKED ARMOR

- 9.1 An aluminum alloy interlocked armor shall be applied over the inner PVC jacket meeting the requirements of C68.3, Clause 4.8.2.

#### 10. OUTER PVC JACKET

- 10.1 Cables shall have an overall red PVC jacket meeting the requirements of C68.3, including requirements for low temperature classification of -40C. Thickness of jacket shall be as specified in C68.3, Table 22.

#### 11. IDENTIFICATION

- 11.1 Cable shall be surface ink printed with a legend identifying the manufacturer, size, voltage rating and insulation level, TECK-HV, minus 40C, TR-XLPE, FT4, HL, power cable symbol, year of manufacture and length markings in meters.

#### 12. TESTS

- 12.1 Completed cable shall be meet requirements for 15kV cable in CSA C68.3, including minus 40C low temperature classification, FT4 flame test requirements of C22.2. No. 0.3, HL requirements of C22.2 No. 174 and the acid gas evolution test of OH L891 SM-77.