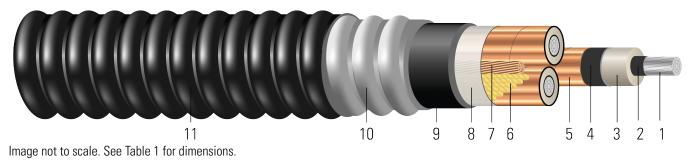
HVTECK AL 3/C 280NLEPR TS PVC AIA PVC 28kV 100% CSA

3 Conductor, 280 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



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: 280 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 28kV 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



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- 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
- 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] CPT AL 280 NLEPR AIA 28kV 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 | | | | 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 |
| 2/0 | 19 | 0.376 | 0.974 | 280 | 1.034 | 6 | 110 | 2.853 | 75 | 3.003 | 3440 |

All dimensions are nominal and subject to normal manufacturing tolerances

 $\boldsymbol{\Diamond}$ 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 |
| 2/0 | 21.0 | 2395 | 0.133 | 0.167 | 0.047 | 0.045 | 0.530 + j0.338 | 0.167 + j0.044 | 3234 | 208 | 228 |

* 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 |
| 2/0 | 19 | 9.55 | 24.74 | 7.11 | 26.26 | 6 | 2.79 | 72.47 | 1.91 | 76.28 | 5119 |

All dimensions are nominal and subject to normal manufacturing tolerances

 \Diamond Cable marked with this symbol is a standard stock item

* Strand count meets minimum number per ASTM





SPEC 26561

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 |
| 2/0 | 533.40 | 10658 | 0.4364 | 0.55 | 0.0143 | 0.1476 | 0.530 + j0.338 | 0.167 + j0.044 | 3234 | 208 | 228 |

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

