# HVTECK CU 1/C 345TRXLPE CB PVC AIA PVC 35kV 100% CSA

Single Conductor, 345 Mils Tree Retardant Cross Linked Polyethylene, 100% Insulation Level, Concentric Bond, Polyvinyl Chloride (PVC) Inner Jacket, Aluminum Interlocked Armour (AIA), Polyvinyl Chloride (PVC) Jacket

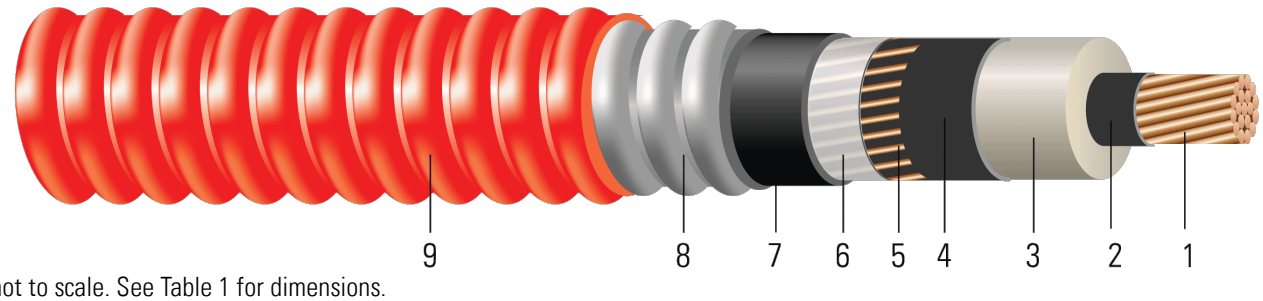



Image not to scale. See Table 1 for dimensions.

## CONSTRUCTION:

1. **Conductor:** Class B compressed stranded bare copper per ASTM B3 and ASTM B8
2. **Conductor Shield:** Semi-conducting cross-linked copolymer
3. **Insulation:** 345 Mils Tree Retardant Cross Linked Polyethylene 100% insulation level
4. **Insulation Shield:** Strippable semi-conducting cross-linked copolymer
5. **Concentric Shield:** Concentrically applied copper bond / shield wires. Complies with greater than the minimum requirement as per Table 44, CSA Standard C68.10 and Table 16A, Canadian Electrical Code Part 1
6. **Neutral Separator:** Mylar tape
7. **Inner Jacket:** PVC inner jacket
8. **Armour:** Aluminum Interlocked Armour (AIA)
9. **Overall Jacket:** Red Polyvinyl Chloride (PVC) Jacket

## APPLICATIONS AND FEATURES:

Southwire's 35kV HVTECK is a CSA armoured cable for industrial and commercial medium voltage applications. Rated FT4, -40°C, Hazardous Locations (HL). These cables are capable of operating continuously at the conductor temperature not in excess of 105°C for normal operation, 140°C for emergency overload, and 250°C for short circuit conditions. Rated for 1000 lbs /FT maximum sidewall pressure. These cables feature sunlight and moisture resistance, exceptional corona resistance, resistance to most chemical soils and acids and are flame retardant.

## 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. 2556 & No. 0.3 Wire and Cable Test Methods
- 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 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
- ICEA S-93-639 (NEMA WC 74) 5-46 KV Shielded Power Cable
- ICEA T-29-520 Flame Test (210,000 BTU/Hr)
- IEEE 383 Flame Test (70,000 btu)


Copyright © 2026 Southwire Company, LLC. All Rights Reserved

- IEEE 1202 FT4 Flame Test (70,000) BTU/hr Vertical Tray Test (1/0 and Larger)
- FT1 Flame Test (1,706 BTU/Hr nominal - Vertical Wire Flame Test)
- AEIC CS-8 Specification for extruded dielectric shielded power cables rated for 5 through 46KV (Qualification Test Requirements)

## SAMPLE PRINT LEGEND:

(CSA) SOUTHWIRE (NESC) #P# 1/C [#AWG or #kcmil] CU 345 TRXLPE AIA 35kV 100% INS LEVEL CB [No. x SIZE] AWG SUN RES 105°C FT4 HL (-40°C) LTGG RoHS YEAR [SEQUENTIAL METER MARKS]

## Table 1 – Weights and Measurements

| Stock Number | Cond. Size | Strand | Diameter Over Conductor | Diameter Over Insulation | Insul. Thickness | Diameter Over Insulation Shield | Concentric Neutral | Inner Jacket Thickness | Dia. Over Armour | Overall Jacket Thickness | Approx. OD | Copper Weight | Approx. Weight | Conduit Size* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | AWG/ Kcmil | No. | inch | inch | mil | inch | No. x AWG | mil | inch | mil | inch | lb/ 1000ft | lb/ 1000ft | inch |
| TBA | 1/0 | 19 | 0.362 | 1.09 | 345 | 1.15 | 7x12 | 80 | 1.91 | 60 | 2.03 | 550 | 2297 | 5.5 |
| TBA | 2/0 | 19 | 0.405 | 1.133 | 345 | 1.193 | 7x12 | 80 | 1.953 | 60 | 2.073 | 638 | 2448 | 5.5 |
| TBA | 3/0 | 19 | 0.456 | 1.184 | 345 | 1.244 | 9x12 | 110 | 2.064 | 60 | 2.184 | 783 | 2782 | 5.5 |
| TBA | 4/0 | 19 | 0.512 | 1.24 | 345 | 1.3 | 9x12 | 110 | 2.12 | 60 | 2.24 | 923 | 3006 | 6 |
| TBA | 250 | 37 | 0.558 | 1.294 | 345 | 1.354 | 11x12 | 110 | 2.174 | 60 | 2.294 | 1088 | 3257 | 6 |
| TBA | 350 | 37 | 0.661 | 1.397 | 345 | 1.457 | 13x12 | 110 | 2.277 | 75 | 2.427 | 1459 | 3849 | 6.5 |
| 674111 | 500 | 37 | 0.789 | 1.525 | 345 | 1.585 | 17x12 | 110 | 2.284 | 75 | 2.434 | 1904 | 3707 | 6.5 |
| TBA | 750 | 61 | 0.968 | 1.714 | 345 | 1.774 | 21x12 | 110 | 2.594 | 75 | 2.744 | 2873 | 5762 | 7.5 |

All dimensions are nominal and subject to normal manufacturing tolerances
◊ Cable marked with this symbol is a standard stock item
1 Comply with ICEA S-93-639 Appendix C for jacket thickness determination
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 | Capacitive Reactance @ 60Hz | Inductive Reactance @ 60Hz | Zero Sequence Impedance | Positive Sequence Impedance | Phase Short Circuit Current @ 6 Cycles | Allowable Ampacity In Air 90°C | Allowable Ampacity Directly Buried 90°C |
|---|---|---|---|---|---|---|---|---|---|---|---|
| AWG/ Kcmil | inch | lb | Ω/1000ft | Ω/1000ft | MΩ*1000ft | Ω/1000ft | Ω/1000ft | Ω/1000ft | Amp | Amp | Amp |
| 1/0 | 14.2 | 844 | 0.102 | 0.139 | 0.068 | 0.061 | 0.379+j0.135 | 0.143+j0.067 | 3879 | 278 | 272 |
| 2/0 | 14.5 | 1064 | 0.082 | 0.112 | 0.064 | 0.059 | 0.352+j0.134 | 0.116+j0.064 | 3879 | 316 | 303 |
| 3/0 | 15.3 | 1342 | 0.064 | 0.087 | 0.059 | 0.058 | 0.287+j0.097 | 0.092+j0.063 | 4987 | 356 | 333 |
| 4/0 | 15.7 | 1692 | 0.051 | 0.07 | 0.055 | 0.056 | 0.269+j0.095 | 0.074+j0.061 | 4987 | 403 | 367 |
| 250 | 16.1 | 2000 | 0.043 | 0.059 | 0.052 | 0.054 | 0.228+j0.074 | 0.064+j0.059 | 6095 | 455 | 411 |
| 350 | 17 | 2800 | 0.031 | 0.043 | 0.046 | 0.052 | 0.190+j0.060 | 0.049+j0.056 | 7203 | 537 | 459 |
| 500 | 17 | 4000 | 0.021 | 0.03 | 0.041 | 0.048 | 0.145+j0.044 | 0.037+j0.051 | 9420 | 616 | 499 |
| 750 | 19.2 | 6000 | 0.014 | 0.021 | 0.035 | 0.046 | 0.115+j0.035 | 0.030+j0.048 | 11636 | 716 | 557 |

* Inductive impedance is based on non-ferrous conduit with one diameter spacing center-to-center.
***** CEC ampacities are based on:
3-1/C in air copper and aluminum: D17M
3-1/C direct buried copper and aluminum: D17A


Copyright © 2026 Southwire Company, LLC. All Rights Reserved

## Table 3 – Weights and Measurements (Metric)

| Stock Number | Cond. Size | Strand | Diameter Over Conductor | Diameter Over Insulation | Insul. Thickness | Diameter Over Insulation Shield | Concentric Neutral | Inner Jacket Thickness | Dia. Over Armour | Overall Jacket Thickness | Approx. OD | Copper Weight | Approx. Weight | Conduit Size* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | AWG/ Kcmil | No. | mm | mm | mm | mm | No. x AWG | mm | mm | mm | mm | kg/km | kg/km | inch |
| TBA | 1/0 | 19 | 9.19 | 27.69 | 8.76 | 29.21 | 7x12 | 2.03 | 48.51 | 1.52 | 51.56 | 818 | 3418 | 5.5 |
| TBA | 2/0 | 19 | 10.29 | 28.78 | 8.76 | 30.30 | 7x12 | 2.03 | 49.61 | 1.52 | 52.65 | 949 | 3643 | 5.5 |
| TBA | 3/0 | 19 | 11.58 | 30.07 | 8.76 | 31.60 | 9x12 | 2.79 | 52.43 | 1.52 | 55.47 | 1165 | 4140 | 5.5 |
| TBA | 4/0 | 19 | 13.00 | 31.50 | 8.76 | 33.02 | 9x12 | 2.79 | 53.85 | 1.52 | 56.90 | 1374 | 4473 | 6 |
| TBA | 250 | 37 | 14.17 | 32.87 | 8.76 | 34.39 | 11x12 | 2.79 | 55.22 | 1.52 | 58.27 | 1619 | 4847 | 6 |
| TBA | 350 | 37 | 16.79 | 35.48 | 8.76 | 37.01 | 13x12 | 2.79 | 57.84 | 1.91 | 61.65 | 2171 | 5728 | 6.5 |
| 674111 | 500 | 37 | 20.04 | 38.73 | 8.76 | 40.26 | 17x12 | 2.79 | 58.01 | 1.91 | 61.82 | 2833 | 5517 | 6.5 |
| TBA | 750 | 61 | 24.59 | 43.54 | 8.76 | 45.06 | 21x12 | 2.79 | 65.89 | 1.91 | 69.70 | 4275 | 8575 | 7.5 |

All dimensions are nominal and subject to normal manufacturing tolerances
◊ Cable marked with this symbol is a standard stock item
1 Comply with ICEA S-93-639 Appendix C for jacket thickness determination
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 | Capacitive Reactance @ 60Hz | Inductive Reactance @ 60Hz | Zero Sequence Impedance | Positive Sequence Impedance | Phase Short Circuit Current @ 6 Cycles | Allowable Ampacity In Air 90°C | Allowable Ampacity Directly Buried 90°C |
|---|---|---|---|---|---|---|---|---|---|---|---|
| AWG/ Kcmil | mm | newton | Ω/km | Ω/km | MΩ*km | Ω/km | Ω/1000ft | Ω/1000ft | Amp | Amp | Amp |
| 1/0 | 360.68 | 3756 | 0.3346 | 0.46 | 0.0207 | 0.2001 | 0.379+j0.135 | 0.143+j0.067 | 3879 | 278 | 272 |
| 2/0 | 368.30 | 4735 | 0.2690 | 0.37 | 0.0195 | 0.1936 | 0.352+j0.134 | 0.116+j0.064 | 3879 | 316 | 303 |
| 3/0 | 388.62 | 5972 | 0.2100 | 0.29 | 0.0180 | 0.1903 | 0.287+j0.097 | 0.092+j0.063 | 4987 | 356 | 333 |
| 4/0 | 398.78 | 7529 | 0.1673 | 0.23 | 0.0168 | 0.1837 | 0.269+j0.095 | 0.074+j0.061 | 4987 | 403 | 367 |
| 250 | 408.94 | 8900 | 0.1411 | 0.19 | 0.0158 | 0.1772 | 0.228+j0.074 | 0.064+j0.059 | 6095 | 455 | 411 |
| 350 | 431.80 | 12460 | 0.1017 | 0.14 | 0.0140 | 0.1706 | 0.190+j0.060 | 0.049+j0.056 | 7203 | 537 | 459 |
| 500 | 431.80 | 17800 | 0.0689 | 0.10 | 0.0125 | 0.1575 | 0.145+j0.044 | 0.037+j0.051 | 9420 | 616 | 499 |
| 750 | 487.68 | 26700 | 0.0459 | 0.07 | 0.0107 | 0.1509 | 0.115+j0.035 | 0.030+j0.048 | 11636 | 716 | 557 |

* Inductive impedance is based on non-ferrous conduit with one diameter spacing center-to-center.
***** CEC ampacities are based on:
3-1/C in air copper and aluminum: D17M
3-1/C direct buried copper and aluminum: D17A


Copyright © 2026 Southwire Company, LLC. All Rights Reserved