

**600 Volts. Copper Conductor
Thermoplastic Insulation/Nylon Sheath
Heat, Moisture, Gasoline, Oil Resistant¹
Also Rated MTW and THWN
Sizes 14 through 10 solid and stranded**



APPLICATIONS

Southwire Type THHN or THWN-2* conductors are primarily used in conduit and cable trays for services, feeders, and branch circuits in commercial or industrial applications as specified in the 2008 National Electrical Code. When used as Type THHN, or T90 Nylon conductor is suitable for use in dry locations at temperatures not to exceed 90 °C. When used as Type THWN-2* or TWN75, conductor is suitable for use in wet or dry locations at temperatures not to exceed 90 °C or not to exceed 75 °C when exposed to oil or coolant. When used as Type MTW, conductor is suitable for use in wet locations or when exposed to oil or coolant at temperatures not to exceed 60 °C or dry locations at temperatures not to exceed 90 °C (with ampacity limited to that for 75 °C conductor temperature per NFPA 79). Conductor temperatures not to exceed 105 °C in dry locations when rated AWM and used as appliance wiring material or when used as T90 Nylon. Voltage for all applications is 600 volts.

SPECIFICATIONS

Southwire Type THHN or THWN-2* or MTW (also AWM) meets or exceeds all applicable ASTM specifications, UL Standard 83, UL 1581, UL Standard 1063 (MTW), CSA, NOM-ANCE 90(D)C, Federal Specification A-A-59544, and requirements of the National Electrical Code (NFPA70).

- VW-1 - Sizes 14 Through 1 AWG
- CT Use - Size 1/0 AWG and Larger
- FT1 - Sizes 14 AWG through 500 kcmil
- T90 Nylon - Sizes 14 AWG through 500 kcmil
- TWN 75 - Sizes 14 AWG through 500 kcmil
- THWN-2 - 8 AWG and Larger
- AWM - 14 Through 6 AWG
- Sunlight Resistant - Colors available in sizes 2 AWG and Larger

CONSTRUCTION

Southwire Type THHN or THWN-2* or MTW copper conductors are annealed (soft) copper, compressed strand, insulated with a tough heat and moisture resistant polyvinyl chloride (PVC), over which a nylon (polyamide) or UL-listed equal jacket is applied. Available in black, white, red, blue, purple, green, yellow, brown, orange, and gray. Some colors standard, some subject to economic order quantity. Conductor sizes 2 AWG and larger listed and marked sunlight resistant in all colors.

¹ Oil and gasoline resistant II as defined by Underwriters Laboratories.
*rated -2 for 8 AWG and larger only.

CU-THHN

Conductor		Insulation Thickness (mils)	Jacket Thickness (mils)	Nominal O.D. (mils)		Approx. Net Weight Per 1000 ft. (lbs)		Allowable Ampacities+			Standard Package
Size (AWG or kcmil)	Num. Strands			Sol.	Str.	Sol.	Str.	60 °C	75 °C	90 °C	
14	7	15	4	102	109	15	16	15	15	15	DNF
12	7	15	4	119	128	23	24	20	20	20	DNF
10	7	20	4	150	161	36	38	30	30	30	DQF
8	19	30	5	--	213	--	63	40	50	55	F
6	19	30	5	--	249	--	95	55	65	75	E
4	19	40	6	--	318	--	152	70	85	95	C
3	19	40	6	--	346	--	189	85	100	110	BC
2	19	40	6	--	378	--	234	95	115	130	C
1	19	50	7	--	435	--	299	110	130	150	B
1/0	19	50	7	--	474	--	372	125	150	170	B
2/0	19	50	7	--	518	--	462	145	175	195	B
3/0	19	50	7	--	568	--	575	165	200	225	B
4/0	19	50	7	--	624	--	718	195	230	260	B
250	37	60	8	--	678	--	851	215	255	290	B
300	37	60	8	--	730	--	1012	240	285	320	B
350	37	60	8	--	777	--	1174	260	310	350	B
400	37	60	8	--	821	--	1334	280	335	380	B
500	37	60	8	--	902	--	1655	320	380	430	B
600	61	70	9	--	998	--	1987	355	420	475	C
750	61	70	9	--	1126	--	2464	400	475	535	C
1000	61	70	9	--	1275	--	3257	455	545	615	C

Solid construction available in sizes 14 through 10 AWG as Types THHN or THWN or AWM only.
 Sizes 14 through 6 AWG also suitable for 105°C appliance wiring material (AWM).
 Sizes 14 and 12 AWG contain four 500 ft. spools per carton. Size 10 AWG contains two 500 ft. spools per carton.
 +Allowable ampacities shown are for general use as specified by the National Electrical Code, 2008 Edition, section 310.15 unless the equipment is marked for use at higher temperatures the conductor ampacity shall be limited to the following.
 60°C - When terminated to equipment for circuits rated 100 amperes or less or marked for size 14 through 1 AWG conductors. MTW wet locations or when exposed to oil or coolant.
 75°C - When terminated to equipment for circuits rated over 100 amperes or marked for conductors larger than size 1 AWG. THWN-2 when exposed to oil or coolant. MTW dry locations.
 90°C - THHN dry locations. THWN-2 wet or dry locations. For ampacity derating purposes.

RECOMMENDED SAMPLE SPECIFICATIONS:

(MTW or THHN or THWN-2)

Conductors shall be UL-listed Type MTW or THHN or THWN-2* gasoline and oil resistant II, suitable for operations at 600 volts as specified in the National Electrical Code. Sizes 14 through 1 AWG shall be rated VW-1, larger sizes shall be listed for CT use. Sizes 2 AWG and larger listed and marked sunlight resistant in black only. Conductors shall be annealed copper, insulated with high-heat and moisture resistant PVC, jacketed with abrasion, moisture, gasoline, and oil resistant nylon or listed equivalent, as manufactured by Southwire Company or approved equal.

(AWM)

Conductors shall be UL-listed Type THHN or THWN-2* or MTW or AWM, suitable for operation at 600 volts at conductor temperatures not to exceed 105 °C.

*rated -2 for 8 AWG and larger only.



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