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

Single Conductor, 260 Mils No Lead Ethylene Propylene Rubber (NL-EPR), 100% Insulation Level, Concentric Bond, Polyvinyl Chloride (PVC) Inner Jacket, Aluminum Interlocked Armour (AIA), Polyvinyl Chloride (PVC) Jacket

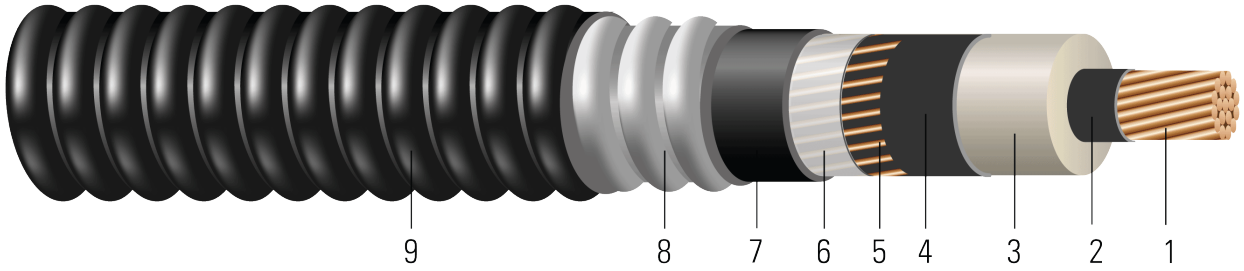

Image not to scale. See Table 1 for dimensions.

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:** 260 Mils No Lead Ethylene Propylene Rubber (NL-EPR) 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:** 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 NLEPR 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	Copper Weight	Approx. Weight
AWG/ Kcmil	No.	inch	inch	mil	inch	No. x AWG	mil	inch	mil	inch	lb/ 1000ft	lb/1000ft
1	19	0.322	0.880	260	0.940	11x14	80	1.560	60	1.680	407	1301
1/0	19	0.361	0.919	260	0.979	11x14	80	1.599	60	1.719	474	1404
2/0	19	0.405	0.963	260	1.023	11x14	80	1.667	60	1.787	559	1565
3/0	19	0.456	1.014	260	1.074	13x14	80	1.718	60	1.838	694	1749
4/0	19	0.512	1.070	260	1.130	13x14	80	1.774	60	1.894	829	1939
250	37	0.558	1.124	260	1.184	17x14	80	1.828	60	1.948	1001	2166
350	37	0.661	1.227	260	1.287	21x14	80	1.965	60	2.085	1365	2744
500	37	0.789	1.355	260	1.415	26x14	110	2.153	60	2.273	1896	3530
750	61	0.968	1.544	260	1.604	21x12	110	2.342	75	2.492	2753	4674
1000	61	1.117	1.693	260	1.753	21x12	110	2.491	75	2.641	3525	5614

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 @ 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	20.2	669	0.128	0.162	0.049	0.060	0.518 + j0.374	0.163 + j0.060	8577	245	244
1/0	20.6	844	0.102	0.128	0.045	0.058	0.482 + j0.359	0.129 + j0.058	8577	278	272
2/0	21.4	1064	0.081	0.102	0.042	0.056	0.454 + j0.343	0.103 + j0.056	8577	316	303
3/0	22.1	1342	0.064	0.081	0.039	0.054	0.430 + j0.326	0.082 + j0.054	10137	356	333
4/0	22.7	1692	0.051	0.065	0.036	0.052	0.410 + j0.308	0.066 + j0.052	10137	403	367
250	23.4	2000	0.043	0.056	0.034	0.050	0.397 + j0.293	0.057 + j0.050	13256	455	411
350	25.0	2800	0.031	0.041	0.030	0.048	0.372 + j0.266	0.042 + j0.048	16376	537	459
500	27.3	4000	0.022	0.030	0.026	0.046	0.350 + j0.237	0.031 + j0.046	20275	616	499
750	29.9	6000	0.014	0.023	0.022	0.043	0.325 + j0.202	0.024 + j0.043	26018	716	557
1000	31.7	8000	0.011	0.019	0.020	0.041	0.308 + j0.179	0.020 + j0.041	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	Copper Weight	Approx. Weight
AWG/ Kcmil	No.	mm	mm	mm	mm	No. x AWG	mm	mm	mm	mm	kg/km	kg/km
1	19	8.18	22.35	6.60	23.88	11x14	2.03	39.62	1.52	42.67	606	1936
1/0	19	9.17	23.34	6.60	24.87	11x14	2.03	40.61	1.52	43.66	705	2089
2/0	19	10.29	24.46	6.60	25.98	11x14	2.03	42.34	1.52	45.39	832	2329
3/0	19	11.58	25.76	6.60	27.28	13x14	2.03	43.64	1.52	46.69	1033	2603
4/0	19	13.00	27.18	6.60	28.70	13x14	2.03	45.06	1.52	48.11	1234	2886
250	37	14.17	28.55	6.60	30.07	17x14	2.03	46.43	1.52	49.48	1490	3223
350	37	16.79	31.17	6.60	32.69	21x14	2.03	49.91	1.52	52.96	2031	4084
500	37	20.04	34.42	6.60	35.94	26x14	2.79	54.69	1.52	57.73	2822	5253
750	61	24.59	39.22	6.60	40.74	21x12	2.79	59.49	1.91	63.30	4097	6956
1000	61	28.37	43.00	6.60	44.53	21x12	2.79	63.27	1.91	67.08	5246	8355

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 @ 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	513.08	2977	0.4199	0.53	0.0149	0.1969	0.518 + j0.374	0.163 + j0.060	8577	245	244
1/0	523.24	3756	0.3346	0.42	0.0137	0.1903	0.482 + j0.359	0.129 + j0.058	8577	278	272
2/0	543.56	4735	0.2657	0.33	0.0128	0.1837	0.454 + j0.343	0.103 + j0.056	8577	316	303
3/0	561.34	5972	0.2100	0.27	0.0119	0.1772	0.430 + j0.326	0.082 + j0.054	10137	356	333
4/0	576.58	7529	0.1673	0.21	0.0110	0.1706	0.410 + j0.308	0.066 + j0.052	10137	403	367
250	594.36	8900	0.1411	0.18	0.0104	0.1640	0.397 + j0.293	0.057 + j0.050	13256	455	411
350	635.00	12460	0.1017	0.13	0.0091	0.1575	0.372 + j0.266	0.042 + j0.048	16376	537	459
500	693.42	17800	0.0722	0.10	0.0079	0.1509	0.350 + j0.237	0.031 + j0.046	20275	616	499
750	759.46	26700	0.0459	0.08	0.0067	0.1411	0.325 + j0.202	0.024 + j0.043	26018	716	557
1000	805.18	35600	0.0361	0.06	0.0061	0.1345	0.308 + j0.179	0.020 + j0.041	26018	825	608

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