HVTECK CU 3/C 260TRXLPE TS PVC AIA PVC 25kV 100% CSA

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

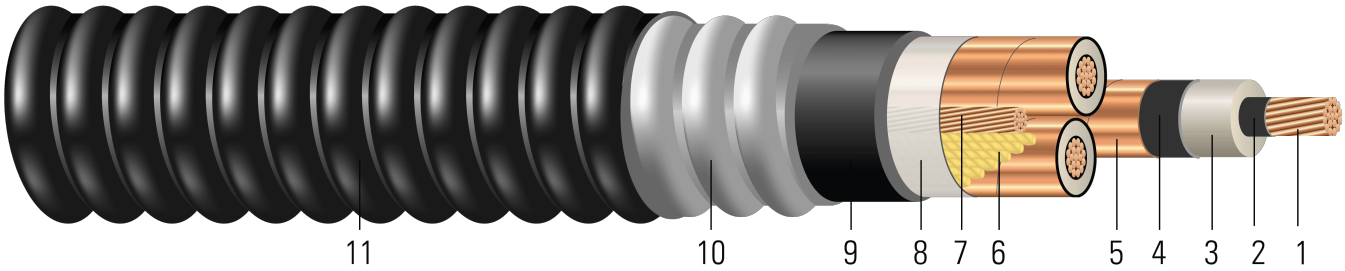

Image not to scale. See Table 1 for dimensions.

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:** 260 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. **Filler:** Interstices filled with non-hydroscoping/non-wicking fillers
7. **Grounding Conductor:** Class B compressed stranded bare copper ground per ASTM B3 and ASTM B8
8. **Binder:** Polypropylene tape
9. **Inner Jacket:** PVC inner jacket
10. **Armour:** Aluminum Interlocked Armour (AIA)
11. **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)

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- IEEE 383 Flame Test (70,000 btu)
- IEEE 1202 FT4 Flame Test (70,000) BTU/hr Vertical Tray Test
- 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# 3/C [#AWG or #kcmil] CU 260 TRXLPE 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

Stock Number	Cond. Size	Strand	Diameter Over Conductor	Diameter Over Insulation	Insul. Thickness	Diameter Over Insulation Shield	Ground Size	Inner Jacket Thickness	Dia. Over Armour	Overall Jacket Thickness	Approx. OD	Copper Weight	Approx. Weight
	AWG/ Kcmil	No.	inch	inch	mil	inch	AWG	mil	inch	mil	inch	lb/ 1000ft	lb/ 1000ft
665414	1	19	0.322	0.88	260	0.94	6	110	2.644	75	2.8	1108	3499
TBA	1	19	0.322	0.880	260	0.940	6	110	2.650	75	2.800	920	3545
TBA	1/0	19	0.361	0.919	260	0.979	6	110	2.734	75	2.884	1126	3878
TBA	2/0	19	0.405	0.963	260	1.023	6	110	2.829	75	2.979	1386	4286
TBA	3/0	19	0.456	1.014	260	1.074	4	110	2.939	75	3.089	1762	4832
TBA	4/0	19	0.512	1.070	260	1.130	4	110	3.060	85	3.230	2173	5496
TBA	250	37	0.558	1.124	260	1.184	4	125	3.207	85	3.377	2536	6150
TBA	350	37	0.661	1.227	260	1.287	3	125	3.429	85	3.599	3512	7494
TBA	500	37	0.789	1.355	260	1.415	3	125	3.706	85	3.876	4921	9367

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.

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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	19.6	2008	0.128	0.175	0.073	0.031	0.532 + j0.418	0.162 + j0.047	2943	185	226
1	19.6	2008	0.128	0.162	0.064	0.047	0.531 + j0.373	0.162 + j0.047	2943	202	226
1/0	20.2	2534	0.102	0.128	0.059	0.045	0.495 + j0.358	0.128 + j0.045	3064	231	256
2/0	20.9	3194	0.081	0.102	0.055	0.043	0.466 + j0.341	0.102 + j0.044	3200	265	290
3/0	21.6	4027	0.064	0.081	0.051	0.042	0.440 + j0.324	0.081 + j0.042	3358	303	327
4/0	22.6	5078	0.051	0.065	0.047	0.040	0.420 + j0.305	0.065 + j0.041	3532	348	369
250	23.6	6000	0.043	0.056	0.044	0.039	0.406 + j0.29	0.056 + j0.039	3699	384	408
350	25.2	8400	0.030	0.041	0.039	0.037	0.381 + j0.262	0.410 + j0.037	4018	468	485
500	27.1	12000	0.020	0.030	0.030	0.035	0.357 + j0.233	0.031 + j0.036	4415	565	571

* Inductive impedance is based on non-ferrous conduit with one diameter spacing center-to-center.
***** CEC ampacities are based on:
3/C in air copper and aluminum: D17N
3/C direct buried copper and aluminum: D17E

Table 3 – Weights and Measurements (Metric)

Stock Number	Cond. Size	Strand	Diameter Over Conductor	Diameter Over Insulation	Insul. Thickness	Diameter Over Insulation Shield	Ground Size	Inner Jacket Thickness	Dia. Over Armour	Overall Jacket Thickness	Approx. OD	Copper Weight	Approx. Weight
	AWG/ Kcmil	No.	mm	mm	mm	mm	AWG	mm	mm	mm	mm	kg/km	kg/km
665414	1	19	8.18	22.35	6.60	23.88	6	2.79	67.16	1.91	71.12	1649	5207
TBA	1	19	8.18	22.35	6.60	23.88	6	2.79	67.31	1.91	71.12	1369	5276
TBA	1/0	19	9.17	23.34	6.60	24.87	6	2.79	69.44	1.91	73.25	1676	5771
TBA	2/0	19	10.29	24.46	6.60	25.98	6	2.79	71.86	1.91	75.67	2063	6378
TBA	3/0	19	11.58	25.76	6.60	27.28	4	2.79	74.65	1.91	78.46	2622	7191
TBA	4/0	19	13.00	27.18	6.60	28.70	4	2.79	77.72	2.16	82.04	3234	8179
TBA	250	37	14.17	28.55	6.60	30.07	4	3.18	81.46	2.16	85.78	3774	9152
TBA	350	37	16.79	31.17	6.60	32.69	3	3.18	87.10	2.16	91.41	5226	11152
TBA	500	37	20.04	34.42	6.60	35.94	3	3.18	94.13	2.16	98.45	7323	13940

All dimensions are nominal and subject to normal manufacturing tolerances
◊ Cable marked with this symbol is a standard stock item
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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.

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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
1	497.84	8936	0.4199	0.57	0.0223	0.1017	0.532 + j0.418	0.162 + j0.047	2943	185	226
1	497.84	8936	0.4199	0.53	0.0195	0.1542	0.531 + j0.373	0.162 + j0.047	2943	202	226
1/0	513.08	11276	0.3346	0.42	0.0180	0.1476	0.495 + j0.358	0.128 + j0.045	3064	231	256
2/0	530.86	14213	0.2657	0.33	0.0168	0.1411	0.466 + j0.341	0.102 + j0.044	3200	265	290
3/0	548.64	17920	0.2100	0.27	0.0155	0.1378	0.440 + j0.324	0.081 + j0.042	3358	303	327
4/0	574.04	22597	0.1673	0.21	0.0143	0.1312	0.420 + j0.305	0.065 + j0.041	3532	348	369
250	599.44	26700	0.1411	0.18	0.0134	0.1280	0.406 + j0.29	0.056 + j0.039	3699	384	408
350	640.08	37380	0.0984	0.13	0.0119	0.1214	0.381 + j0.262	0.410 + j0.037	4018	468	485
500	688.34	53400	0.0656	0.10	0.0091	0.1148	0.357 + j0.233	0.031 + j0.036	4415	565	571

* Inductive impedance is based on non-ferrous conduit with one diameter spacing center-to-center.
***** CEC ampacities are based on:
3/C in air copper and aluminum: D17N
3/C direct buried copper and aluminum: D17E

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