



**COPPERWELD**<sup>®</sup>  
BUILDING WIRE



# Type THHN/THWN-2 Cu-Clad Conductor

600V | Premium Building Wire

## Copper-Clad Aluminum Conductors

NFPA 70



Conductors drawn from a copper-clad aluminum rod, with the copper metallurgically bonded to an AA 8000 series aluminum core, where oxygen-free copper forms a minimum of 10 percent of the cross-sectional area of a solid conductor or each strand of a stranded conductor.

**Application Standards** — UL-83, UL-1581, ASTM B566-4

**Conductors** — Solid or stranded annealed bimetallic conductor meeting ASTM B566 with an 8000-series aluminum core.

**Conductor Insulation** — Color-coded Polyvinyl Chloride (PVC) compound meeting the required thickness of Type THHN/THWN-2 with a heat-stabilized Nylon jacket rated for 90°C in dry locations.

Copperweld<sup>®</sup> THHN/THWN-2 building wire is for general purpose applications defined by the NEC. It is allowed for new construction or rewiring for 600-volt applications and is appropriate for use in wet or dry locations in temperatures not to exceed 90°C. For applications requiring Type MTW, the conductor is appropriate for use in dry locations at 90°C, or not to exceed 60°C in wet locations or where exposed to oils or coolants. In ducts or on trays for residential, commercial and industrial applications in fixed locations, in dry and damp locations.



- 1) Nylon jacket
- 2) PVC insulation
- 3) Copperweld Listed Bimetal

## Identification, Applications and Usage

Copperweld Copper-Clad Aluminum THHN/THWN-2 conductors are referenced by Article 310 of the National Electrical Code for use in general wiring. OSHA safety listed: UL E510284.

**Wiring Methods:** Per section 310.3(B) and Table 310.4(A) of the National Electrical Code referencing Conductor Materials and Applications & Insulations Rated for 600 Volts, THHN/THWN-2 conductors are primarily used in conduit and cable trays and may also be used for services, feeders and branch circuits in commercial or industrial applications as specified in the National Electrical Code. THHN applications are suitable for use in dry locations only at temperatures not to exceed 90°C. THWN-2 applications are suitable for use in either wet or dry applications, with temperatures that do not exceed 75°C.

Copperweld THHN/THWN-2 is identified for use with Wiring Devices, Splice Connectors and Equipment Terminals Rated for Cu, Cu/Al and CO/ALR. When terminating with twist-on splice connectors, pre-twisting is not recommended. Torque until the wires are tight under the cap and visibly twisted together to ensure safe electrical contact. Do not exceed the number of wires per the manufacturer's instructions. Copperweld® THHN/THWN-2 is made with ASTM B-566 Copper-Clad Aluminum copper bimetal, which carries its own component listing, RU DVVU2. Per UL Guide Information RTRT and WJQR, Copperweld® NM-B can terminate with any wiring device (receptacle or switch) rated copper-only or CO/ALR. Copperweld® THHN/THWN-2 satisfies Article 110.14 Electrical Connections as being SAFE for termination with ALL Copper-Only, Cu/Al or CO/ALR terminal connectors (Push-In, Crimp and Twist-On Types) and equipment. Copperweld® THHN/THWN-2 may be pigtailed to single-metal copper wire in dry, damp and wet locations; however, code-compliant termination methods must be applied for each location. Listed connection equipment is required for damp and wet locations for all conductor material types, where oxide inhibitor must be applied. Copperweld® THHN/THWN-2 should not be terminated with single-metal Aluminum wire without the application of an oxide inhibitor along with a terminal or connector specifically listed for the intermixing of dissimilar metals. Copperweld® ASTM B-566 Copper-Clad Aluminum wire is not dissimilar to copper, brass or zinc-plated steel, and can be terminated with those metals without oxide inhibitors in dry locations only.

## Copperweld® THHN Specifications

Type	Size (AWG or KCMIL)	Strands	Insulation Thickness (in)		Outside Diameter (in)	Allowable Ampacity			Approx. Weight (lbs/1000 ft)	Standard Packaging	Standard 48x48 Pallet Qty
			PVC	Nylon		60°C	75°C	90°C			
THHN	12	1	0.015	0.004	0.119	15	20	25	10.78	500' Plastic Spools, 1000' Wood Reels, 2500' Wood Reels	144
THHN	10	1	0.020	0.004	0.151	25	30	35	17.35	500' Plastic Spools, 1000' Wood Reels, 2500' Wood Reels	144
THHN	8	1	0.030	0.005	0.200	35	40	45	29.26	500' Plastic Spools, 1000' Wood Reels, 2500' Wood Reels	72
THHN	6	1	0.030	0.005	0.232	40	50	55	44.29	500' Plastic Spools, 1000' Wood Reels, 2500' Wood Reels	Call for quantities
THHN	4	1	0.040	0.006	0.296	55	65	75	72.31	500' Plastic Spools, 1000' Wood Reels, 2500' Wood Reels	Call for quantities
THHN	2	1	0.040	0.006	0.350	75	90	100	107.49	500' Plastic Spools, 1000' Wood Reels, 2500' Wood Reels	Call for quantities
THHN	12	7	0.015	0.004	0.130	15	20	25	11.76	500' Plastic Spools, 1000' Wood Reels, 2500' Wood Reels	144
THHN	10	7	0.020	0.004	0.164	25	30	35	19.05	500' Plastic Spools, 1000' Wood Reels, 2500' Wood Reels	144
THHN	8	7	0.030	0.005	0.217	35	40	45	32.08	500' Plastic Spools, 1000' Wood Reels, 2500' Wood Reels	72
THHN	6	7	0.030	0.005	0.255	40	50	55	47.43	500' Plastic Spools, 1000' Wood Reels, 2500' Wood Reels	Call for quantities
THHN	4	7	0.040	0.006	0.325	55	65	75	77.73	500' Plastic Spools, 1000' Wood Reels, 2500' Wood Reels	Call for quantities
THHN	2	7	0.040	0.006	0.386	75	90	100	114.84	500' Plastic Spools, 1000' Wood Reels, 2500' Wood Reels	Call for quantities