

PRODUCT SPECIFICATION

CABLE TYPE: THHN THWN-2 600V



THHN / THWN(-2) Cu

1. General Description

Stranded bare copper conductor PVC insulated with Nylon sheath wire suit for exposed or connected wiring in wet or dry locations

2. Design

Conductor: Stranded bare copper conductor or aluminum alloy S8000

Insulation: PVC wet or dry locations not to exceed 90° C

Nylon Sheath: Transparent Nylon sheath

The detailed rating, application and allowable temperatures are as follows:

- ◆ THHN or T90 Nylon- Dry locations not to exceed 90° C
- ◆ THWN-2- Wet or dry locations not to exceed 90° C or locations not to exceed 75° C when exposed to oil
- ◆ THWN- Wet locations not to exceed 75° C or dry locations not to exceed 90° C or locations not to exceed 75° C when exposed to oil
- ◆ TWN75- Wet locations not to exceed 75° C
- ◆ MTW- Wet locations or when exposed to oil at temperatures not to exceed 60° C or dry locations not to exceed 90° C (with ampacity limited to that for 75° C conductor temperature per NFPA 79)
- ◆ AWM- Dry locations not to exceed 105° C only when rated and used as appliance wiring material
- ◆ **Marked as THHN in all sizes. Also marked as THWN-2 in sizes 8 AWG and larger or marked as THWN in sizes 14, 12, 10 AWG. Marked sunlight resistant in sizes 2 AWG and larger.**

3. Dimension and other engineering data according to product list table 1

Table 1

Size (AWG)	Number of Strands	Insulation Thickness (mils)	Sheath Thickness (mils)	Nominal O.D. (in)	Net Weight Copper Conductor (lbs/kft)	Current Rating (A)			Standard package
						60C	75C	90C	
14	1	15	4	0.110	16	15	15	15	C
12	7	15	4	0.130	25	20	20	20	C
12	19	15	4	0.137	26	20	20	20	BC
10	7	20	4	0.150	36	30	30	30	BC
10	19	20	4	0.173	38	30	30	30	BC
8	7	30	5	0.215	63	40	50	55	ABCD
6	19	30	5	0.250	95.5	55	65	75	ABCD
1/0	19	50	7	0.474	372.6	125	150	170	ABCD
2/0	19	50	7	0.519	463	145	175	195	ABCD
4/0	19	50	7	0.625	718	195	230	260	ABCD

PRODUCT SPECIFICATION

CABLE TYPE: THHN THWN-2 600V

250	37	60	8	0.678	851	215	255	290	ABCD
300	37	60	8	0.730	1012	240	285	320	ABC
350	37	60	8	0.777	1174	260	310	350	ABC
400	37	60	8	0.821	1334	280	335	380	ABC
500	37	60	8	0.902	1655	320	380	430	ABCD
600	61	70	9	0.998	1987	350	420	475	ABC
750	61	70	9	1.126	2464	400	475	535	BC
1000	61	70	9	1.275	3257	455	545	615	C
A – 2,500ft - reel B – 1000ft - reel C – 500' Spool D – 5000ft - reel									

4. Marking

ASCENT E478018 ** (UL) THHN OR THWN-2 600V 90°C DRY OR WET XXAWG STR CU XXXXXFT

5. Performance of the wires

- ◆ ASTM - B3, B8, and B787 (19 Wire Combination Unilay-Stranded)
- ◆ UL Standards 83, 758, 1063, and 1581
- ◆ CSA C22.2 No. 75, T90 Nylon/TWN75 Sizes through 1000 kcmil
- ◆ NOM-ANCE 90° C
- ◆ NEMA WC-70 (ICEA S-95-658) Construction Requirements
- ◆ National Electrical Code, NFPA 70
- ◆ CT Rated in Sizes 1/0 AWG and larger
- ◆ VW-1 - Sizes 14 through 1 AWG
- ◆ FT1 - All Sizes
- ◆ Sunlight Resistant – Sizes 2 AWG and larger
- ◆ AWM - Sizes 14 through 6 AWG
- ◆ MTW - Stranded Constructions Only
- ◆ RoHS/REACH Compliant

6. Reference

UL83, UL1581, UL1063, UL758, ASTM - B3, B8, and B787

7. Colors

Available in Black, White, Red, Blue, Purple, Green, Yellow, Orange, Brown and Gray. Other colors available on request. Also available in striped configurations. Some colors are subject to economic order quantity.

Spec No.: 10521
Revision: 01
Date: 2025-05-16