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

3 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

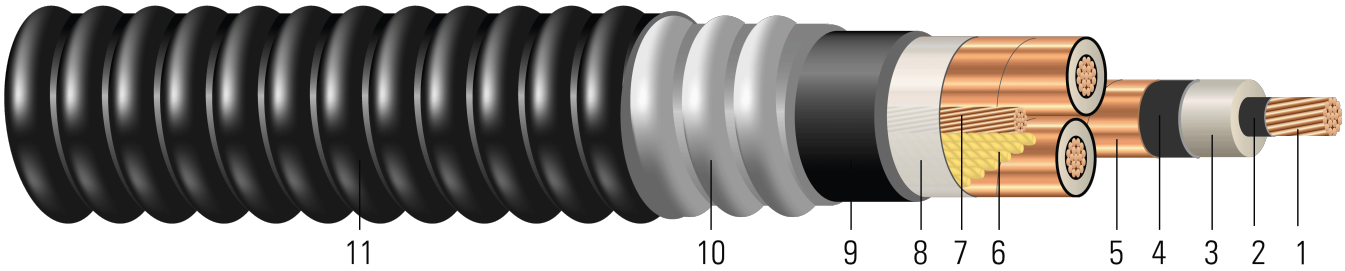

Image not to scale. See Table 1 for dimensions.

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. **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 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

Stock Number	Cond. Size	Strand	Diameter Over Conductor	Diameter Over Insulation	Insul. Thickness	Diameter Over Insulation Shield	Ground	Inner Jacket Thickness	Dia. Over Armour	Overall Jacket Thickness	Approx. OD	Copper Weight	Approx. Weight	Conduit Size*
	AWG/ Kcmil	No.	inch	inch	mil	inch	No. x AWG	mil	inch	mil	inch	lb/ 1000ft	lb/ 1000ft	inch
TBA	1	19	0.322	0.88	260	0.94	1x6	110	2.586	75	2.736	1098	3014	3.5
TBA	1/0	19	0.362	0.92	260	0.98	1x6	110	2.673	75	2.823	1314	3329	3.5
TBA	2/0	19	0.405	0.963	260	1.023	1x6	110	2.766	75	2.916	1582	3704	4
TBA	3/0	19	0.456	1.014	260	1.074	1x4	110	2.876	75	3.026	1967	4215	4
TBA	4/0	19	0.512	1.07	260	1.13	1x4	110	2.997	75	3.147	2390	4777	4
TBA	250	37	0.558	1.124	260	1.184	1x4	125	3.143	85	3.313	2764	5366	4.5
647159	350	37	0.661	1.207	260	1.267	1x3	125	3.4	85	3.57	3763	7629	4.5
456806*	500	37	0.789	1.332	260	1.392	1x3	125	3.67	85	3.84	5196	9460	5

All dimensions are nominal and subject to normal manufacturing tolerances
◊ Cable marked with this symbol is a standard stock item
* Red jacket
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	19.2	2008	0.128	0.175	0.047	0.031	0.545+j0.418	0.175+j0.047	2943	202	226
1/0	19.8	2534	0.102	0.139	0.043	0.029	0.508+j0.402	0.139+j0.045	3067	231	256
2/0	20.4	3194	0.082	0.112	0.041	0.027	0.480+j0.386	0.112+j0.044	3201	265	290
3/0	21.2	4027	0.064	0.087	0.038	0.026	0.452+j0.367	0.087+j0.042	3359	303	327
4/0	22	5078	0.051	0.07	0.035	0.024	0.432+j0.349	0.070+j0.041	3532	348	369
250	23.2	6000	0.043	0.059	0.032	0.023	0.418+j0.332	0.059+j0.039	3699	384	408
350	25	8400	0.031	0.043	0.028	0.021	0.396+j0.308	0.043+j0.037	3957	468	485
500	26.9	12000	0.021	0.03	0.024	0.019	0.373+j0.277	0.030+j0.035	4344	565	571

* 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/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	Inner Jacket Thickness	Dia. Over Armour	Overall Jacket Thickness	Approx. OD	Copper Weight	Approx. Weight	Conduit Size*
	AWG/ Kcmil	No.	mm	mm	mm	mm	No. x AWG	mm	mm	mm	mm	kg/km	kg/km	inch
TBA	1	19	8.18	22.35	6.60	23.88	1x6	2.79	65.68	1.91	69.49	1634	4485	3.5
TBA	1/0	19	9.19	23.37	6.60	24.89	1x6	2.79	67.89	1.91	71.70	1955	4954	3.5
TBA	2/0	19	10.29	24.46	6.60	25.98	1x6	2.79	70.26	1.91	74.07	2354	5512	4
TBA	3/0	19	11.58	25.76	6.60	27.28	1x4	2.79	73.05	1.91	76.86	2927	6273	4
TBA	4/0	19	13.00	27.18	6.60	28.70	1x4	2.79	76.12	1.91	79.93	3557	7109	4
TBA	250	37	14.17	28.55	6.60	30.07	1x4	3.18	79.83	2.16	84.15	4113	7985	4.5
647159	350	37	16.79	30.66	6.60	32.18	1x3	3.18	86.36	2.16	90.68	5600	11353	4.5
456806*	500	37	20.04	33.83	6.60	35.36	1x3	3.18	93.22	2.16	97.54	7732	14078	5

All dimensions are nominal and subject to normal manufacturing tolerances
◊ Cable marked with this symbol is a standard stock item
* Red jacket
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	487.68	8936	0.4199	0.57	0.0143	0.1017	0.545+j0.418	0.175+j0.047	2943	202	226
1/0	502.92	11276	0.3346	0.46	0.0131	0.0951	0.508+j0.402	0.139+j0.045	3067	231	256
2/0	518.16	14213	0.2690	0.37	0.0125	0.0886	0.480+j0.386	0.112+j0.044	3201	265	290
3/0	538.48	17920	0.2100	0.29	0.0116	0.0853	0.452+j0.367	0.087+j0.042	3359	303	327
4/0	558.80	22597	0.1673	0.23	0.0107	0.0787	0.432+j0.349	0.070+j0.041	3532	348	369
250	589.28	26700	0.1411	0.19	0.0098	0.0755	0.418+j0.332	0.059+j0.039	3699	384	408
350	635.00	37380	0.1017	0.14	0.0085	0.0689	0.396+j0.308	0.043+j0.037	3957	468	485
500	683.26	53400	0.0689	0.10	0.0073	0.0623	0.373+j0.277	0.030+j0.035	4344	565	571

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

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