

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

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

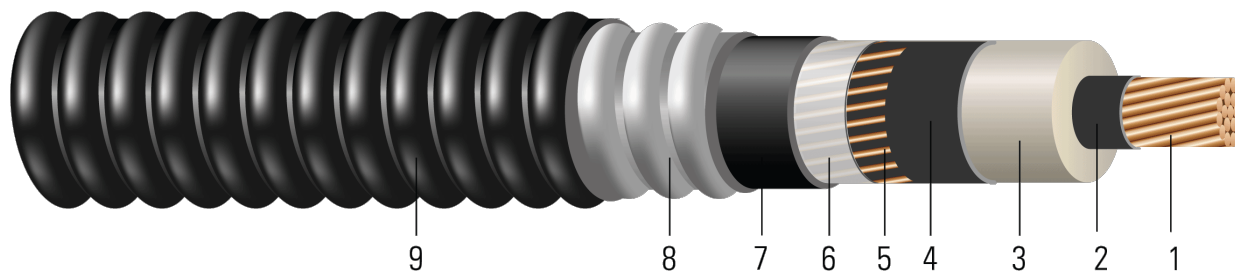


Image not to scale. See Table 1 for dimensions.

### CONSTRUCTION:

- Conductor:** Class B compressed stranded bare copper per ASTM B3 and ASTM B8
- Conductor Shield:** Semi-conducting cross-linked copolymer
- Insulation:** 260 Mils Tree Retardant Cross Linked Polyethylene 100% insulation level
- Insulation Shield:** Strippable semi-conducting cross-linked copolymer
- 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
- Neutral Separator:** Mylar tape
- Inner Jacket:** PVC inner jacket
- Armour:** Aluminum Interlocked Armour (AIA)
- 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

### SAMPLE PRINT LEGEND:

(CSA) SOUTHWIRE (NESC) #P# 1/C [#AWG or #kcmil] CU 260 TRXLPE AIA 25kV 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**

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	Approx. Weight
AWG/ Kcmil	No.	inch	inch	mil	inch	No. x AWG	mil	inch	mil	inch	lb/1000ft
1	19	0.322	0.880	260	0.940	11 x 14	80	1.566	60	1.686	1300
1/0	19	0.361	0.919	260	0.979	11 x 14	80	1.605	60	1.725	1405
2/0	19	0.405	0.963	260	1.023	11 x 14	80	1.673	60	1.793	1565
3/0	19	0.456	1.014	260	1.074	13 x 14	80	1.724	60	1.844	1749
4/0	19	0.512	1.070	260	1.130	13 x 14	80	1.780	60	1.900	1939
250	37	0.558	1.124	260	1.184	17 x 14	80	1.834	60	1.954	2166
350	37	0.661	1.227	260	1.287	21 x 14	80	1.937	60	2.057	2726
500	37	0.789	1.355	260	1.415	26 x 14	110	2.125	60	2.245	3510
750	61	0.968	1.544	260	1.604	21 x 12	110	2.348	75	2.498	4676
1000	61	1.117	1.693	260	1.753	21 x 12	110	2.497	75	2.647	5615

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	11.8	669	0.128	0.162	0.068	0.060	0.144 + j0.034	0.15 + j0.042	8577	245	244
1/0	12.0	844	0.102	0.128	0.063	0.058	0.11 + j0.032	0.116 + j0.04	8577	278	272
2/0	12.5	1064	0.081	0.102	0.058	0.056	0.084 + j0.031	0.09 + j0.039	8577	316	303
3/0	12.9	1342	0.064	0.081	0.054	0.054	0.063 + j0.029	0.069 + j0.037	10137	356	333
4/0	13.3	1692	0.051	0.065	0.050	0.052	0.047 + j0.027	0.053 + j0.035	10137	403	367
250	13.6	2000	0.043	0.056	0.047	0.051	0.038 + j0.026	0.044 + j0.034	13256	455	411
350	14.3	2800	0.031	0.041	0.042	0.048	0.023 + j0.024	0.029 + j0.032	16376	537	459
500	15.7	4000	0.022	0.030	0.036	0.046	0.012 + j0.022	0.018 + j0.03	20275	616	499
750	17.4	6000	0.014	0.023	0.031	0.043	0.005 + j0.02	0.012 + j0.028	26018	716	557
1000	18.5	8000	0.011	0.019	0.028	0.042	0.001 + j0.019	0.008 + j0.027	26018	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	Concentric Neutral	Inner Jacket Thickness	Dia. Over Armour	Overall Jacket Thickness	Approx. OD	Approx. Weight
AWG/Kcmil	No.	mm	mm	mm	mm	No. x AWG	mm	mm	mm	mm	kg/km
1	19	8.18	22.35	6.60	23.88	11 x 14	2.03	39.78	1.52	42.82	1935
1/0	19	9.17	23.34	6.60	24.87	11 x 14	2.03	40.77	1.52	43.82	2091
2/0	19	10.29	24.46	6.60	25.98	11 x 14	2.03	42.49	1.52	45.54	2329
3/0	19	11.58	25.76	6.60	27.28	13 x 14	2.03	43.79	1.52	46.84	2603
4/0	19	13.00	27.18	6.60	28.70	13 x 14	2.03	45.21	1.52	48.26	2886
250	37	14.17	28.55	6.60	30.07	17 x 14	2.03	46.58	1.52	49.63	3223
350	37	16.79	31.17	6.60	32.69	21 x 14	2.03	49.20	1.52	52.25	4057
500	37	20.04	34.42	6.60	35.94	26 x 14	2.79	53.97	1.52	57.02	5223
750	61	24.59	39.22	6.60	40.74	21 x 12	2.79	59.64	1.91	63.45	6959
1000	61	28.37	43.00	6.60	44.53	21 x 12	2.79	63.42	1.91	67.23	8356

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	299.72	2977	0.4199	0.53	0.0207	0.1969	0.144 + j0.034	0.15 + j0.042	8577	245	244
1/0	304.80	3756	0.3346	0.42	0.0192	0.1903	0.11 + j0.032	0.116 + j0.04	8577	278	272
2/0	317.50	4735	0.2657	0.33	0.0177	0.1837	0.084 + j0.031	0.09 + j0.039	8577	316	303
3/0	327.66	5972	0.2100	0.27	0.0165	0.1772	0.063 + j0.029	0.069 + j0.037	10137	356	333
4/0	337.82	7529	0.1673	0.21	0.0152	0.1706	0.047 + j0.027	0.053 + j0.035	10137	403	367
250	345.44	8900	0.1411	0.18	0.0143	0.1673	0.038 + j0.026	0.044 + j0.034	13256	455	411
350	363.22	12460	0.1017	0.13	0.0128	0.1575	0.023 + j0.024	0.029 + j0.032	16376	537	459
500	398.78	17800	0.0722	0.10	0.0110	0.1509	0.012 + j0.022	0.018 + j0.03	20275	616	499
750	441.96	26700	0.0459	0.08	0.0094	0.1411	0.005 + j0.02	0.012 + j0.028	26018	716	557
1000	469.90	35600	0.0361	0.06	0.0085	0.1378	0.001 + j0.019	0.008 + j0.027	26018	825	608

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

