

## HVTECK CU 1/C 260TRXLPE TS PVC AIA PVC 25kV 100% CSA

Single Conductor, 260 Mils Tree Retardant Cross Linked Polyethylene, 100% Insulation Level, Tape Shield, Polyvinyl Chloride (PVC) Inner Jacket, Aluminum Interlocked Armour (AIA), Polyvinyl Chloride (PVC) Jacket

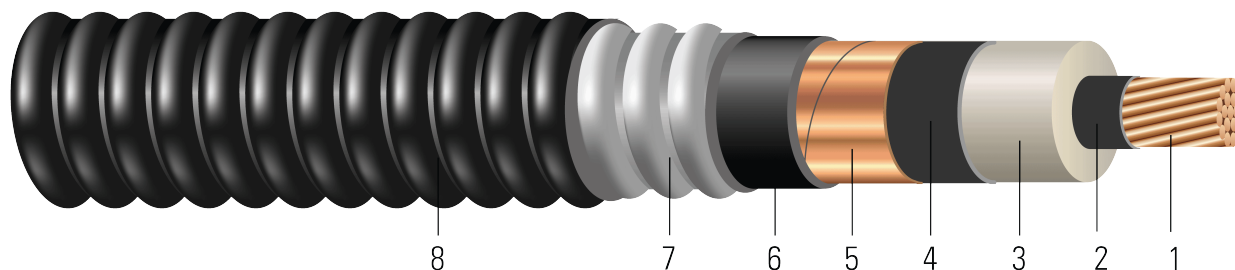


Image not to scale. See Table 1 for dimensions.

### 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:** 260 Mils Tree Retardant Cross Linked Polyethylene 100% insulation level
4. **Insulation Shield:** Strippable semi-conducting cross-linked copolymer
5. **Copper Tape Shield:** Helically wrapped 5 mil copper tape with 25% overlap
6. **Inner Jacket:** PVC inner jacket
7. **Armour:** Aluminum Interlocked Armour (AIA)
8. **Overall Jacket:** Black Polyvinyl Chloride (PVC) Jacket

### APPLICATIONS AND FEATURES:

Southwire's 25kV 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)
- 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 260 TRXLPE AIA 25kV 100% INS LEVEL 25% TS SUN RES 105°C FT4 HL (-40°C) LTGG RoHS YEAR [SEQUENTIAL METER MARKS]

**Table 1 – Weights and Measurements**

Cond. Size	Strand	Diameter Over Conductor	Diameter Over Insulation	Insul. Thickness	Diameter Over Insulation Shield	Inner Jacket Thickness	Dia. Over Armour	Overall Jacket Thickness	Approx. OD	Approx. Weight
AWG/ Kcmil	No.	inch	inch	mil	inch	mil	inch	mil	inch	lb/1000ft
1	19	0.322	0.880	260	0.940	80	1.452	50	1.552	1147
1/0	19	0.361	0.919	260	0.979	80	1.491	50	1.591	1254
2/0	19	0.405	0.963	260	1.023	80	1.535	60	1.655	1416
3/0	19	0.456	1.014	260	1.074	80	1.586	60	1.706	1576
4/0	19	0.512	1.070	260	1.130	80	1.666	60	1.786	1801
250	37	0.558	1.124	260	1.184	80	1.720	60	1.840	1979
350	37	0.661	1.227	260	1.287	80	1.823	60	1.943	2398
500	37	0.789	1.355	260	1.415	80	1.951	60	2.071	3091
750	61	0.968	1.544	260	1.604	110	2.200	60	2.320	4209
1000	61	1.117	1.693	260	1.753	110	2.349	75	2.499	5229

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



**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 @ 60Hz	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	10.8	669	0.128	0.162	0.068	0.058	0.521 + j0.376	0.163 + j0.058	2912	245	244
1/0	11.1	844	0.102	0.128	0.063	0.056	0.485 + j0.36	0.129 + j0.056	3033	278	272
2/0	11.5	1064	0.081	0.102	0.058	0.054	0.457 + j0.344	0.103 + j0.054	3169	316	303
3/0	11.9	1342	0.064	0.081	0.054	0.052	0.432 + j0.327	0.082 + j0.052	3327	356	333
4/0	12.5	1692	0.051	0.065	0.050	0.050	0.412 + j0.309	0.066 + j0.051	3501	403	367
250	12.8	2000	0.043	0.056	0.047	0.049	0.399 + j0.293	0.057 + j0.049	3668	455	411
350	13.6	2800	0.031	0.041	0.042	0.046	0.375 + j0.266	0.042 + j0.047	3987	537	459
500	14.4	4000	0.022	0.030	0.036	0.044	0.352 + j0.236	0.031 + j0.044	4384	616	499
750	16.2	6000	0.014	0.023	0.031	0.042	0.327 + j0.201	0.024 + j0.042	4969	716	557
1000	17.4	8000	0.011	0.019	0.028	0.040	0.31 + j0.179	0.02 + j0.04	5431	825	608

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

**Table 3 – Weights and Measurements (Metric)**

Cond. Size	Strand	Diameter Over Conductor	Diameter Over Insulation	Insul. Thickness	Diameter Over Insulation Shield	Inner Jacket Thickness	Dia. Over Armour	Overall Jacket Thickness	Approx. OD	Approx. Weight
AWG/Kcmil	No.	mm	mm	mm	mm	mm	mm	mm	mm	kg/km
1	19	8.18	22.35	6.60	23.88	2.03	36.88	1.27	39.42	1707
1/0	19	9.17	23.34	6.60	24.87	2.03	37.87	1.27	40.41	1866
2/0	19	10.29	24.46	6.60	25.98	2.03	38.99	1.52	42.04	2107
3/0	19	11.58	25.76	6.60	27.28	2.03	40.28	1.52	43.33	2345
4/0	19	13.00	27.18	6.60	28.70	2.03	42.32	1.52	45.36	2680
250	37	14.17	28.55	6.60	30.07	2.03	43.69	1.52	46.74	2945
350	37	16.79	31.17	6.60	32.69	2.03	46.30	1.52	49.35	3569
500	37	20.04	34.42	6.60	35.94	2.03	49.56	1.52	52.60	4600
750	61	24.59	39.22	6.60	40.74	2.79	55.88	1.52	58.93	6264
1000	61	28.37	43.00	6.60	44.53	2.79	59.66	1.91	63.47	7782

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



**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 @ 60Hz	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	274.32	2977	0.4199	0.53	0.0207	0.1903	0.521 + j0.376	0.163 + j0.058	2912	245	244
1/0	281.94	3756	0.3346	0.42	0.0192	0.1837	0.485 + j0.36	0.129 + j0.056	3033	278	272
2/0	292.10	4735	0.2657	0.33	0.0177	0.1772	0.457 + j0.344	0.103 + j0.054	3169	316	303
3/0	302.26	5972	0.2100	0.27	0.0165	0.1706	0.432 + j0.327	0.082 + j0.052	3327	356	333
4/0	317.50	7529	0.1673	0.21	0.0152	0.1640	0.412 + j0.309	0.066 + j0.051	3501	403	367
250	325.12	8900	0.1411	0.18	0.0143	0.1608	0.399 + j0.293	0.057 + j0.049	3668	455	411
350	345.44	12460	0.1017	0.13	0.0128	0.1509	0.375 + j0.266	0.042 + j0.047	3987	537	459
500	365.76	17800	0.0722	0.10	0.0110	0.1444	0.352 + j0.236	0.031 + j0.044	4384	616	499
750	411.48	26700	0.0459	0.08	0.0094	0.1378	0.327 + j0.201	0.024 + j0.042	4969	716	557
1000	441.96	35600	0.0361	0.06	0.0085	0.1312	0.31 + j0.179	0.02 + j0.04	5431	825	608

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

