



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

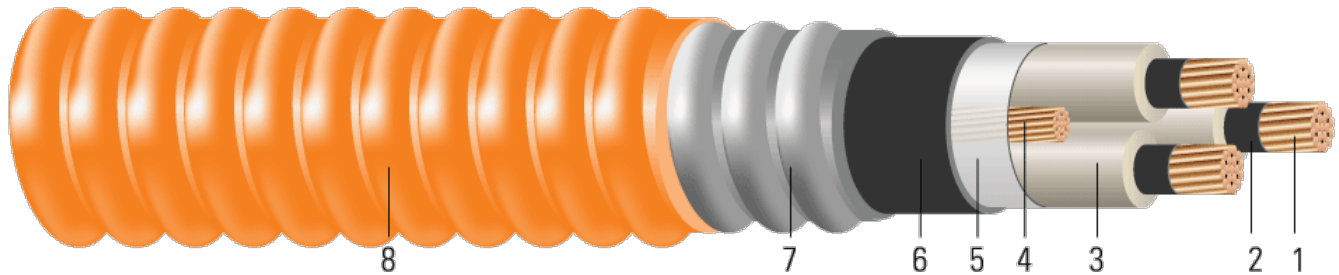


Image not to scale. See Table 1 for dimensions.

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

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

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.

