

# **TCU 600V NLEPR Insulation Thermoset LSZH-TS Jacket RHH/RHW-2/ USE-2. CT Rated - Sunlight Resistant - For Direct Burial - Silicone Free**

Power Cable 600Volt Single Conductor Tinned Copper, No Lead Ethylene Propylene Rubber (NL-EPR) insulation RHH/RHW-2/ USE-2 Thermoset SOLONON® Low Smoke Zero Halogen (LSZH-TS) Jacket. CT Rated 1/0 and Larger - Sunlight Resistant - For Direct Burial - Silicone Free



Image not to scale. See Table 1 for dimensions.

## **CONSTRUCTION:**

1. **Conductor:** Class B compressed stranded tinned copper per ASTM B8 and ASTM B33
2. **Binder Tape:** Mylar Tape
3. **Insulation:** No Lead Ethylene Propylene Rubber (NL-EPR) Type RHH/RHW-2 USE-2
4. **Overall Jacket:** Thermoset SOLONON® Low Smoke Zero Halogen (LSZH-TS) Silicone-Free Jacket

## **APPLICATIONS AND FEATURES:**

Southwire's 600 Volt power cables are suited for use in wet and dry areas, conduits, ducts, troughs, trays, direct burial, aerial supported by a messenger, and where superior electrical properties are desired. These cables are capable of operating continuously at the conductor temperature not in excess of 90°C for normal operation in wet and dry locations, 130°C for emergency overload, and 250°C for short circuit conditions. For uses in Class I, II, and III, Division 2 hazardous locations per NEC Article 501 and 502. Rated for 1000 lbs./FT maximum sidewall pressure.

- a. NEC compliant
- b. Passes UL VW-1
- c. 70,000 BTU/Hr. Vertical Flame Test
- d. UL listed for CT use on 1/0 and Larger
- e. IEEE 1202 and ST-1 (1/0 and larger)
- f. -40°C Cold impact and cold bend
- g. Oil Resistant I and II
- h. UV/Sunlight resistant black color
- i. Color Available upon request

## **SPECIFICATIONS:**

- ASTM B8 Concentric-Lay-Stranded Copper Conductors
- ASTM B33 Standard Specification for Tin-Coated Soft or Annealed Copper Wire
- UL 44 Thermoset-Insulated Wires and Cables
- UL 1685 FT4-ST1 Vertical-Tray Fire Propagation and Smoke Release Test (1/0 and Larger)
- ICEA S-95-658 (NEMA WC70) Power Cables Rated 2000 Volts or Less for the Distribution of Electrical Energy
- CT USE Sizes 1/0 AWG and Larger



- NFPA 130 Standard for Fixed Guideway Transit and Passenger Rail Systems (500kcmil & Larger)

**SAMPLE PRINT LEGEND:**

{SQFTG} SOUTHWIRE® {UL} XXX KCMIL TINNED CU TYPE RHH OR RHW-2 OR USE-2 XX MILS NL-EPR XX MILS  
SOLONON® ST1 LS FOR CT USE SUN RES 600V

**Table 1 – Weights and Measurements**

Stock Number	Cond. Size	Strand Count	Diameter Over Conductor	Min. Avg. Insul. Thickness	Jacket Thickness	Approx. OD	Copper Weight	Approx. Weight	Jacket Color
	AWG/ Kcmil	No. of Strands	inch	mil	mil	inch	lb/1000ft	lb/1000ft	
TBA	8	7	0.141	45	15	0.258	50	68	Black
TBA	6	7	0.177	45	30	0.334	81	113	Black
TBA	4	7	0.225	45	30	0.381	128	166	Black
TBA	2	7	0.282	45	30	0.439	204	249	Black
TBA	1	19	0.322	55	45	0.528	258	328	Black
TBA	1/0	19	0.361	55	45	0.568	325	402	Black
TBA	2/0	19	0.405	55	45	0.611	410	494	Black
TBA	3/0	19	0.456	55	45	0.662	518	610	Black
TBA	250	37	0.558	65	65	0.824	771	919	Black
TBA	350	37	0.661	65	65	0.927	1081	1251	Black
674244	500	37	0.789	75	65	1.089	1543	1798	Black
TBA	600	61	0.865	80	65	1.162	1853	2094	Black
TBA	750	61	0.968	80	65	1.264	2316	2582	Black
TBA	1000	61	1.117	80	65	1.413	3088	3389	Black

All dimensions are nominal and subject to normal manufacturing tolerances

◊ Cable marked with this symbol is a standard stock item

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**

Stock Number	Cond. Size	Min Bending Radius	Max Pull Tension	DC Resistance @ 25°C	AC Resistance @ 75°C	Inductive Reactance @ 60Hz	Allowable Ampacity At 75°C	Allowable Ampacity At 90°C
	AWG/ Kcmil	inch	lb	Ω/1000ft	Ω/1000ft	Ω/1000ft	Amp	Amp
TBA	8	1.0	132	0.653	0.786	0.052	50	55
TBA	6	1.3	209	0.411	0.495	0.051	65	75
TBA	4	1.5	333	0.258	0.310	0.048	85	95
TBA	2	1.8	530	0.162	0.195	0.045	115	130
TBA	1	2.1	669	0.128	0.154	0.046	130	145
TBA	1/0	2.3	844	0.102	0.122	0.044	150	170
TBA	2/0	2.4	1064	0.081	0.097	0.043	175	195
TBA	3/0	2.6	1342	0.064	0.078	0.042	200	225
TBA	250	3.3	2000	0.043	0.053	0.041	255	290
TBA	350	3.7	2800	0.031	0.039	0.040	310	350
674244	500	5.4	4000	0.022	0.029	0.039	380	430
TBA	600	5.8	4800	0.018	0.025	0.039	420	475
TBA	750	6.3	6000	0.014	0.022	0.038	475	535
TBA	1000	7.1	8000	0.011	0.018	0.037	545	615

\* Ampacities based upon 2023 NEC Table 310.16 and do not take into account the overcurrent protection limitations in NEC 240.4(D) of 15 Amps for 14 AWG CU, 20 Amps for 12 AWG CU, and 30 Amps for 10 AWG CU (independent of the conductor temperature rating and stranding if size is present in table). Also, see NEC sections 310.15 and 110.14(C) for additional requirements.

\* Inductive Reactance is based on non-ferrous conduit with one diameter spacing center-to-center.

