HVTECK AL 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

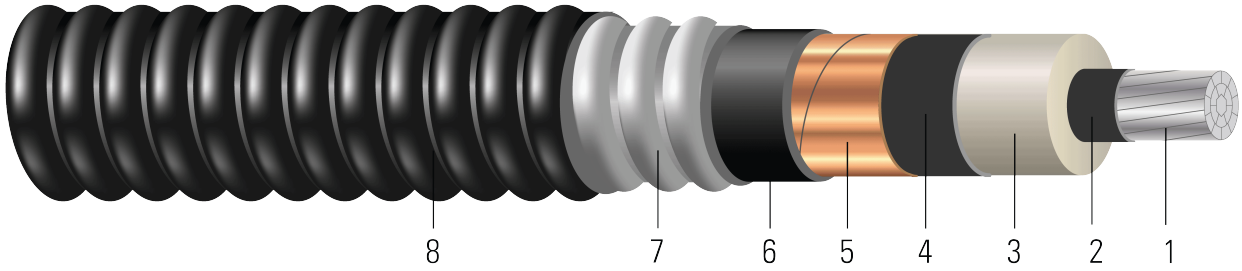

Image not to scale. See Table 1 for dimensions.

CONSTRUCTION:

1. **Conductor:** Class B compact stranded 8000 Series aluminum per ASTM B800 and ASTM B836
2. **Conductor Shield:** Semi-conducting cross-linked copolymer; A conductor separator is used for cable size larger than or equal to 500 Kcmil
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 B801 Concentric-Lay-Stranded Conductors of 8000 Series Aluminum Alloy
- ASTM B836 Compact Rounded Stranded Aluminum 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] CPT AL 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	Approx. Weight
AWG/ Kcmil	No.	inch	inch	mil	inch	mil	inch	mil	inch	lb/1000ft
1	19	0.298	0.856	260	0.916	80	1.428	50	1.528	890
1/0	19	0.336	0.894	260	0.954	80	1.466	50	1.566	948
2/0	19	0.376	0.934	260	0.994	80	1.506	60	1.626	1043
3/0	19	0.422	0.980	260	1.040	80	1.552	60	1.672	1119
4/0	19	0.474	1.032	260	1.092	80	1.604	60	1.724	1210
250	37	0.520	1.086	260	1.146	80	1.682	60	1.802	1337
350	37	0.615	1.181	260	1.241	80	1.777	60	1.897	1523
500	37	0.735	1.301	260	1.361	80	1.897	60	2.017	1878
750	61	0.908	1.484	260	1.544	110	2.140	60	2.260	2436
1000	61	1.060	1.636	260	1.696	110	2.292	75	2.442	2913

All dimensions are nominal and subject to normal manufacturing tolerances
◊ Cable marked with this symbol is a standard stock item
* Strand count meets minimum number per ASTM

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	18.3	502	0.211	0.266	0.051	0.059	0.626 + j0.380	0.267 + j0.058	2869	193	194
1/0	18.8	633	0.168	0.211	0.048	0.057	0.569 + j0.365	0.212 + j0.056	2986	221	219
2/0	19.5	798	0.133	0.167	0.044	0.055	0.523 + j0.350	0.168 + j0.054	3110	253	246
3/0	20.1	1006	0.105	0.133	0.041	0.053	0.486 + j0.333	0.134 + j0.052	3253	288	275
4/0	20.7	1269	0.084	0.105	0.038	0.051	0.455 + j0.316	0.106 + j0.050	3414	327	305
250	21.6	1500	0.071	0.090	0.036	0.050	0.435 + j0.300	0.091 + j0.049	3581	367	343
350	22.8	2100	0.050	0.065	0.032	0.048	0.402 + j0.273	0.066 + j0.046	3875	443	399
500	24.2	3000	0.035	0.046	0.028	0.045	0.373 + j0.244	0.047 + j0.043	4247	529	451
750	27.1	4500	0.024	0.033	0.024	0.043	0.342 + j0.208	0.034 + j0.041	4814	633	505
1000	29.3	6000	0.018	0.026	0.021	0.041	0.321 + j0.184	0.027 + j0.040	5285	711	544

* 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	7.57	21.74	6.60	23.27	2.03	36.27	1.27	38.81	1324
1/0	19	8.53	22.71	6.60	24.23	2.03	37.24	1.27	39.78	1411
2/0	19	9.55	23.72	6.60	25.25	2.03	38.25	1.52	41.30	1552
3/0	19	10.72	24.89	6.60	26.42	2.03	39.42	1.52	42.47	1665
4/0	19	12.04	26.21	6.60	27.74	2.03	40.74	1.52	43.79	1801
250	37	13.21	27.58	6.60	29.11	2.03	42.72	1.52	45.77	1990
350	37	15.62	30.00	6.60	31.52	2.03	45.14	1.52	48.18	2266
500	37	18.67	33.05	6.60	34.57	2.03	48.18	1.52	51.23	2795
750	61	23.06	37.69	6.60	39.22	2.79	54.36	1.52	57.40	3625
1000	61	26.92	41.55	6.60	43.08	2.79	58.22	1.91	62.03	4335

All dimensions are nominal and subject to normal manufacturing tolerances
◊ Cable marked with this symbol is a standard stock item
* Strand count meets minimum number per ASTM

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	464.82	2234	0.6923	0.87	0.0155	0.1936	0.626 + j0.380	0.267 + j0.058	2869	193	194
1/0	477.52	2817	0.5512	0.69	0.0146	0.1870	0.569 + j0.365	0.212 + j0.056	2986	221	219
2/0	495.30	3551	0.4364	0.55	0.0134	0.1804	0.523 + j0.350	0.168 + j0.054	3110	253	246
3/0	510.54	4477	0.3445	0.44	0.0125	0.1739	0.486 + j0.333	0.134 + j0.052	3253	288	275
4/0	525.78	5647	0.2756	0.34	0.0116	0.1673	0.455 + j0.316	0.106 + j0.050	3414	327	305
250	548.64	6675	0.2329	0.30	0.0110	0.1640	0.435 + j0.300	0.091 + j0.049	3581	367	343
350	579.12	9345	0.1640	0.21	0.0098	0.1575	0.402 + j0.273	0.066 + j0.046	3875	443	399
500	614.68	13350	0.1148	0.15	0.0085	0.1476	0.373 + j0.244	0.047 + j0.043	4247	529	451
750	688.34	20025	0.0787	0.11	0.0073	0.1411	0.342 + j0.208	0.034 + j0.041	4814	633	505
1000	744.22	26700	0.0591	0.09	0.0064	0.1345	0.321 + j0.184	0.027 + j0.040	5285	711	544

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