

ROME HL TECK 90 MINUS 40°C, FT4, 5000 VOLTS

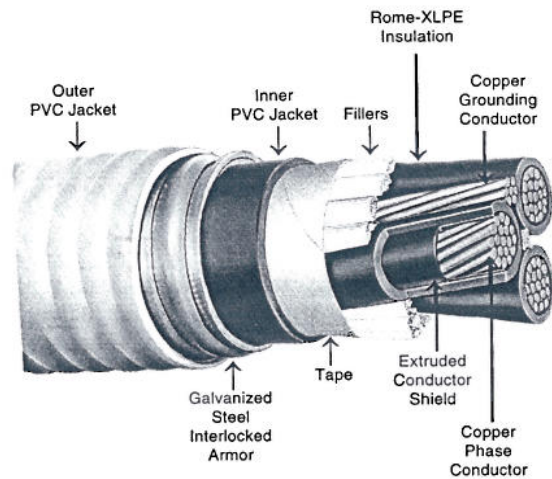
3 Conductor, Rome-XLPE Insulation (RW90), Nonshielded, Vertical Support (VS)
Ribbed Inner PVC Jacket, Steel Armor, Outer PVC Jacket

APPLICATION: As flame retardant three conductor power cable rated 5000 volts, 100% and 133% insulation level, 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 cableways, and in non-ventilated, ventilated or ladder type cable trays. Ribbed inner jacket enables armor to grip core tightly for vertical support installations. 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 TECK 90 MINUS 40°C per CSA Std. C22.2 No. 131.
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: Three conductors of Class B stranded uncoated compact copper, extruded conductor shield, Rome-XLPE crosslinked polyethylene insulation, color or number coded. Three conductors twisted together with one uncoated copper grounding conductor and suitable fillers, tape, ribbed PVC inner jacket, galvanized steel interlocked armor, PVC outer jacket, surface printed.



Size AWG or kcmil		Thickness		Diameters						Weight		AMP*
Phase	Ground	Insul.	Inner Jkt.	Inner Jkt.		Armor		Outer Jkt.		lb/k ft.	kg/km	
		Mils	Mils	In.	mm	In.	mm	In.	mm			
2	6	90	80	1.41	35.8	1.48	37.6	1.59	40.4	2040	3036	120
1	6	90	80	1.57	39.9	1.65	41.9	1.78	45.2	2480	3690	140
1/0	6	90	80	1.66	42.2	1.76	44.7	1.89	48.0	2840	4227	155
2/0	6	90	80	1.75	44.4	1.86	47.2	1.99	50.6	3320	4941	185
3/0	4	90	80	1.86	47.2	1.96	49.8	2.09	53.1	3750	5581	210
4/0	4	90	110	2.03	51.6	2.14	54.4	2.27	57.7	4570	6801	235
250	4	90	110	2.15	54.6	2.25	57.2	2.41	61.2	5165	7687	265
300	4	90	110	2.26	57.4	2.37	60.2	2.53	64.3	6100	9078	295
350	3	90	110	2.35	59.7	2.46	62.5	2.62	66.6	6575	9785	325
400	3	90	110	2.45	62.2	2.56	65.0	2.72	69.1	7315	10886	345
500	3	90	110	2.62	66.6	2.73	69.3	2.89	73.4	8220	12233	395
600	2	90	110	2.91	73.9	3.01	76.4	3.18	80.8	10300	15328	455
750	2	90	140	3.19	81.0	3.29	83.6	3.48	88.4	11720	17442	500
1000	1	90	140	3.51	89.2	3.62	91.9	3.80	96.5	14500	21579	585

*AMPACITY in accordance with Rule 12-2212 of Canadian Electrical Code, Part 1, for installation in air or ventilated tray, with maintained spacing, 90°C conductor temperature, 30°C ambient.

NOTES:

1. Cable weight based upon steel armor. Aluminum armor available on request.
2. Standard phase identification is black, red, blue for 2 AWG, black with printed numbers on larger sizes.
3. Standard color of outer jacket is orange. Black jackets may also be supplied.
4. Inner jacket diameter is over the ribs.

Specification

ROME HL TECK 90 MINUS 40°C, FT4, 5000 VOLTS

3 Conductor, Rome-XLPE Insulation (RW90), Nonshielded, Vertical Support (VS)
Ribbed Inner PVC Jacket, Steel Armor, Outer PVC Jacket

1. SCOPE

- 1.1 This specification describes three conductor Rome TECK 90 MINUS 40°C 5000 Volt Nonshielded cable with Rome-XLPE crosslinked polyethylene insulation, ribbed PVC inner jacket, galvanized steel interlocked armor, and PVC outer jacket. The cables may be used in circuits not exceeding 5000 volts 100% and 133% insulation level, at temperatures of 90°C in wet or dry locations. Cables are intended for use indoors or outdoors, in open wiring, ventilated flexible cableways, cable trays and direct burial installations in commercial or industrial applications. Ribbed inner PVC jacket enables armor to grip core tightly for vertical support installations.

2. STANDARDS

- 2.1 The following standards shall form a part of this specification to the extent specified herein:
- 2.1.1 CSA Std C22.2 No. 131 TECK 90 MINUS 40°C 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.
 - 2.1.5 CSA Std C22.2 No. 38 Thermoset Insulated Wires and Cables.

3. CONDUCTORS

- 3.1 Conductors shall be Class B stranded uncoated compact copper conforming to CSA C22.2 No. 131.

4. CONDUCTOR SHIELD

- 4.1 Shall be an extruded conducting crosslinked polyethylene compound with thickness in accordance with C22.2 No. 131.

5. INSULATION

- 5.1 Shall be Rome-XLPE crosslinked polyethylene meeting the requirements of CSA C22.2 No. 38 for RW90. Average thickness shall be 90 mils. Minimum thickness at any point shall be not less than 90% of the specified average thickness.

6. PHASE IDENTIFICATION

- 6.1 Conductor size 2 AWG shall be colored black, red, blue. Larger sizes shall have printed numbers on black insulation.

7. ASSEMBLY

- 7.1 Insulated phase conductors shall be cabled together with a class B concentric or compressed 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 CSA C22.2 No. 131. A nonhygroscopic cable tape shall be applied over the assembly.

8. INNER PVC JACKET

- 8.1 Shall be PVC meeting the requirements of C22.2 No. 131 including requirements for low temperature classification of -40°C. Thickness of jacket shall be as specified in C22.2 No. 131. Jacket shall have extruded ribs to enable armor to tightly grip the core.

9. INTERLOCKED ARMOR

- 9.1 A galvanized steel interlocked armor shall be applied over the inner PVC jacket meeting the requirements of C22.2 No. 131, Clause 4.11. Armor shall tightly grip the ribs on the inner jacket.

10. OUTER PVC JACKET

- 10.1 Cables shall have an overall orange PVC jacket meeting the requirements of C22.2 No. 131 including requirements for low temperature classification of -40°C. Thickness of jacket shall be as specified in C22.2 No. 131.

11. IDENTIFICATION

- 11.1 Cable shall be surface ink printed with a legend identifying the manufacturer, number of conductors, size, voltage rating, TECK 90, MINUS 40°C, XLPE, FT4, HL and length markings in meters. Cable shall also be printed with a VS designation for vertical support.

12. TESTS

- 12.1 Completed cable shall be capable of compliance with the FT4 flame test of C22.2 No. 0.3, HL requirements of C22.2 No. 174 and the acid gas evolution test of OH L891SM-77, in addition to the requirements for Type TECK 90 MINUS 40°C cable in C22.2 No. 131.