**HVTECK SPECIFICATIONS**

**HVTECK CU 1/C 320EPR TS LSZH AIA LSZH SOLONON® 25KV 133% CSA**

**PRODUCT HIGHLIGHTS**
Southwire’s 25KV HVTECK Solonon® low smoke zero halogen jacketed cable is a CSA armoured cable for industrial and commercial medium voltage applications. Rated FT4-ST1, -25°C, Hazardous Locations (HL) and 105°C for use in harsh Canadian environments. For installation in cable trays, duct banks, direct burial, troughs, continuous rigid cable supports and concrete encasable.

**CONSTRUCTION**

**Conductor**
- Class B compressed stranded copper
- in accordance with ASTM B3 and ASTM B9

**Options**
- Class B compact stranded - 8000 Series Aluminum - ACM
- Class B compact stranded copper
- Strand blocking technology
- Tinning on copper conductors

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

**Insulation**
- No-lead EPR (Ethylene Propylene Rubber)
- Thickness: 0.32 inches (8.13mm) - nominal
- Insulation level: 133%
- 105°C rated

**Insulation Shield**
- Extruded Semi-conducting thermosetting polymeric layer
- CSA B8.10 - Shield Removal/termination requirements are printed on the surface
- Meets requirement of ICEA but built to CSA standards

**Copper Tape Shield**
- Helically wrapped 5 mil copper tape with 25% overlap
- Not designed to carry ground fault current
- A separate bonding/grounding conductor may be required

**Inner Jacket**
- Black PVC
- Thickness:
  - No.1 AWG to 350 kcmil = 0.08 inches (2.03mm)
  - 500 kcmil to 1000 kcmil = 0.11 inches (2.79mm)

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

**Overall Jacket**
- Black - Low Smoke Zero Halogen XLPE Solonon jacket
- Nominal Thickness:
  - No.1 AWG to 500 kcmil = 0.06 inches (1.52mm)
  - 750 kcmil to 1000 kcmil = 0.075 inches (1.91mm)

**Typical Print Legend**
- (CSA) SOUTHWIRE (NESC) #P# (#AWG or #kcmil) CU 320 EPR AIA 25KV 133% INS LEVEL 25% TS SUN RES 105° FT4-ST1 LSZH SOLONON HL (-25°C) LTD D RoHS YEAR [SEQUENTIAL METER MARKS]

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**TABLE 1 - WEIGHTS & MEASUREMENTS**

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**NOTE:** These are minimum average dimensions as per CSA Standards.
* Other conductor sizes and outer jacket colours are available upon request. (#s in brackets represent # of strands / conductor)
** Longer maximum lengths may be possible. Standard sizes and lengths may be supplied. Reel sizes are not guaranteed. The factory reserves the right to make changes as necessary to optimize manufacturing requirements.

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### HVTECK Specifications

**HVTECK CU 1/C 320EPR TS LSZH AIA LSZH SOLONON® 25KV 133% CSA**

#### Design

**Qualification Standards**
- CSA C68.10 - Shielded Power Cables for Commercial and Industrial Applications - 5 to 46 kV
- CSA C68.3 - Shielded & Concentric Neutral Power Cable - 5 to 46 kV
- CSA C22.2 No. 174 - Cables in Hazardous Locations
- ICEA T-29-520 - Vertical Cable Tray Flame Test - (210,000 BTU/Hr.)
- IEEE 1202 - Flame Test - (70,000 BTU/Hr. - Vertical Tray Test)
- IEEE 383 - Flame Test - (70,000 BTU/Hr. - Vertical Tray Test)
- IEEE 356 - Flame Test - (70,000 BTU/Hr. - Vertical Tray Test)
- AEIC CS-8 - Qualification Testing Requirements

#### Flame Test Ratings
- FT1 - Flame Test - (1,706 BTU/Hr. nominal - Vertical Wire Flame Test)
- FT4 - Flame Test - (550 BTU/Hr. - Vertical Wire Flame Test)
- T22 - Flame Test - (550 BTU/Hr. - Vertical Wire Flame Test)
- UL-1682 - Flame Test - (70,000 BTU/Hr. - Vertical Tray Test)
- ICEA S-93-639 (NEMA WC 74) 5 to 46 kV - Shielded Power Cable
- AEIC CS-8 - Qualification Testing Requirements

#### Operating Temperatures
- 25°C - CSA Cold Bend and Impact Temperature
- -10°C - CSA Cold Bend and Impact Temperature
- 90°C - Shield temperature
- 105°C - Max. Continuous Operating Temperature
- 100°C for Emergency Overload Temperature
- 100°C for Emergency Overload Temperature

#### Ampacities

<table>
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<tr>
<th>HVTECK Product Code</th>
<th>Maximum Pulling Tension</th>
<th>DC Resistance @ 25°C</th>
<th>DC Resistance @ 90°C</th>
<th>Inductance</th>
<th>Capacitance</th>
<th>Inductive Reactance @ 60Hz</th>
<th>Capacitive Reactance @ 60Hz</th>
<th>Positive - Sequence Impedance</th>
<th>Zero - Sequence Impedance</th>
<th>Short Circuit Current (each phase conductor)</th>
<th>Short Circuit Current (phase A)</th>
<th>Allowable Ampacities in Ventilated Cable Tray</th>
<th>Allowable Ampacities Directly Buried in Earth</th>
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* Calculations are based on three cables triplexed / 5 mil 25% overlap copper tape shield / Conductor temperature of 90°C / Shield temperature of 45°C / Earth resistivity of 100 ohms-meter
1 Ampacities are based on Table D17M of the 2015 Canadian Electrical Code Part I (40°C Ambient Air Temperature, indoor installation)
2 Ampacities are based on Table D17A of the 2015 Canadian Electrical Code Part I

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