# SIM*pull* THHN®

## Copper THHN Wire & Cable

**600 Volts. Copper Conductor. Thermoplastic Insulation/Nylon Sheath, Heat, Moisture, Gasoline and Oil Resistant II. All Sizes Rated Both THHN and either THWN (sizes 14, 12, and 10 AWG) or THWN-2 (sizes 8 AWG and larger). Also Rated MTW and AWM (See Below). SIMpull® Technology for Easier Pulling.**

## APPLICATIONS



Southwire® SIM*pull* THHN® copper conductors are primarily used in conduit and cable trays for services, feeders and branch circuits in commercial or industrial applications as specified in the National Electrical Code. Voltage for all applications is 600 volts. SIM*pull* THHN® copper conductors are designed to be installed without application of a pulling lubricant.

These conductors have multiple ratings. Depending upon the product application, 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

## STANDARDS & REFERENCES

Southwire® SIM*pull* THHN® copper conductors comply with the following:

- 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
- Federal Specification A-A-59544
- 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

## CONSTRUCTION

Southwire® SIM*pull* THHN® copper conductors are made with soft drawn copper. Sizes 14 through 4/0 AWG use a combination-unilay stranding while 250 kcmil and larger sizes use a compressed copper stranding. The wire is covered with a tough heat and moisture resistant PVC insulation with an overall nylon jacket utilizing SIM*pull*® Technology. Available in black, white, red, blue, purple, green, yellow, orange, brown, and gray. Also available in striped configurations. Some colors are subject to economic order quantity. 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, and 10 AWG. Marked sunlight resistant in sizes 2 AWG and larger. Sizes 14, 12, and 10 AWG are available with SIM*pull*® Technology only in SIM*pull* BARREL™ cable drum or SIM*pull*® *Coil*PAK™ configurations.



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One Southwire Drive, Carrollton, GA 30119, USA

| Conductor | | Insulation Thickness (mils) | Jacket Thickness (mils) | Nominal O.D. (mils) | Approx. Net Wt. Per 1000' (lbs.) | Allowable Ampacities+ | | | Standard Package |
|---|---|---|---|---|---|---|---|---|---|
| Size (AWG or kcmil) | No. of strands | | | | | 60°C | 75°C | 90°C | |
| 14* | 1 | 15 | 4 | 102 | 15 | 15 | 15 | 15 | AC |
| 12* | 1 | 15 | 4 | 119 | 23 | 20 | 20 | 20 | AC |
| 10* | 1 | 20 | 4 | 150 | 36 | 30 | 30 | 30 | AC |
| 14* | 19 | 15 | 4 | 109 | 16 | 15 | 15 | 15 | AC |
| 12* | 19 | 15 | 4 | 128 | 24 | 20 | 20 | 20 | AC |
| 10* | 19 | 20 | 4 | 161 | 38 | 30 | 30 | 30 | AC |
| 8 | 19 | 30 | 5 | 213 | 63 | 40 | 50 | 55 | ABCD |
| 6 | 19 | 30 | 5 | 249 | 95 | 55 | 65 | 75 | ABCD |
| 4 | 19 | 40 | 6 | 318 | 152 | 70 | 85 | 100 | ABCD |
| 3 | 19 | 40 | 6 | 346 | 189 | 85 | 100 | 115 | ABCD |
| 2 | 19 | 40 | 6 | 378 | 234 | 95 | 115 | 130 | ABCD |
| 1 | 19 | 50 | 7 | 435 | 299 | 110 | 130 | 145 | ABCD |
| 1/0 | 19 | 50 | 7 | 474 | 372 | 125 | 150 | 170 | ABCD |
| 2/0 | 19 | 50 | 7 | 518 | 462 | 145 | 175 | 195 | ABCD |
| 3/0 | 19 | 50 | 7 | 568 | 575 | 165 | 200 | 225 | ABCD |
| 4/0 | 19 | 50 | 7 | 624 | 718 | 195 | 230 | 260 | ABCD |
| 250 | 37 | 60 | 8 | 694 | 851 | 215 | 255 | 290 | ABCD |
| 300 | 37 | 60 | 8 | 747 | 1012 | 240 | 285 | 320 | ABC |
| 350 | 37 | 60 | 8 | 797 | 1174 | 260 | 310 | 350 | ABC |
| 400 | 37 | 60 | 8 | 842 | 1334 | 280 | 335 | 380 | ABC |
| 500 | 37 | 60 | 8 | 926 | 1655 | 320 | 380 | 430 | ABCD |
| 600 | 61 | 70 | 9 | 1024 | 1987 | 350 | 420 | 475 | ABC |
| 750 | 61 | 70 | 9 | 1126 | 2464 | 400 | 475 | 535 | BC |
| 1000 | 61 | 70 | 9 | 1275 | 3257 | 455 | 545 | 615 | C |

* Sizes 14, 12, and 10 AWG are available with SIMpull® Technology only in SIMpull® Barrel or CoilPAK® configurations. Standard put ups vary from the ones shown on this chart for standard 14-10 AWG THHN.

+Allowable ampacities shown are for general use as specified by the 2014 Edition of the National Electrical Code Sections 310.15 and 240.4(D).

Unless the equipment is marked for use at higher temperatures the conductor shall be limited to the following per NEC 110.14(C):

60° C - When terminated to equipment for circuits rated 100 amperes or less or marked for 14 - 1 AWG conductors.

75° C - When terminated to equipment for circuits rated over 100 amperes or marked for conductors larger than 1 AWG.

90° C - THHN dry locations and THWN-2 wet or dry locations for ampacity adjustment purposes using NEC section 310.15.

Package Codes:
A - 2500' Reel
B - 1000' Reel
C - 500' Spool
D - 5000' Reel

The Power of Connections.™

Southwire®

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| Conductor | | |
|---|---|---|
| Size (AWG or kcmil) | No. of strands | Stock Numbers |
| 14* | 1 | **SIM*pull* THHN® CU Stock #: BK:580285, WE:580294, WE/RD:580622, RD:580293, BE:580287, GN:580291, YW:580295, OE:580292, BN:580288, PE:580286, GY:580289** |
| | | **Standard THHN CU Stock #: BK:115790, WE:115808, RD:115816, BE:115824, GN:115832, YW:115840, OE:115857, BN:115865, PE:211243, GY:214668, TN:302539, PK:255331** |
| 12* | 1 | **SIM*pull* THHN® CU Stock #: BK:580265, WE:580275, WE/BK:580280, WE/BE:580281, WE/RD:580283 RD:580273, GN:580271, GN/YW:584566, BE:580267, PE:580264, YW:580276, OE:580272, BN:580268, GY:580269, GY/BN:580277 GY/OE:580278, GY/PE:580263, GY/YW:580279, PK:581931** |
| | | **Standard THHN CU Stock #: BK:115873, WE:115881, WE/BK:565284, WE/BE:611410, WE/RD:565285, Red:115899, GN:115915, GN/YW:401000, BE:115907, PE:212043, YW:115923 OE:115931, BN:115949, GY:228700, GY/BN:575303, GY/OE:575304 GY/YW:575305, PK:256479, TN:320127** |
| 10* | 1 | **SIM*pull* THHN® CU Stock #: BK:580203, WE:580215, WE/BK:580216, WE/BE:580218, WE/RD:580219, RD:580214, GN:580211, Gn/YW:580212, BE:580204, PE:580202, YW:580220, OE:580213, BN:580205, GY:580206, GY/BN:580226, GY/OE:580208, GY/PE:580201, GY/YW:580210** |
| | | **Standard THHN CU Stock #: BK:115956 WE:115964, WE/BK:551545, WE/BE:551547, WE/RD:551546, RD:115972, GN:115998, GN/YW:611757, BE:115980, YW:116004, OE:116012, BN:116020, GY:229823, GY/BN:575300, GY/OE:575301, GY/YW:575302, PK:258384, PE:253336** |
| 14* | 19 | **SIM*pull* THHN® CU Stock #: BK:585485, WE:580180, WE/BK:585484, WE/BE:581899, RD:585494, BE:585486, BE/WE:592686, GN:585490, YW:580181, OE:580177, BN:580172, BN/RD:592685, PE:580178, GY:580173, PK:581933** |
| | | **Standard THHN CU Stock #: BK:229559 WE:229567, RD:229575, RD/BK:662817, BE:229583, GN:229591, YW:229609, OE:229617, BN:229625, PE:239566, GY:229633, PK:244863, TN:320150** |
| 12* | 19 | **SIM*pull* THHN® CU Stock #: BK:580182, WE:580199, WE/BK:580192, WE/BE:580193, WE/RD:580194, RD:580198, BE:580222, GN:580195, GN/YW:583863, YW:580200, OE:580196, BN:585461, PE:580197, GY:580250, GY/BN:580207, GY/OE:580189, GY/PE:580188, GY/YW:580190, PK:581932** |
| | | **Standard THHN CU Stock #: BK:229641 WE:229658, WE/BK:311514, WE/BE:566441, WE/RD:566440, RD:229666, BE:229674, BE/WE:662981, GN:229682, GN/YW:663013, YW:229690, OE:229708, BN:229716, PE:232124, GY:229724, GY/BN:575307, GY/OE:575309, GY/YW:575310, TN:320168, PK:242503** |
| 10* | 19 | **SIM*pull* THHN® CU Stock #: BK:580221 WE:580255, WE/BK:580260, WE/BE:580261, WE/RD:580262, RD:580254, BE:580222, GN:585464, GN/YW:584567, YW:585470, OE:585465, BN:580223, PE:580253, GY:580250, GY/BN:580207, GY/OE:580257, GY/PE:580227, GY/YW:580259, PK:581930** |
| | | **Standard THHN CU Stock #: BK:229732, WE:229740, WE/BK:610028, WE/BE:556199, WE/RD:556198, RD:229757, RD/WE:663039, BE:229765, GN:229773, GN/YW:663112, PE:256594, YW:229781, OE:229799, BN:229807, GY:229815, GY/BN:575297, GY/OE:575298, GY/YW:575299, PK:260539, TN:320176** |

**Color Abbreviations**

BK-Black WE-White RD-Red BE-Blue GN-Green YW-Yellow
OE-Orange BN-Brown GY-Grey PK-Pink PE-Purple TN-Tan



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| Conductor | | |
|---|---|---|
| Size (AWG or kcmil) | No. of strands | Stock Numbers |
| 8 | 19 | **SIM*pull* THHN® CU Stock #: BK:204883, WE:204891, RD:204909, BE:204917, GN:204925, YW:238485, OE:238493, BN:238477, GY:238501, PK:577515, PE:256586** |
| 6 | 19 | **SIM*pull* THHN® CU Stock #: BK:204933, WE:204941, RD:204958, BE:204966, GN:204974, YW:260687, OE:260679, BN:260695, GY:254649, PE:485607** |
| 4 | 19 | **SIM*pull* THHN® CU Stock #: BK:204990, WE:205005, RD:204982, BE:205633, GN:251728, YW:411694, OE:411710, BN:411702, GY:611778, PE:552486** |
| 3 | 19 | **SIM*pull* THHN® CU Stock #: BK:243469, WE:243477, RD:243485, BE:372763, GN:601971, YW:551080, OE:551079, BN:551078, GY:551081, PE:552533** |
| 2 | 19 | **SIM*pull* THHN® CU Stock #: BK:205021, WE:205039, RD:205013, BE:315812, GN:295832, YW:420653, OE:610171, BN:610169, GY:610172, PE:552534** |
| 1 | 19 | **SIM*pull* THHN® CU Stock #: BK:205047, WE:344580, RD:344598, BE:481945, GN:400192, YW:550887, OE:550888, BN:550890, GY:550891, PE:552488** |
| 1/0 | 19 | **SIM*pull* THHN® CU Stock #: BK:205054, WE:558771, RD:558773, BE:558774, GN:556315, YW:558777, OE:558779, BN:558778, GY:558781, PE:551539** |
| 2/0 | 19 | **SIM*pull* THHN® CU Stock #: BK:205062 WE:556111, RD:556113, BE:556114, GN:556115, YW:556116, OE:556117, BN:556119, GY:558784, PE:552535** |
| 3/0 | 19 | **SIM*pull* THHN® CU Stock #: BK:205070, WE:556120, RD:556121, BE:556122, GN:556123, YW:556124, OE:556125, BN:556127, GY:556698, PE:551541** |
| 4/0 | 19 | **SIM*pull* THHN® CU Stock #: BK:205088, WE:556128, RD:556129, BE:556130, GN:556131, YW:556132, OE:556133, BN:556135, GY:556697, PE:551540** |
| 250 | 37 | **SIM*pull* THHN® CU Stock #: BK:205096, WE:556136, YW:556140, OE:556141, BN:556143, GY:556552, BE:556138, GN:556139, PK:592681, PE:551025, RD:556137, TN:592682** |
| 300 | 37 | **SIM*pull* THHN® CU Stock #: BK:205104, WE:556144, RD:556145, BE:556146, GN:556147, YW:556148, OE:556149, BN:556150, GY:556551, PE:551026** |
| 350 | 37 | **SIM*pull* THHN® CU Stock #: BK:205112, WE:556151, RD:556152, BE:556153, GN:556154, YW:556155, OE:556156, BN:556157, GY:556707, PE:551027** |
| 400 | 37 | **SIM*pull* THHN® CU Stock #: BK:205120, WE:556158, RD:556160, BE:556161, GN:556162, YW:556163, OE:556164, BN:556165, GY:556550, PK:581797, PE:551029, TN:581798** |
| 500 | 37 | **SIM*pull* THHN® CU Stock #: BK:205138, WE:556166, RD:556168, BE:556169, GN:556170, YW:556171, OE:556172, BN:556173, GY:556549, PK:581782, PE:551599, TN:581783** |
| 600 | 61 | **SIM*pull* THHN® CU Stock #: BK:321471, WE:556174, RD:556176, BE:556177, GN:556178, YW:556179, OE:556180, BN:556181, GY:558859, PE:552485** |
| 750 | 61 | **SIM*pull* THHN® CU Stock #: BK:320994, WE:564945, RD:564946, BE:564944, GN:551700, YW:550907, OE:550908, BN:550909, GY:550910, PE:552536** |
| 1000 | 61 | **SIM*pull* THHN® CU Stock #: BK:289710, BN:552644, OE:552645, YW:552647** |

**Color Abbreviations**

| | | | | | |
|---|---|---|---|---|---|
| BK-Black | WE-White | RD-Red | BE-Blue | GN-Green | YW-Yellow |
| OE-Orange | BN-Brown | GY-Grey | PK-Pink | PE-Purple | TN-Tan |



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