CSA TECK 90 CU 3/C 5000V NON-SHIELDED TRXLPE POWER CABLE

5000V, Non-Shielded, TRXLPE Insulated, FT4, -40°C, HL (Hazardous Locations), AG14 & 90°C

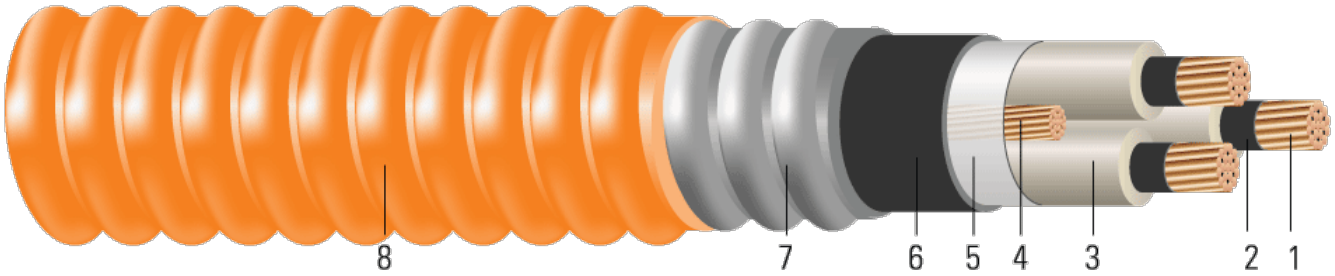

Image not to scale. See Table 1 for dimensions.

CONSTRUCTION:

1. **Conductor:** Class B stranded copper, compressed or compact, in accordance with ASTM B3 and B8.
2. **Conductor Shield:** Extruded semi-conducting thermosetting polymeric layer
3. **Insulation:** TRXLPE (cross-linked polyethylene), Thickness: 0.090" (2.3 mm) - nominal, 90°C
4. **Grounding Conductor:** Class B compressed or compact stranded bare copper, in accordance with ASTM B3 and B8
5. **Binder:** Polypropylene tape
6. **Inner Jacket:** Black PVC, Thickness: No. 2 AWG to No. 3/0 AWG = 0.080" (2.0 mm); No. 4/0 AWG to 500 kcmil = 0.110" (2.8 mm); 750 kcmil to 1000 kcmil = 0.140" (3.6 mm)
7. **Armor:** Aluminum Interlocked Armour (AIA)
8. **Overall Jacket:** Orange PVC (optional colours available), Thickness: No. 2 AWG to 250 kcmil = 0.060" (1.5 mm); 350 kcmil to 750 kcmil = 0.075" (1.9 mm); 1000 kcmil = 0.090" (2.3 mm)

APPLICATIONS AND FEATURES:

Southwire's Teck 90, 5000V, non-shielded, TRXLPE insulated (treeing resistant) power cable is a CSA approved armoured cable for industrial and commercial medium voltage applications. FT4, -40°C, HL, AG14 and 90°C rated for use in harsh Canadian environments. Rated for installation in cable trays, duct banks, direct burial, troughs, hazardous locations, continuous rigid cable supports, and is concrete encaseable.

- -40°C - CSA Cold Bend and Impact Temperature
- -25°C - Min. Installation Temperature
- 90°C - Max. Continuous Operating Temperature
- 140°C for Emergency Overload Temperature
- 250°C for Short Circuit Temperature

SPECIFICATIONS:

- ASTM B3 Soft or Annealed Copper Wire
- ASTM B8 Concentric-Lay-Stranded Copper Conductors
- CSA C22.2 No. 174 Cables in Hazardous Locations
- CSA C22.2 No. 131 Type TECK 90 Cable
- CSA C22.2 No. 2556 & No. 0.3 Wire and Cable Test Methods
- CSA LTGG [-40°C] - as per C68.10 - for Cold Bend and Impact rating
- CSA HL - for Hazardous Locations rating

- CSA SUN RES - for Sunlight Resistant rating
- CSA AG14 - Acid Gas Compliance
- ICEA S-96-659 (NEMA WC 71) 2001-5000 V Nonshielded Cables
- IEEE 383 Flame Test (70,000 btu)
- IEEE 1202 FT4 Flame Test (70,000) BTU/hr Vertical Tray Test
- FT1 Flame Test (1,706 BTU/Hr nominal - Vertical Wire Flame Test)

SAMPLE PRINT LEGEND:

SOUTHWIRE {CSA} LL90458 3/C XX KCMIL CU TECK 90 TRXLPE CDRS WITH GROUND -40°C FT4 SUN. RES. AG14 5000V HL {YYYY} USA {SEQUENTIAL METER MARKS}

Table 1 – Weights and Measurements

Stock Number	Cond. Size	Strand	Diameter Over Conductor	Insul. Thickness	Ground	Inner Jacket Thickness	Dia. Over Armour	Overall Jacket Thickness	Approx. OD	Copper Weight	Approx. Weight
	AWG/ Kcmil	No.	inch	mil	No. x AWG	mil	inch	mil	inch	lb/1000ft	lb/1000ft
573334◊	2	7	0.282	90	1x6	85	1.585	55	1.695	702	1523
586789◊	1/0	19	0.361	90	1x6	85	1.764	55	1.874	1069	2011
577417◊	2/0	19	0.405	90	1x6	85	1.869	55	1.979	1326	2391
671374**	2/0	19	0.405	90	1x4	85	1.869	55	1.979	1375	2436
577418◊	4/0	19	0.512	90	1x4	115	2.135	55	2.245	2109	3448
568924◊	250	37	0.558	90	1x4	115	2.282	65	2.414	2469	3981
576145**	250	37	0.558	90	1x4	115	2.282	65	2.414	2469	3976
580964◊	350	37	0.661	90	1x3	115	2.461	65	2.593	3438	5095
568927◊	500	37	0.789	90	1x3	115	2.731	65	2.863	4841	6713
582272	750	61	0.968	90	1x2	145	3.252	80	3.420	7223	9801

All dimensions are nominal and subject to normal manufacturing tolerances
◊ Cable marked with this symbol is a standard stock item
* Other conductor sizes and outer jacket colours are available upon request. (#s in brackets represent # of strands / conductor. Number of strands may vary as per CSA standard.)
** Black Jacket
TBA stock codes are estimations only and actual product may vary. Please wait until a stock code is assigned to purchase connectors and/or fittings.

Table 2 – Electrical and Engineering Data

Cond. Size	Min Bending Radius	Max Pull Tension	DC Resistance @ 25°C	AC Resistance @ 90°C	Inductive Reactance @ 60Hz	Allowable Ampacity In Air 90°C
AWG/ Kcmil	inch	lb	Ω/1000ft	Ω/1000ft	Ω/1000ft	Amp
2	11.8	1592	0.162	0.195	0.035	172
1/0	13.1	2534	0.102	0.122	0.033	225
2/0	13.8	3194	0.081	0.097	0.032	260
2/0	13.8	3194	0.081	0.097	0.032	260
4/0	15.7	5078	0.051	0.062	0.030	342
250	16.8	6000	0.043	0.053	0.030	376
250	16.8	6000	0.043	0.053	0.030	376
350	18.1	8400	0.031	0.039	0.028	460
500	20.0	12000	0.022	0.029	0.027	556
750	23.9	18000	0.014	0.022	0.027	678

* Inductive impedance is based on non-ferrous conduit with one diameter spacing center-to-center.

Table 3 – Weights and Measurements (Metric)

Stock Number	Cond. Size	Strand	Diameter Over Conductor	Insul. Thickness	Ground	Inner Jacket Thickness	Dia. Over Armour	Overall Jacket Thickness	Approx. OD	Copper Weight	Approx. Weight
	AWG/ Kcmil	No.	mm	mm	No. x AWG	mm	mm	mm	mm	kg/km	kg/km
573334◊	2	7	7.16	2.29	1x6	2.16	40.26	1.40	43.05	1045	2266
586789◊	1/0	19	9.17	2.29	1x6	2.16	44.81	1.40	47.60	1591	2993
577417◊	2/0	19	10.29	2.29	1x6	2.16	47.47	1.40	50.27	1973	3558
671374**	2/0	19	10.29	2.29	1x4	2.16	47.47	1.40	50.27	2046	3625
577418◊	4/0	19	13.00	2.29	1x4	2.92	54.23	1.40	57.02	3139	5131
568924◊	250	37	14.17	2.29	1x4	2.92	57.96	1.65	61.32	3674	5924
576145**	250	37	14.17	2.29	1x4	2.92	57.96	1.65	61.32	3674	5917
580964◊	350	37	16.79	2.29	1x3	2.92	62.51	1.65	65.86	5116	7582
568927◊	500	37	20.04	2.29	1x3	2.92	69.37	1.65	72.72	7204	9990
582272	750	61	24.59	2.29	1x2	3.68	82.60	2.03	86.87	10749	14585

All dimensions are nominal and subject to normal manufacturing tolerances
◊ Cable marked with this symbol is a standard stock item
* Other conductor sizes and outer jacket colours are available upon request. (#s in brackets represent # of strands / conductor. Number of strands may vary as per CSA standard.)
** Black Jacket
TBA stock codes are estimations only and actual product may vary. Please wait until a stock code is assigned to purchase connectors and/or fittings.

Table 4 – Electrical and Engineering Data (Metric)

Cond. Size	Min Bending Radius	Max Pull Tension	DC Resistance @ 25°C	AC Resistance @ 90°C	Inductive Reactance @ 60Hz	Allowable Ampacity In Air 90°C
AWG/ Kcmil	mm	newton	Ω/km	Ω/km	Ω/km	Amp
2	299.72	7084	0.5315	0.64	0.1148	172
1/0	332.74	11276	0.3346	0.40	0.1083	225
2/0	350.52	14213	0.2657	0.32	0.1050	260
2/0	350.52	14213	0.2657	0.32	0.1050	260
4/0	398.78	22597	0.1673	0.20	0.0984	342
250	426.72	26700	0.1411	0.17	0.0984	376
250	426.72	26700	0.1411	0.17	0.0984	376
350	459.74	37380	0.1017	0.13	0.0919	460
500	508.00	53400	0.0722	0.10	0.0886	556
750	607.06	80100	0.0459	0.07	0.0886	678

* Inductive impedance is based on non-ferrous conduit with one diameter spacing center-to-center.