HVTECK CU 1/C 175TRXLPE TS PVC AIA PVC 15kV 100% CSA

Single Conductor, 175 Mils Tree Retardant Cross Linked Polyethylene, 100% Insulation Level, Tape Shield, Polyvinyl Chloride (PVC) Inner Jacket, Aluminum Interlocked Armour (AIA), Polyvinyl Chloride (PVC) Jacket

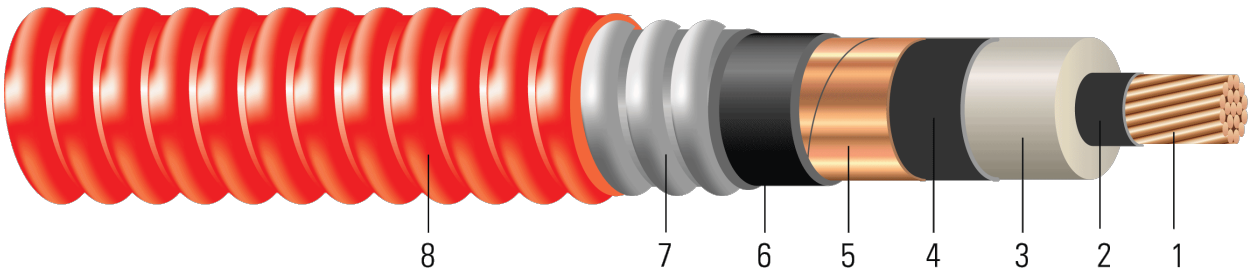

Image not to scale. See Table 1 for dimensions.

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:** 175 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:** Red Polyvinyl Chloride (PVC) Jacket

APPLICATIONS AND FEATURES:

Southwire's 15kV 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 175 TRXLPE AIA 15kV 100% INS LEVEL 25% TS SUN RES 105°C FT4 HL (-40°C) LTGG RoHS YEAR [SEQUENTIAL METER MARKS]

Table 1 – Weights and Measurements

Stock Number	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
	AWG/ Kcmil	No.	inch	inch	mil	inch	mil	inch	mil	inch	lb/1000ft	lb/1000ft
TBA	2	7	0.282	0.670	175	0.730	80	1.132	50	1.232	219	802
TBA	1	19	0.322	0.710	175	0.770	80	1.172	50	1.272	273	888
TBA	1/0	19	0.361	0.749	175	0.809	80	1.321	50	1.421	341	998
TBA	2/0	19	0.405	0.793	175	0.853	80	1.365	50	1.465	427	1118
672009	3/0	19	0.456	0.844	175	0.904	80	1.428	50	1.528	592	1371
668868	4/0	19	0.512	0.900	175	0.960	80	1.484	50	1.584	731	1553
TBA	250	37	0.558	0.954	175	1.014	80	1.526	60	1.646	791	1644
TBA	350	37	0.661	1.057	175	1.117	80	1.653	60	1.773	1103	2072
TBA	500	37	0.789	1.185	175	1.245	80	1.781	60	1.901	1569	2645
665710	750	61	0.968	1.374	175	1.434	80	1.958	60	2.078	2429	3668
TBA	1000	61	1.117	1.523	175	1.583	110	2.179	60	2.299	3120	4718

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
2	14.8	530	0.162	0.204	0.054	0.056	0.567 + j0.455	0.205 + j0.057	2292	215	221
1	15.3	669	0.128	0.162	0.049	0.053	0.526 + j0.435	0.163 + j0.053	2416	245	247
1/0	17.1	844	0.102	0.128	0.046	0.053	0.490 + j0.416	0.129 + j0.053	2537	278	275
2/0	17.6	1064	0.081	0.102	0.042	0.051	0.464 + j0.397	0.103 + j0.051	2673	317	306
3/0	18.3	1342	0.064	0.081	0.039	0.049	0.441 + j0.376	0.082 + j0.050	2831	357	335
4/0	19.0	1692	0.051	0.065	0.035	0.048	0.423 + j0.355	0.066 + j0.048	3005	404	369
250	19.8	2000	0.043	0.056	0.033	0.047	0.411 + j0.336	0.057 + j0.047	3172	456	412
350	21.3	2800	0.031	0.041	0.029	0.044	0.389 + j0.303	0.042 + j0.044	3491	537	456
500	22.8	4000	0.022	0.030	0.025	0.042	0.367 + j0.268	0.031 + j0.042	3888	616	497
750	24.9	6000	0.014	0.023	0.021	0.039	0.343 + j0.226	0.024 + j0.039	4473	706	551
1000	27.6	8000	0.011	0.019	0.019	0.038	0.325 + j0.199	0.020 + j0.038	4935	813	596

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

Table 3 – Weights and Measurements (Metric)

Stock Number	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
	AWG/ Kcmil	No.	mm	mm	mm	mm	mm	mm	mm	mm	kg/km	kg/km
TBA	2	7	7.16	17.02	4.44	18.54	2.03	28.75	1.27	31.29	326	1194
TBA	1	19	8.18	18.03	4.44	19.56	2.03	29.77	1.27	32.31	406	1321
TBA	1/0	19	9.17	19.02	4.44	20.55	2.03	33.55	1.27	36.09	507	1485
TBA	2/0	19	10.29	20.14	4.44	21.67	2.03	34.67	1.27	37.21	635	1664
672009	3/0	19	11.58	21.44	4.44	22.96	2.03	36.27	1.27	38.81	881	2040
668868	4/0	19	13.00	22.86	4.44	24.38	2.03	37.69	1.27	40.23	1088	2311
TBA	250	37	14.17	24.23	4.44	25.76	2.03	38.76	1.52	41.81	1177	2447
TBA	350	37	16.79	26.85	4.44	28.37	2.03	41.99	1.52	45.03	1641	3083
TBA	500	37	20.04	30.10	4.44	31.62	2.03	45.24	1.52	48.29	2335	3936
665710	750	61	24.59	34.90	4.44	36.42	2.03	49.73	1.52	52.78	3615	5459
TBA	1000	61	28.37	38.68	4.44	40.21	2.79	55.35	1.52	58.39	4643	7021

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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
2	375.92	2359	0.5315	0.67	0.0165	0.1837	0.567 + j0.455	0.205 + j0.057	2292	215	221
1	388.62	2977	0.4199	0.53	0.0149	0.1739	0.526 + j0.435	0.163 + j0.053	2416	245	247
1/0	434.34	3756	0.3346	0.42	0.0140	0.1739	0.490 + j0.416	0.129 + j0.053	2537	278	275
2/0	447.04	4735	0.2657	0.33	0.0128	0.1673	0.464 + j0.397	0.103 + j0.051	2673	317	306
3/0	464.82	5972	0.2100	0.27	0.0119	0.1608	0.441 + j0.376	0.082 + j0.050	2831	357	335
4/0	482.60	7529	0.1673	0.21	0.0107	0.1575	0.423 + j0.355	0.066 + j0.048	3005	404	369
250	502.92	8900	0.1411	0.18	0.0101	0.1542	0.411 + j0.336	0.057 + j0.047	3172	456	412
350	541.02	12460	0.1017	0.13	0.0088	0.1444	0.389 + j0.303	0.042 + j0.044	3491	537	456
500	579.12	17800	0.0722	0.10	0.0076	0.1378	0.367 + j0.268	0.031 + j0.042	3888	616	497
750	632.46	26700	0.0459	0.08	0.0064	0.1280	0.343 + j0.226	0.024 + j0.039	4473	706	551
1000	701.04	35600	0.0361	0.06	0.0058	0.1247	0.325 + j0.199	0.020 + j0.038	4935	813	596

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