

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

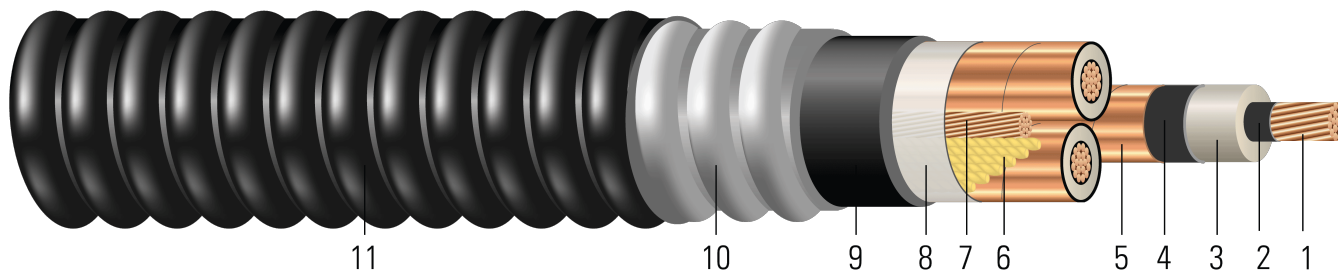


Image not to scale. See Table 1 for dimensions.

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-hydroscopic/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)



Southwire Company, LLC | One Southwire Drive, Carrollton, GA 30119 | www.southwire.com



Southwire

**CABLETECH
SUPPORT™**

Services

- 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

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

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	Approx. Weight
AWG/ Kcmil	No.	inch	inch	mil	inch	AWG	mil	inch	mil	inch	lb/1000ft
1	19	0.322	0.880	260	0.940	6	110	2.649	75	2.799	3636
1/0	19	0.361	0.919	260	0.979	6	110	2.733	75	2.883	3977
2/0	19	0.405	0.963	260	1.023	6	110	2.828	75	2.978	4391
3/0	19	0.456	1.014	260	1.074	4	110	2.939	75	3.089	4903
4/0	19	0.512	1.070	260	1.130	4	110	3.060	85	3.230	5578
250	37	0.558	1.124	260	1.184	4	125	3.206	85	3.376	6240
350	37	0.661	1.227	260	1.287	3	125	3.429	85	3.599	7569
500	37	0.789	1.355	260	1.415	3	125	3.705	85	3.875	9464

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 @ 60Hz	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	19.5	2008	0.128	0.162	0.068	0.047	0.532 + j0.377	0.162 + j0.047	2912	202	226
1/0	20.1	2534	0.102	0.128	0.063	0.045	0.495 + j0.361	0.128 + j0.045	3033	231	256
2/0	20.8	3194	0.081	0.102	0.058	0.043	0.466 + j0.344	0.102 + j0.044	3169	265	290
3/0	21.6	4027	0.064	0.081	0.054	0.042	0.441 + j0.327	0.081 + j0.042	3327	303	327
4/0	22.6	5078	0.051	0.065	0.050	0.040	0.42 + j0.308	0.065 + j0.041	3501	348	369
250	23.6	6000	0.043	0.056	0.047	0.039	0.406 + j0.292	0.056 + j0.039	3668	384	408
350	25.1	8400	0.031	0.041	0.042	0.037	0.381 + j0.265	0.041 + j0.037	3987	468	485
500	27.1	12000	0.022	0.030	0.036	0.035	0.358 + j0.235	0.031 + j0.036	4384	565	571

* 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	Ground Size	Inner Jacket Thickness	Dia. Over Armour	Overall Jacket Thickness	Approx. OD	Approx. Weight
AWG/ Kcmil	No.	mm	mm	mm	mm	AWG	mm	mm	mm	mm	kg/km
1	19	8.18	22.35	6.60	23.88	6	2.79	67.28	1.91	71.09	5411
1/0	19	9.17	23.34	6.60	24.87	6	2.79	69.42	1.91	73.23	5918
2/0	19	10.29	24.46	6.60	25.98	6	2.79	71.83	1.91	75.64	6535
3/0	19	11.58	25.76	6.60	27.28	4	2.79	74.65	1.91	78.46	7296
4/0	19	13.00	27.18	6.60	28.70	4	2.79	77.72	2.16	82.04	8301
250	37	14.17	28.55	6.60	30.07	4	3.18	81.43	2.16	85.75	9286
350	37	16.79	31.17	6.60	32.69	3	3.18	87.10	2.16	91.41	11264
500	37	20.04	34.42	6.60	35.94	3	3.18	94.11	2.16	98.43	14084

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 @ 60Hz	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	495.30	8936	0.4199	0.53	0.0207	0.1542	0.532 + j0.377	0.162 + j0.047	2912	202	226
1/0	510.54	11276	0.3346	0.42	0.0192	0.1476	0.495 + j0.361	0.128 + j0.045	3033	231	256
2/0	528.32	14213	0.2657	0.33	0.0177	0.1411	0.466 + j0.344	0.102 + j0.044	3169	265	290
3/0	548.64	17920	0.2100	0.27	0.0165	0.1378	0.441 + j0.327	0.081 + j0.042	3327	303	327
4/0	574.04	22597	0.1673	0.21	0.0152	0.1312	0.42 + j0.308	0.065 + j0.041	3501	348	369
250	599.44	26700	0.1411	0.18	0.0143	0.1280	0.406 + j0.292	0.056 + j0.039	3668	384	408
350	637.54	37380	0.1017	0.13	0.0128	0.1214	0.381 + j0.265	0.041 + j0.037	3987	468	485
500	688.34	53400	0.0722	0.10	0.0110	0.1148	0.358 + j0.235	0.031 + j0.036	4384	565	571

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

