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

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

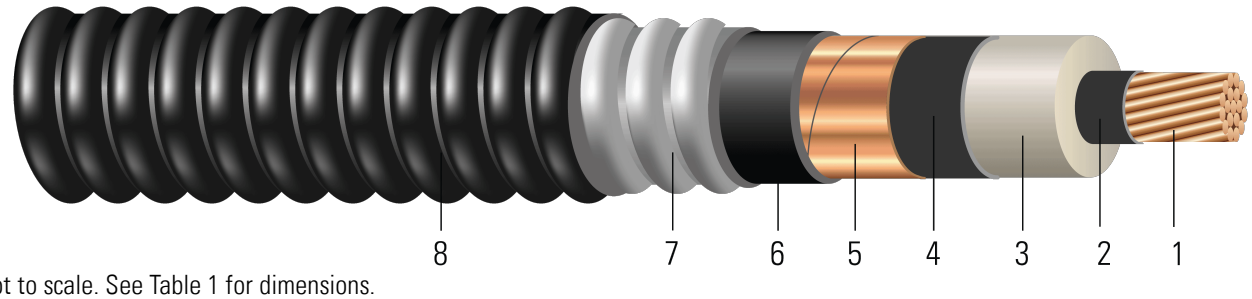


Image not to scale. See Table 1 for dimensions.

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 No Lead Ethylene Propylene Rubber (NL-EPR) 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)

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- 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 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	Copper Weight	Approx. Weight	Conduit Size*
AWG/ Kcmil	No.	inch	inch	mil	inch	mil	inch	mil	inch	lb/1000ft	lb/1000ft	inch
1	19	0.322	0.88	260	0.94	80	1.33	50	1.43	335	1178	3.5
1/0	19	0.362	0.92	260	0.98	80	1.37	50	1.47	407	1289	4
2/0	19	0.405	0.963	260	1.023	80	1.413	50	1.513	495	1418	4
3/0	19	0.456	1.014	260	1.074	80	1.564	60	1.684	606	1751	4.5
4/0	19	0.512	1.07	260	1.13	80	1.62	60	1.74	746	1951	4.5
250	37	0.558	1.124	260	1.184	80	1.674	60	1.794	869	2136	4.5
350	37	0.661	1.227	260	1.287	80	1.777	60	1.897	1187	2565	5
500	37	0.789	1.355	260	1.415	80	1.905	60	2.025	1660	3176	5.5
750	61	0.968	1.544	260	1.604	110	2.154	60	2.274	2448	4295	6
1000	61	1.117	1.693	260	1.753	110	2.303	75	2.453	3232	5314	6.5

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	10	669	0.128	0.175	0.047	0.056	0.530+j0.415	0.176+j0.061	2943	245	244
1/0	10.3	844	0.102	0.139	0.043	0.054	0.494+j0.399	0.140+j0.059	3067	278	272
2/0	10.6	1064	0.082	0.112	0.041	0.052	0.466+j0.384	0.113+j0.057	3201	316	303
3/0	11.8	1342	0.064	0.087	0.038	0.052	0.438+j0.366	0.088+j0.057	3359	356	333
4/0	12.2	1692	0.051	0.07	0.035	0.05	0.419+j0.348	0.071+j0.055	3532	403	367
250	12.6	2000	0.043	0.059	0.032	0.049	0.405+j0.332	0.060+j0.054	3699	455	411
350	13.3	2800	0.031	0.043	0.029	0.046	0.383+j0.304	0.044+j0.051	4019	537	459
500	14.2	4000	0.021	0.03	0.025	0.043	0.362+j0.273	0.032+j0.049	4415	616	499
750	15.9	6000	0.014	0.021	0.021	0.041	0.338+j0.235	0.023+j0.046	5001	716	557
1000	17.2	8000	0.011	0.018	0.019	0.04	0.323+j0.211	0.020+j0.045	5462	825	608

* Inductive impedance is based on non-ferrous conduit with one diameter spacing center-to-center.
***** CEC ampacities are based on:

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3-1/C in air copper and aluminum: D17M
3-1/C direct buried copper and aluminum: D17A

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	Copper Weight	Approx. Weight	Conduit Size*
AWG/ Kcmil	No.	mm	mm	mm	mm	mm	mm	mm	mm	kg/km	kg/km	inch
1	19	8.18	22.35	6.60	23.88	2.03	33.78	1.27	36.32	499	1753	3.5
1/0	19	9.19	23.37	6.60	24.89	2.03	34.80	1.27	37.34	606	1918	4
2/0	19	10.29	24.46	6.60	25.98	2.03	35.89	1.27	38.43	737	2110	4
3/0	19	11.58	25.76	6.60	27.28	2.03	39.73	1.52	42.77	902	2606	4.5
4/0	19	13.00	27.18	6.60	28.70	2.03	41.15	1.52	44.20	1110	2903	4.5
250	37	14.17	28.55	6.60	30.07	2.03	42.52	1.52	45.57	1293	3179	4.5
350	37	16.79	31.17	6.60	32.69	2.03	45.14	1.52	48.18	1766	3817	5
500	37	20.04	34.42	6.60	35.94	2.03	48.39	1.52	51.43	2470	4726	5.5
750	61	24.59	39.22	6.60	40.74	2.79	54.71	1.52	57.76	3643	6392	6
1000	61	28.37	43.00	6.60	44.53	2.79	58.50	1.91	62.31	4810	7908	6.5

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	254.00	2977	0.4199	0.57	0.0143	0.1837	0.530+j0.415	0.176+j0.061	2943	245	244
1/0	261.62	3756	0.3346	0.46	0.0131	0.1772	0.494+j0.399	0.140+j0.059	3067	278	272
2/0	269.24	4735	0.2690	0.37	0.0125	0.1706	0.466+j0.384	0.113+j0.057	3201	316	303
3/0	299.72	5972	0.2100	0.29	0.0116	0.1706	0.438+j0.366	0.088+j0.057	3359	356	333
4/0	309.88	7529	0.1673	0.23	0.0107	0.1640	0.419+j0.348	0.071+j0.055	3532	403	367
250	320.04	8900	0.1411	0.19	0.0098	0.1608	0.405+j0.332	0.060+j0.054	3699	455	411
350	337.82	12460	0.1017	0.14	0.0088	0.1509	0.383+j0.304	0.044+j0.051	4019	537	459
500	360.68	17800	0.0689	0.10	0.0076	0.1411	0.362+j0.273	0.032+j0.049	4415	616	499
750	403.86	26700	0.0459	0.07	0.0064	0.1345	0.338+j0.235	0.023+j0.046	5001	716	557
1000	436.88	35600	0.0361	0.06	0.0058	0.1312	0.323+j0.211	0.020+j0.045	5462	825	608

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

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