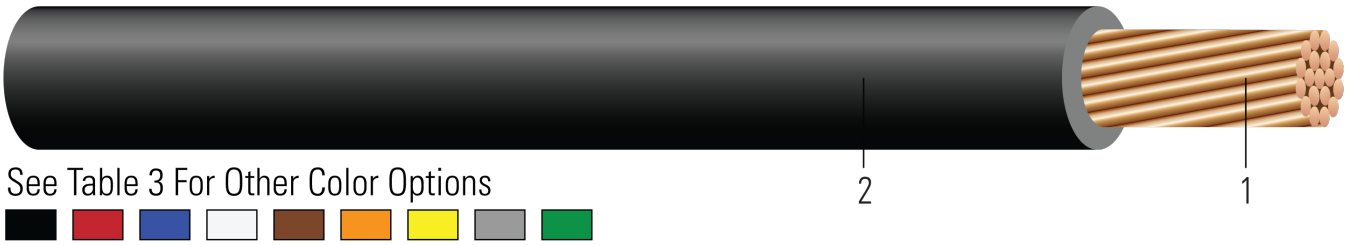
# SIMpull XHHW-2®/RW90 Copper

Single Conductor Copper, Cross Linked Polyethylene (XLPE) with SIMpull technology for easier pulling. Type XHHW-2 Conductor are rated 600 or 1000 Volt. Type RW90 Conductors are rated for 600 Volt.




See Table 3 For Other Color Options

Image not to scale. See Table 1 for dimensions.

## CONSTRUCTION:

1. **Conductor:** Class B compressed stranded bare copper per ASTM B3 and B8
2. **Insulation:** Flame-Retardant and Moisture-Resistant Thermoset Cross-Linked Polyethylene (XLPE) with Patented SIMpull® Technology

## APPLICATIONS AND FEATURES:

### APPLICATION

Southwire Copper SIMpull XHHW-2®/RW90 conductors are primarily used in conduit, cable tray or other recognized raceways for services, feeders, and branch circuit wiring. SIMpull XHHW-2®/RW90 copper conductors may be used in wet or dry locations at temperatures not to exceed 90°C. Southwire Copper SIMpull XHHW-2®/RW90 conductors are designed to be installed without the application of pulling lubricant.
Voltage rating for XHHW-2 is 600 volts or 1000 volts for sizes 8 and larger. Type XHHW-2 is suitable for use in Health Care Facilities per Section 517.160 of the National Electrical Code where a dielectric constant of less than 3.5 maybe specified.
Voltage rating for RW90 is 600 volts. RW90 is suitable for use in open wiring and use in raceways (except cable troughs and ventilated flexible cableways) in dry or wet locations as per Canadian Electrical Code. For open wiring exposed to the weather.

### FEATURES

- SIS- 8 AWG
- Sunlight resistant
- -40°C Cold bend
- FT1
- Gasoline and Oil Resistant II
- CT Rated- 1/0 AWG and larger
- FT4- 350 kcmil and larger
- RoHS/REACH Compliant

### For Circuit Sizes (14, 12, and 10 AWG) Go To:

- SPEC 10005 for XHHW-2
- SPEC 22061 for RW90



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## SPECIFICATIONS:

- ASTM B3 Soft or Annealed Copper Wire
- ASTM B8 Concentric-Lay-Stranded Copper Conductors
- ASTM B787 19 Wire Combination Unilay-Stranded Copper Conductors
- UL 44 Thermoset-Insulated Wires and Cables
- UL 1685 Vertical-Tray Fire Propagation and Smoke Release Test (1/0 and Larger)
- CSA C22.2 No. 38 Thermoset-insulated wires and cables
- ICEA S-95-658 (NEMA WC70) Power Cables Rated 2000 Volts or Less for the Distribution of Electrical Energy
- IEEE 1202/FT4 Flame Test (70,000 BTU/hr) 350kcmil and Larger
- Made in America: Compliant with both Buy American and Buy America Act (BAA) requirements per 49 U.S.C. § 5323(j) and the Federal Transit Administration Buy America requirements per 49 C.F.R. part 661
- Federal Specification A-A-59544
- NMX-J-451-ANCE Thermoset insulated wires and cables
- NOM-063-SCFI Electrical Products – Conductors – Safety Requirements
- NEMA 70901-2-2024 Make It American Compliance with Domestic Preference Requirements Pt. 2 Wire & Cable

## SAMPLE PRINT LEGEND:

### 8 AWG thru 1 AWG

{SQFTG} SOUTHWIRE{R} {NOLUBE}{R} {SIMPULL}{R} E30117 {UL} TYPE XHHW-2 8 AWG (8.37{MM2}) CU 600V/1000V SR GRII PRII OR SIS 600V - LL90458 {CSA} RW90 XLPE 8 AWG (8.37{mm2}) CU 600V GRI PRI -40{D}C SR FT1 - {NOM}-ANCE LS - PAT WWW.PATENTSW.COM

### 1/0 AWG thru 300 kcmil

{SQFTG} SOUTHWIRE{R} {NOLUBE}{R} {SIMPULL}{R} E30117 {UL} TYPE XHHW-2 1/0 AWG (53.5{MM2}) CU 600V/1000V SR FOR CT USE GRII PRII - LL90458 {CSA} RW90 XLPE 1/0 AWG (53.5{mm2}) CU 600V GRI PRI -40{D}C SR FT1 - {NOM}-ANCE LS - PAT WWW.PATENTSW.COM

### 350 kcmil and Larger

{SQFTG} SOUTHWIRE{R} {NOLUBE}{R} {SIMPULL}{R} E30117 {UL} TYPE XHHW-2 350 KCMIL (177{MM2}) CU 600V/1000V SR FOR CT USE GRII PRII FT4 - LL90458 {CSA} RW90 XLPE 350 KCMIL (177{mm2}) CU 600V GRI PRI -40{D}C SR FT4 - {NOM}-ANCE LS - PAT WWW.PATENTSW.COM



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## Table 1 – Weights and Measurements

| Cond. Size | Strand Count | Diameter Over Conductor | Insul. Thickness | Insulation Color | Approx. OD | Copper Weight | Approx. Weight |
|---|---|---|---|---|---|---|---|
| AWG/Kcmil | No. of Strands | inch | mil | | inch | lb/1000ft | lb/1000ft |
| 8 | 7 | 0.142 | 45 | OE | 0.238 | 50 | 64 |
| 6 | 7 | 0.177 | 45 | GN | 0.274 | 81 | 97 |
| 4 | 7 | 0.225 | 45 | BK | 0.321 | 128 | 148 |
| 3 | 7 | 0.252 | 45 | BK | 0.348 | 162 | 184 |
| 2 | 7 | 0.283 | 45 | BK | 0.379 | 204 | 228 |
| 1 | 19 | 0.322 | 55 | PE | 0.437 | 258 | 290 |
| 1/0 | 19 | 0.362 | 55 | OE | 0.476 | 326 | 362 |
| 2/0 | 19 | 0.405 | 55 | OE | 0.52 | 410 | 450 |
| 3/0 | 19 | 0.456 | 55 | TN | 0.57 | 518 | 562 |
| 4/0 | 19 | 0.512 | 55 | PK | 0.626 | 655 | 704 |
| 250 | 37 | 0.558 | 65 | PE | 0.68 | 771 | 833 |
| 300 | 37 | 0.611 | 65 | BE | 0.732 | 926 | 993 |
| 350 | 37 | 0.661 | 65 | PE | 0.779 | 1080 | 1152 |
| 400 | 37 | 0.706 | 65 | GN | 0.823 | 1235 | 1311 |
| 500 | 37 | 0.789 | 65 | PE | 0.904 | 1543 | 1628 |
| 600 | 61 | 0.866 | 80 | BN | 1.008 | 1852 | 1964 |
| 700 | 61 | 0.935 | 80 | BN | 1.075 | 2161 | 2281 |
| 750 | 61 | 0.968 | 80 | TN | 1.107 | 2315 | 2439 |
| 1000 | 61 | 1.117 | 80 | BK | 1.285 | 3087 | 3233 |

All dimensions are nominal and subject to normal manufacturing tolerances
◊ Cable marked with this symbol is a standard stock item


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## Table 2 – Electrical and Engineering Data

| Cond. Size | Min Bending Radius | Max Pull Tension | DC Resistance @ 25°C | AC Resistance @ 75°C | Inductive Reactance @ 60Hz | Allowable Ampacity At 75°C | Allowable Ampacity At 90°C |
|---|---|---|---|---|---|---|---|
| AWG/ Kcmil | inch | lb | Ω/1000ft | Ω/1000ft | Ω/1000ft | Amp | Amp |
| 8 | 1 | 132 | 0.653 | 0.81 | 0.052 | 50 | 55 |
| 6 | 1.1 | 209 | 0.411 | 0.495 | 0.051 | 65 | 75 |
| 4 | 1.3 | 333 | 0.258 | 0.32 | 0.048 | 85 | 95 |
| 3 | 1.4 | 420 | 0.205 | 0.254 | 0.047 | 100 | 115 |
| 2 | 1.5 | 530 | 0.162 | 0.201 | 0.045 | 115 | 130 |
| 1 | 1.7 | 669 | 0.128 | 0.159 | 0.046 | 130 | 145 |
| 1/0 | 1.9 | 844 | 0.102 | 0.127 | 0.044 | 150 | 170 |
| 2/0 | 2.1 | 1064 | 0.082 | 0.102 | 0.043 | 175 | 195 |
| 3/0 | 2.3 | 1342 | 0.064 | 0.079 | 0.042 | 200 | 225 |
| 4/0 | 2.5 | 1692 | 0.051 | 0.063 | 0.041 | 230 | 260 |
| 250 | 2.7 | 2000 | 0.043 | 0.053 | 0.041 | 255 | 290 |
| 300 | 2.9 | 2400 | 0.036 | 0.045 | 0.041 | 285 | 320 |
| 350 | 3.1 | 2800 | 0.031 | 0.039 | 0.04 | 310 | 350 |
| 400 | 3.3 | 3200 | 0.027 | 0.035 | 0.04 | 335 | 380 |
| 500 | 3.6 | 4000 | 0.021 | 0.027 | 0.039 | 380 | 430 |
| 600 | 5 | 4800 | 0.018 | 0.024 | 0.039 | 420 | 475 |
| 700 | 5.4 | 5600 | 0.015 | 0.02 | 0.038 | 460 | 520 |
| 750 | 5.5 | 6000 | 0.014 | 0.019 | 0.038 | 475 | 535 |
| 1000 | 6.4 | 8000 | 0.011 | 0.016 | 0.037 | 545 | 615 |

* Ampacities based upon 2023 NEC Table 310.16 and do not consider the overcurrent protection limitations in NEC 240.4(D) of 15 Amps for 14 AWG CU, 20 Amps for 12 AWG CU, and 30 Amps for 10 AWG CU (independent of the conductor temperature rating and stranding if size is present in table). Also, see NEC sections 310.15 and 110.14(C) for additional requirements.
* Inductive impedance is based on non-ferrous conduit with one diameter spacing center-to-center.
* Ampacities derived from the 2021 Canadian Electrical Code. - Table 2 - for Raceway or Cable. Not more than 3 copper conductors on an ambient temperature of 30°C.


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## Table 3 - Stock Code Colors

| Size (Strand) | Black | Red | Blue | White | Brown | Orange | Yellow | Gray | Purple | Green |
|---|---|---|---|---|---|---|---|---|---|---|
| 8 (7) | 112953 | 952713 | 553059 | 952721 | 553060 | 553061 | 553062 | 553063 | | 952739 |
| 6 (7) | 112961 | 952705 | 959916 | 678607 | 683383 | 683391 | 553067 | 553068 | | 553230 |
| 4 (7) | 112979 | 952697 | 553846 | 678599 | 553847 | 553848 | 553849 | 553850 | | 558627 |
| 3 (7) | 267278 | 652971 | 652972 | 652973 | 677646 | 677647 | 652975 | 677648 | | 890469 |
| 2 (7) | 112987 | 218115 | 553087 | 218107 | 553088 | 553089 | 553090 | | 674066 | 474122 |
| 1 (19) | 112995 | 550761 | 550762 | 550808 | 553854 | 553855 | 553856 | 553857 | 674065 | 550766 |
| 1/0 (19) | 113001 | 553860 | 553861 | 553858 | 553863 | 553864 | 553865 | 553866 | 674064 | 553862 |
| 2/0 (19) | 113019 | 553871 | 553872 | 553870 | 553873 | 553874 | 553876 | 553877 | 553878 | 552070 |
| 3/0 (19) | 113027 | 553881 | 553882 | 553880 | 553885 | 553886 | 553887 | 553888 | 674063 | 553884 |
| 4/0 (19) | 113035 | 553078 | 553079 | 553077 | 553080 | 553082 | 553083 | 553084 | 674062 | 552071 |
| 250 (37) | 113043 | 553893 | 553894 | 553892 | 553896 | 553897 | 553898 | 553899 | 674061 | 553895 |
| 300 (37) | 113050 | 643848 | 643849 | 643850 | 561129 | 561130 | 561131 | 584039 | 139410 | 580121 |
| 350 (37) | 113068 | 553903 | 553904 | 553902 | 553906 | 553907 | 553908 | 553910 | 674060 | 553905 |
| 400 (37) | 113076 | 561701 | 561702 | 561132 | 561111 | 561112 | 561113 | 561703 | | 558666 |
| 500 (37) | 113084 | 550369 | 550261 | 553071 | 550260 | 550262 | 550259 | 553074 | 553075 | 553072 |
| 600 (61) | 113092 | 553914 | 553915 | 553913 | 553918 | 553919 | 553920 | 553921 | 589214 | 553916 |
| 700 (61) | 586272 | | | | 662840 | 662842 | 662843 | 662844 | | |
| 750 (61) | 113100 | 553927 | 553928 | 553926 | 553930 | 553931 | 553932 | 553934 | | 553929 |
| 1000 (61) | 113134 | 138623 | 138622 | 138624 | 678463 | 678465 | 678464 | | | 668449 |

Award Winning Patent Pending Building Wire Selector


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