



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

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

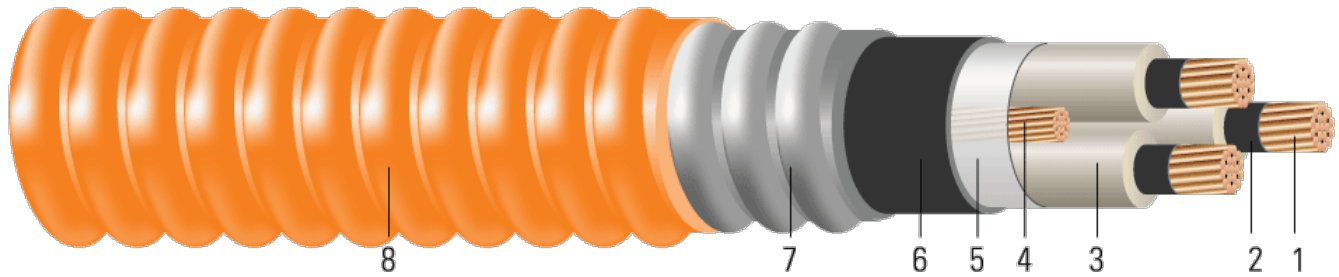


Image not to scale. See Table 1 for dimensions.

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:** No-Lead EPR (ethylene propylene rubber), 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 5KV TECK 90, 5000V, non-shielded, EPR insulated 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 EPCV 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
568467◇	2	7	0.282	90	1x6	85	1.585	55	1.695	702	1541
568468◇	1	19	0.322	90	1x6	85	1.682	55	1.792	864	1788
568470◇	1/0	19	0.361	90	1x6	85	1.768	55	1.878	1069	2055
568471◇	2/0	19	0.405	90	1x6	85	1.874	55	1.984	1326	2439
568472◇	3/0	19	0.456	90	1x4	85	1.982	55	2.092	1699	2894
568473◇	4/0	19	0.512	90	1x4	115	2.135	55	2.245	2109	3501
568474◇	250	37	0.558	90	1x4	115	2.248	55	2.358	2469	3959
568475◇	350	37	0.661	90	1x3	115	2.505	65	2.637	3438	5196
568476◇	500	37	0.789	90	1x3	115	2.731	65	2.863	4841	6806

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.)

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	12.5	2008	0.128	0.154	0.034	197
1/0	13.1	2534	0.102	0.122	0.033	225
2/0	13.8	3194	0.081	0.097	0.032	260
3/0	14.6	4027	0.064	0.078	0.031	297
4/0	15.7	5078	0.051	0.062	0.030	342
250	16.5	6000	0.043	0.053	0.030	376
350	18.4	8400	0.031	0.039	0.028	460
500	20.0	12000	0.022	0.029	0.027	556

* 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
568467◇	2	7	7.16	2.29	1x6	2.16	40.26	1.40	43.05	1045	2293
568468◇	1	19	8.18	2.29	1x6	2.16	42.72	1.40	45.52	1286	2661
568470◇	1/0	19	9.17	2.29	1x6	2.16	44.91	1.40	47.70	1591	3058
568471◇	2/0	19	10.29	2.29	1x6	2.16	47.60	1.40	50.39	1973	3630
568472◇	3/0	19	11.58	2.29	1x4	2.16	50.34	1.40	53.14	2528	4307
568473◇	4/0	19	13.00	2.29	1x4	2.92	54.23	1.40	57.02	3139	5210
568474◇	250	37	14.17	2.29	1x4	2.92	57.10	1.40	59.89	3674	5892
568475◇	350	37	16.79	2.29	1x3	2.92	63.63	1.65	66.98	5116	7732
568476◇	500	37	20.04	2.29	1x3	2.92	69.37	1.65	72.72	7204	10128

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.)

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	317.50	8936	0.4199	0.51	0.1115	197
1/0	332.74	11276	0.3346	0.40	0.1083	225
2/0	350.52	14213	0.2657	0.32	0.1050	260
3/0	370.84	17920	0.2100	0.26	0.1017	297
4/0	398.78	22597	0.1673	0.20	0.0984	342
250	419.10	26700	0.1411	0.17	0.0984	376
350	467.36	37380	0.1017	0.13	0.0919	460
500	508.00	53400	0.0722	0.10	0.0886	556

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

