

## 3/C CU 220 NLEPR TS PVC AIA PVC 15kV 133% TECK

3 Conductor, 220 Mils No Lead Ethylene Propylene Rubber NL EPR, 133% Insulation Level, Tape Shield, Polyvinyl Chloride (PVC) Inner Jacket, Aluminum Interlocked Armor (AIA), Polyvinyl Chloride (PVC) Jacket. Silicone Free

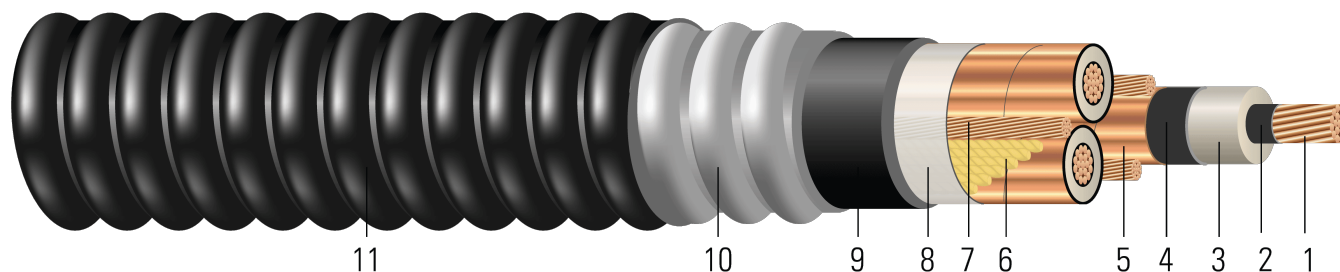


Image not to scale. See Table 1 for dimensions.

### CONSTRUCTION:

1. **Conductor:** Class B compressed stranded bare copper per ASTM B3 and ASTM B8 (Tinned Copper per ASTM B33 optional)
2. **Conductor Shield:** Semi-conducting cross-linked copolymer
3. **Insulation:** 220 Mils No Lead Ethylene Propylene Rubber NL EPR 133% 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. **Grounding Conductor:** Three separate ground wires with a combined circular mil of 50% of the phase conductor. Class B compressed stranded bare copper per ASTM B3 and ASTM B8 (Tinned Copper per ASTM B33 optional)
7. **Filler:** Wax paper filler
8. **Binder:** Polypropylene tape
9. **Inner Jacket:** 125 mils PVC inner jacket
10. **Armor:** Aluminum Interlocked Armor (AIA)
11. **Overall Jacket:** Black Polyvinyl Chloride (PVC) Jacket

### APPLICATIONS AND FEATURES:

Southwire's 15KV Teck type cables are suited for use in wet and dry areas, conduits, ducts, troughs, trays, direct burial, and where superior electrical properties are desired. 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 at -35°C for cold bend. For uses in Class I and II, Division 2 hazardous locations per NEC Article 501 and 502. Rated for 1000 lbs./ FT maximum sidewall pressure. The ground is sized to equal 50% of the phase conductor. Silicone free cable.

### SPECIFICATIONS:

- ASTM B3 Standard Specification for Soft or Annealed Copper Wire
- ASTM B8 Concentric-Lay-Stranded Copper Conductors
- ASTM B33 Standard Specification for Tin-Coated Soft or Annealed Copper Wire
- UL 1072 Medium-Voltage Power Cables
- UL 1685 Vertical-Tray Fire Propagation and Smoke Release Test
- ICEA S-93-639 (NEMA WC 74) 5-46 KV Shielded Power Cable
- AEIC CS-8 Specification for extruded dielectric shielded power cables rated for 5 through 46KV



Southwire Company, LLC | One Southwire Drive, Carrollton, GA 30119 | [www.southwire.com](http://www.southwire.com)



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## SAMPLE PRINT LEGEND:

{SQFTG\_DUAL} SOUTHWIRE{R} POWER CABLE MASTER-DESIGN {UL} 3/C XXX KCMIL CU 220 MILS NL-EPR 15KV 133% INS LEVEL 25%TS GW 3 X X AWG CU MV-105 FOR CT USE SUN. RES. FOR DIRECT BURIAL {NESC}

### Table 1 – Weights and Measurements

Stock Number	Cond. Size	Diameter Over Conductor	Diameter Over Insulation	Diameter Over Insulation Shield	Ground	Jacket Thickness <sup>1</sup>	Approx. OD	Approx. Weight	Max Pull Tension	Min Bending Radius
	AWG/ Kcmil	inch	inch	inch	No. x AWG	mil	inch	lb/1000ft	lb	inch
TBA	1/0	0.362	0.839	0.899	6	75	2.697	3523	2534	18.9
TBA	2/0	0.405	0.882	0.942	6	75	2.790	3912	3194	19.5
TBA	3/0	0.456	0.933	0.993	5	75	2.900	4445	4027	20.3
TBA	4/0	0.512	0.989	1.049	4	75	3.021	5031	5078	21.1
TBA	250	0.558	1.044	1.104	4	75	3.140	5562	6000	22.0
TBA	350	0.661	1.147	1.207	2	85	3.432	7082	8400	24.0
552046	500	0.789	1.275	1.335	3x1	85	3.631	9541	12000	26.0
TBA	750	0.968	1.463	1.523	2/0	85	4.115	11960	18000	28.8

All dimensions are nominal and subject to normal manufacturing tolerances

◇ Cable marked with this symbol is a standard stock item

<sup>1</sup> Comply with ICEA S-93-639 Appendix C for jacket thickness determination

<sup>^</sup> Black outer jacket

### Table 2 – Electrical and Engineering Data

Cond. Size	DC Resistance @ 25°C	AC Resistance @ 90°C	Capacitive Reactance @ 60Hz	Inductive Reactance @ 60Hz	Zero Sequence Impedance*	Positive Sequence Impedance*	Shield Short Circuit Current 6 Cycles	Allowable Ampacity Directly Buried 90/105°C <sup>†</sup>	Allowable Ampacity In Air 90/105°C <sup>‡</sup>
AWG/ Kcmil	Ω/1000ft	Ω/1000ft	MΩ*1000ft	Ω/1000ft	Ω/1000ft	Ω/1000ft	Amp	Amp	Amp
1/0	0.102	0.128	0.057	0.043	0.500+j0.383	0.128+j0.043	2937	240/255	215/240
2/0	0.081	0.101	0.053	0.042	0.470+j0.366	0.101+j0.042	3097	270/290	245/275
3/0	0.0642	0.081	0.049	0.040	0.447+j0.346	0.081+j0.040	3263	305/330	285/315
4/0	0.051	0.064	0.045	0.039	0.425+j0.327	0.064+j0.039	3445	350/375	325/360
250	0.0431	0.054	0.043	0.038	0.411+j0.309	0.054+j0.038	3625	380/410	360/400
350	0.0308	0.039	0.038	0.036	0.386+j0.279	0.039+j0.036	3959	460/495	435/490
500	0.0216	0.028	0.033	0.034	0.362+j0.247	0.028+j0.034	4376	550/590	535/600
750	0.0144	0.020	0.028	0.032	0.335+j0.209	0.021+j0.032	4987	665/720	670/745

\* Calculations are based on 5 mil 25 % over lapping copper tape shield / Conductor temperature of 90°C / Shield temperature of 45°C / Earth resistivity of 100 ohms-meter

<sup>†</sup> Ampacities are based on Table D17N of the 2015 Canadian Electrical Code Part I (40°C Ambient Air Temperature, indoor installation)

<sup>‡</sup> Ampacities are based on Table D17E of the 2015 Canadian Electrical Code Part I

