

Type THHN/THWN-2 CCA Conductor

600V | Copperweld® Copper-Clad Aluminum (CCA) Building Wire



Engineering Specifications:

Standards: UL-83, UL-1581, ASTM B566

Listings and Compliance: UL: E510284 and E538020, ETL: 5021266, RoHS Compliant, REACH Compliant

Construction:

- **Conductors** – UL recognized component (DVVV2); solid or stranded annealed Copper-Clad Aluminum (CCA) bimetallic conductor meeting ASTM B566 with an 8000-series aluminum core
- **Insulation** – Color-coded Polyvinyl Chloride (PVC) meeting the required thickness of Type THHN/THWN-2
- **Jacket** – Heat-stabilized nylon jacket

Identification and Applications:

- **Identification:** Copperweld® THHN/THWN-2 wire is identified for use with wiring devices, splice connectors and equipment terminals rated for CC, Cu, Cu/Al and CO/ALR. Copperweld® Copper-Clad Aluminum (CCA) is not dissimilar metallurgically to copper, brass or zinc-plated steel. Copperweld® CCA is dissimilar to aluminum for making electrical connections. If splicing with twist-on splice connectors, pre-twisting is not required. Copperweld® THHN/THWN-2 wire is made with ASTM B-566 Copper-Clad Aluminum bare conductor, which carries its own component listing, DVVV2, which is an NEC requirement.
- **Applications:** Refer to Article 310 of the NEC.



- 1 Copperweld CCA conductor
- 2 PVC insulation
- 3 Nylon jacket

| Equivalent Copper Size | CCA Size | No. of Strands** | Thickness (mils) | | Nom. Outside Diameter (in) | Nom. Total Weight (lbs/1000 ft) | Allowable Ampacity* | |
|------------------------|----------|------------------|------------------|--------|----------------------------|---------------------------------|---------------------|------|
| | | | Insulation | Jacket | | | 75°C | 90°C |
| 14 AWG | 12 AWG | Solid | 15 | 4 | 0.119 | 10.84 | 20 | 25 |
| 12 AWG | 10 AWG | Solid | 20 | 4 | 0.150 | 17.11 | 30 | 35 |
| 10 AWG | 8 AWG | Solid | 30 | 5 | 0.199 | 28.99 | 40 | 45 |
| 14 AWG | 12 AWG | 7 | 15 | 4 | 0.130 | 11.82 | 20 | 25 |
| 12 AWG | 10 AWG | 7 | 20 | 4 | 0.164 | 18.95 | 30 | 35 |
| 10 AWG | 8 AWG | 7 | 30 | 5 | 0.216 | 31.29 | 40 | 45 |
| 8 AWG | 6 AWG | 7 | 30 | 5 | 0.254 | 45.54 | 50 | 55 |
| 6 AWG | 4 AWG | 7 | 40 | 6 | 0.324 | 73.41 | 65 | 75 |
| 5 AWG | 3 AWG | 7 | 40 | 6 | 0.352 | 88.45 | 75 | 85 |
| 4 AWG | 2 AWG | 7 | 40 | 6 | 0.384 | 109.80 | 90 | 100 |
| 3 AWG | 1 AWG | 7 | 50 | 7 | 0.442 | 142.60 | 100 | 115 |

* Ampacity of conductors are based on the Copper-Clad Aluminum columns of NFPA 70 (NEC) Table 310.16. See 110.14(C), 240.4(D) and 310.15(B) and (C) for other limitations where applicable.

** Other stranding options available on request.



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Ordering Information:

| Cable Type | CCA Size | No. of Strands * | Colors *** | Standard Packaging** | Part Number*** |
|-------------|---------------|------------------|------------|---------------------------|------------------------------------|
| THHN/THWN-2 | 12 AWG | Solid | See Legend | 500', 1000', 2500', 5000' | 12THHN-1/0-CCA-[CLR]-T2-[Ft]-[PKG] |
| THHN/THWN-2 | 10 AWG | Solid | See Legend | 500', 1000', 2500', 5000' | 10THHN-1/0-CCA-[CLR]-T2-[Ft]-[PKG] |
| THHN/THWN-2 | 8 AWG | Solid | See Legend | 500', 1000', 2500', 5000' | 8THHN-1/0-CCA-[CLR]-T2-[Ft]-[PKG] |
| THHN/THWN-2 | 12 AWG | 7 | See Legend | 500', 1000', 2500', 5000' | 12THHN-7/0-CCA-[CLR]-T2-[Ft]-[PKG] |
| THHN/THWN-2 | 10 AWG | 7 | See Legend | 500', 1000', 2500', 5000' | 10THHN-7/0-CCA-[CLR]-T2-[Ft]-[PKG] |
| THHN/THWN-2 | 8 AWG | 7 | See Legend | 500', 1000', 2500', 5000' | 8THHN-7/0-CCA-[CLR]-T2-[Ft]-[PKG] |
| THHN/THWN-2 | 6 AWG | 7 | See Legend | 500', 1000', 2500', 5000' | 6THHN-7/0-CCA-[CLR]-T2-[Ft]-[PKG] |
| THHN/THWN-2 | 4 AWG | 7 | See Legend | 500', 1000', 2500', 5000' | 4THHN-7/0-CCA-[CLR]-T2-[Ft]-[PKG] |
| THHN/THWN-2 | 3 AWG | 7 | See Legend | 500', 1000', 2500', 5000' | 3THHN-7/0-CCA-[CLR]-T2-[Ft]-[PKG] |
| THHN/THWN-2 | 2 AWG | 7 | See Legend | 500', 1000', 2500', 5000' | 2THHN-7/0-CCA-[CLR]-T2-[Ft]-[PKG] |
| THHN/THWN-2 | 1 AWG | 7 | See Legend | 500', 1000', 2500', 5000' | 1THHN-7/0-CCA-[CLR]-T2-[Ft]-[PKG] |

* Other stranding options available on request.

** Other packaging options and denominations available on request.

*** Part Number Legend: [Size of Circuit Cond.][Type]-[# of Strands Circuit Cond. / Ground Cond.]-[Cond. Material]-[Color]-T2-[Length in Feet]-[Packaging]

- Color [CLR]: Black [BK], Blue [BL], Brown [BR], Gray [GY], Green [GR], Orange [OR], Purple [PU], Red [RD], White [WT], and Yellow [YL]
- Other color options available upon request.
- Standard Packaging [PKG]: Hand Coils [C], Plastic Spools or Wooden Reels [RL]