Rome Cable
CORPORATION

SPEC 7640

January 1, 2002

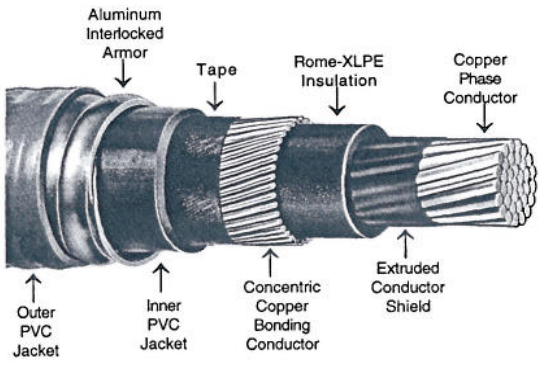
ROME HL TECK 90 MINUS 40C, FT4, 5000 VOLTS

Single Conductor, Rome-XLPE Insulation (RW90), Nonshielded Inner PVC Jacket, Aluminum Armor, Outer PVC Jacket

APPLICATION: As flame retardant single conductor power cable rated 5000 volts, 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 TECK90 MINUS 40C per CSA Std. C22.2 No. 131.
2. Passes FT-4 70,000 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-XLPE crosslinked polyethylene insulation, 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.	Inner Jkt.	Inner Jkt.		Armor		Outer Jkt.		lb/k ft.	kg/km	
		Mils	Mils	In.	mm	In.	mm	In.	mm			
4	6	90	45	.638	16.2	.803	20.4	.908	23.1	505	752	135
3	6	90	45	.665	16.9	.830	21.1	.935	23.8	550	818	155
2	6	90	45	.695	17.6	.860	21.8	.965	24.5	600	893	180
1	4	90	45	.727	18.5	.892	22.6	.997	25.3	730	1086	210
1/0	4	90	45	.757	19.2	.922	23.4	1.03	26.2	812	1208	245
2/0	4	90	45	.804	20.4	1.00	25.4	1.11	28.2	970	1444	285
3/0	3	90	45	.849	21.6	1.05	26.7	1.16	29.5	1130	1682	330
4/0	3	90	60	.932	23.7	1.13	28.7	1.24	31.5	1327	1975	385
250	2	90	60	.991	25.2	1.19	30.2	1.30	33.0	1531	2278	425
300	2	90	60	1.07	27.2	1.27	32.2	1.37	34.8	1720	2560	480
350	1	90	60	1.11	28.2	1.31	33.3	1.42	36.1	1961	2918	530
400	1	90	60	1.16	29.5	1.36	34.5	1.46	37.1	2130	3170	575
500	1/0	90	60	1.23	31.2	1.43	36.3	1.54	39.1	2558	3807	660
600	1/0	90	60	1.32	33.5	1.55	39.4	1.68	42.7	3250	3837	740
750	2/0	90	60	1.49	37.8	1.69	42.9	1.82	46.2	3634	5408	845
1000	2/0	90	60	1.65	41.9	1.88	47.8	2.00	50.8	4520	6727	1000

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

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 XLPE insulation. Total area of the bonding conductor is equivalent to the size indicated in table.

Information on this sheet subject to change without notice.

Rome Cable
CORPORATION

SPEC 7640

1-1-02

Specification

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

Single Conductor, Rome-XLPE Insulation (RW90), Nonshielded Inner PVC Jacket, Aluminum Armor, Outer PVC Jacket

1. SCOPE

1.1 This specification describes single conductor Rome TECK 90 MINUS 40C cable with Rome-XLPE crosslinked polyethylene insulation, PVC inner jacket, aluminum interlocked armor, and PVC outer jacket. The cables may be used in circuits not exceeding 5000 volts 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.

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 40C 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. BONDING CONDUCTOR

6.1 A bonding or grounding conductor consisting of concentric bare copper wires shall be helically applied over the XLPE insulation. The bonding conductor shall comply with Table 1 and Clause 4.2.3 of CSA C22.2 No. 131. A nonhygroscopic cable tape shall be applied over the concentric wires.

7. INNER PVC JACKET

7.1 Shall be PVC meeting the requirements of C22.2 No. 131 including requirements for low temperature classification of -40C. Thickness of jacket shall be as specified in C22.2 No. 131.

8. INTERLOCKED ARMOR

8.1 An aluminum alloy interlocked armor shall be applied over the inner PVC jacket meeting the requirements of C22.2 No. 131, Clause 4.11.

9. OUTER PVC JACKET

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

10. IDENTIFICATION

10.1 Cable shall be surface ink printed with a legend identifying the manufacturer, size, voltage rating, TECK 90 MINUS 40C, XLPE, FT4, HL and length markings in meters.

11. TESTS

11.1 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 40C cable in C22.2 No. 131.