Stock #: 646849 SPEC 45262

# TCU 600/1000V EPR Insulation Thermoplastic CPE-TP Jacket XHHW-2. CT Rated - Sunlight Resistant - For Direct Burial - Silicone Free

Type TC-ER Power Cable 600Volt Four Conductor Copper, Ethylene Propylene Rubber (EPR) insulation XHHW-2 Thermoplastic Chlorinated Polyethylene (CPE-TP) Jacket with 1 Tinned CU Ground. VW-1 rated

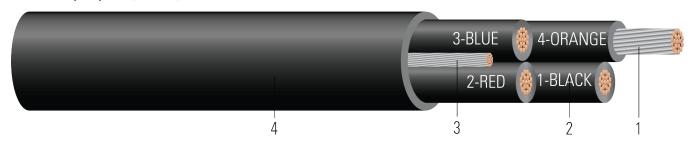


Image not to scale. See Table 1 for dimensions.

### **CONSTRUCTION:**

- 1. Conductor: Class B compressed stranded tinned copper per ASTM B33 and ASTM B8
- 2. **Insulation:** Ethylene Propylene Rubber (EPR) Type XHHW-2
- 3. **Grounding Conductor:** Class B compressed stranded tinned copper per ASTM B33 and ASTM B8
- 4. Filler: Paper filler (cable size 8 & 6 uses Polypropylene filler)
- 5. **Binder:** Polyester flat thread binder tape for cable sizes larger than 2 AWG
- 6. **Overall Jacket:** Thermoplastic Chlorinated Polyethylene (CPE-TP) Jacket

#### **APPLICATIONS AND FEATURES:**

Southwire's 600 Volt Type TC-ER 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. Constructions with 3 or more conductors are listed for exposed runs (TC-ER) per NEC 336.10. VW-1 rated

#### 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 44 VW-1 Vertical flame test on individual conductors
- UL 1277 Electrical Power and Control Tray Cables
- UL 1685 FT4 Vertical-Tray Fire Propagation and Smoke Release Test
- ICEA S-58-679 Control Cable Conductor Identification Method 3 (1-BLACK, 2-RED, 3-BLUE)
- ICEA S-95-658 (NEMA WC70) Power Cables Rated 2000 Volts or Less for the Distribution of Electrical Energy
- IEEE 1202 FT4 Flame Test (70,000) BTU/hr Vertical Tray Test









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## **SAMPLE PRINT LEGEND:**

{SQFTG} SOUTHWIRE® ROYAL{TM} E75755 {UL} XXX AWG (XX.X{mm2}) 4/C EPR/CPE TYPE TC-ER EPR XHHW-2 CDRS GW 1 X 6 AWG 600V 90°C DRY/ 90°C WET OIL RES I SUNLIGHT RESISTANT DIRECT BURIAL FT4/IEEE 1202 -- {NOM}-ANCE EPR/ CPE Tipo XHHW-2 SR FT4 600V 90°C USA

## **Table 1 – Weights and Measurements**

Stock Number	Cond. Size	Cond. Number	Strand Count	Diameter Over Conductor	Insul. Thickness	Ground	Jacket Thickness	Approx. OD	Copper Weight	Approx. Weight
	AWG/ Kcmil		No. of Strands	inch	mil	No. x AWG	mil	inch	lb/1000ft	lb/1000ft
646849	600	4	61	0.865	80	1 x 2	140	2.790	7691	9439

All dimensions are nominal and subject to normal manufacturing tolerances

# **Table 2 – Electrical and Engineering Data**

Stock Number	Cond. Size	Cond. Number	Min Bending Radius	Max Pull Tension	DC Resistance @ 25°C	AC Resistance @ 75°C	Inductive Reactance @ 60Hz	Allowable Ampacity At 60°C	Allowable Ampacity At 75°C	Allowable Ampacity At 90°C
	AWG/ Kcmil		inch	lb	Ω/1000ft	Ω/1000ft	Ω/1000ft	Amp	Amp	Amp
646849	600	4	16.7	15360	0.018	0.025	0.039	280	336	380

<sup>\*</sup> Ampacities based upon 2023 NEC Table 310.16. See NEC sections 310.15 and 110.14(C) for additional requirements.







<sup>♦</sup> Cable marked with this symbol is a standard stock item

<sup>\*</sup> Ampacities have been adjusted for more than Three Current-Carrying Conductors.