## TECK 90 SPECIFICATIONS

### CSA TECK 90 5000V NON-SHIELDED EPR POWER CABLE

### PRODUCT HIGHLIGHTS
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, -40C, 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.

### CONSTRUCTION

**Conductor**
- Class B stranded copper
  - compressed or compact
  - in accordance with ASTM B3 and ASTM B8
- Optional Class B compact stranded 8000 Series Aluminum ACM

**Conductor Shield**
- Extruded semi-conducting thermosetting polymeric layer

**Insulation**
- No-Lead EPR (ethylene propylene rubber)
- Thickness: 0.090” (2.3 mm) - nominal
- 90°C rated

**Grounding Conductor**
- Class B compressed or compact stranded bare copper
  - in accordance with ASTM B3 and B8

**Fillers**
- Non-wicking, non-hygroscopic

**Inner Jacket**
- Black PVC
- Thickness:
  - No. 2 AWG to No. 3/0 AWG = 0.49 mm (0.02"")
  - No. 4/0 AWG to 500 kcmil = 0.53 mm (0.02"")
  - 750 kcmil to 1000 kcmil = 0.60 mm (0.02"")

**Armour**
- Aluminum Interlocked Armour (AIA)
- Optional Galvanized Steel Interlocked Armour (GSIA)

**Overall Jacket**
- Orange PVC (optional colours available)
- Thickness:
  - No. 2 AWG to 250 kcmil = 0.060” (1.5 mm)
  - 250 kcmil to 750 kcmil = 0.075” (1.9 mm)
  - 1000 kcmil = 0.090” (2.3 mm)

### Print Legend
- SOUTHWIRE [symbol - lightning bolt] ##/ CSA LL90458 3/C [AWG 2 to 1000 kcmil] CU TECK 90 EPR CDRS WITH GROUND -40°C FT4 SUN. RES. AG14 5000V HL YEAR SEQUENTIAL METER MARKS

### TABLE 1 - WEIGHTS & MEASUREMENTS

<table>
<thead>
<tr>
<th>TECK 90</th>
<th>Conductor Size</th>
<th>Conductor Diameter</th>
<th>Diameter Over Insulation</th>
<th>Ground Wire Size</th>
<th>Inner Jacket Diameter</th>
<th>Armour Diameter</th>
<th>Approx. Overall Diameter</th>
<th>Approx. Weight of Cable</th>
<th>Std. Real Weight (reel and cable)*</th>
<th>Std. Real Diameter**</th>
<th>Std. Real Width**</th>
<th>Std. Length of Cable on Reel**</th>
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**Note:** These are minimum dimensions as per CSA Standards.

* Other conductor sizes and outer jacket colours are available upon request. (#s in brackets represent # of strands / conductor)

** These are maximum reel sizes and cable lengths. Standard sizes and lengths will be supplied. Reel sizes are not guaranteed. The factory reserves the right to make changes as necessary to optimize manufacturing requirements.

# Non-stock item. Please consult the factory when ordering.

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# DESIGN

## Qualification Standards
- CSA C22.2 No. 131 - Type TECK 90 Cable
- CSA C22.2 No. 174 - Cables in Hazardous Locations
- CSA C22.2 No. 2556 & No. 0.3 - Wire and Cable Test Methods
- IEEAS-96-659 (NEMA WC71) - Nonshielded Cables Rated 2001-5000 Volts

## Flame Test Ratings
- FT1 - Flame Test (1,706 BTU/Hr nominal - Vertical Wire Flame Test)
- FT4 - Flame Test (70,000 BTU/Hr - Vertical Tray Flame Test)
- IEEE 383 - Flame Test (70,000 BTU/Hr)
- IEEE 1202 - Flame Test (70,000 BTU/Hr - Vertical Tray Test)

## Operating Temperatures
- -40°C - CSA Cold Bend and Impact Temperature
- -25°C - Min. Installation Temperature
- 90°C - Max. Continuous Operating Temperature

# TABLE 2 - ENGINEERING SPECIFICATIONS

<table>
<thead>
<tr>
<th>TECK 90 Stock Number</th>
<th>Conductor Size*</th>
<th>Minimum Bend Radius</th>
<th>Maximum Pulling Tension</th>
<th>DC Resistance @ 25°C P</th>
<th>AC Resistance Ratios @ 90°C &amp; 60 Hz (each conductor) P</th>
<th>Inductance L</th>
<th>Capacitance (each phase conductor) C</th>
<th>Inductive Reactance @ 60Hz X</th>
<th>Capacitive Reactance @ 60Hz (phase to neutral) Xc</th>
<th>Capacitive Susceptance @ 60Hz (phase to neutral) Bx</th>
<th>Short Circuit Current (each phase conductor) @ 60Hz kAmps</th>
<th>Allowable Ampacities in Raceway or Cable†</th>
<th>Allowable Ampacities Directly Buried in Earth‡</th>
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* Other conductor sizes and outer jacket colours are available upon request.
† Ampacities are based on Table 2 of the 2012 Canadian Electrical Code Part I (30°C Ambient Temperature)
‡ Ampacities are based on Table D12A and Detail 1 of Diagram B4-3 of the 2012 Canadian Electrical Code Part I
§ Non-stock item. Please consult the factory when ordering.