



## Copper SIMpull XHHW-2®/RW90

Conductor size 8 AWG and larger. Power Cable 600 or 1000 Volt Single Conductor Copper, Cross Linked Polyethylene (XLPE) with SIMpull technology for easier pulling.



Image not to scale. See Table 1 for dimensions.

### CONSTRUCTION:

1. **Conductor:** Class B compressed stranded bare copper per ASTM B3 and ASTM B8
2. **Insulation:** Cross Linked Polyethylene (XLPE) with SIMpull technology

### APPLICATIONS AND FEATURES:

#### APPLICATION

Southwire® SIMpull XHHW-2®/RW90 copper conductors are primarily used in conduit, cable tray or other recognized raceways for services, feeders, and branch circuit wiring, as specified in the National Electrical Code. SIMpull XHHW-2®/RW90 copper conductors may be used in wet or dry locations at temperatures not to exceed 90°C. Voltage rating for XHHW-2 conductors is 600 volts or 1000 volts for all sizes. 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. This cable is designed to be installed without the application of pulling lubricant. RW90 is for open wiring and use in raceways (except cabletroughs 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
- SPEC 10005 for circuit sizes 14 AWG, 12 AWG, and 10 AWG

### 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

**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

**Table 1 – Weights and Measurements**

| Cond. Size<br>AWG/Kcmil | Cond. Number | Strand Count<br>No. of Strands | Diameter Over Conductor<br>inch | Insul. Thickness<br>mil | Approx. OD<br>inch | Copper Weight<br>lb/1000ft | Approx. Weight<br>lb/1000ft |
|-------------------------|--------------|--------------------------------|---------------------------------|-------------------------|--------------------|----------------------------|-----------------------------|
| 1                       | 1            | 19                             | 0.322                           | 55                      | 0.435              | 258                        | 291                         |

All dimensions are nominal and subject to normal manufacturing tolerances

◊ Cable marked with this symbol is a standard stock item

**Table 2 – Electrical and Engineering Data**

| Cond. Size<br>AWG/<br>Kcmil | Cond. Number | Min Bending<br>Radius<br>inch | Max Pull<br>Tension<br>lb | DC Resistance @<br>25°C<br>Ω/1000ft | AC Resistance @<br>75°C<br>Ω/1000ft | Inductive Reactance<br>@ 60Hz<br>Ω/1000ft | Allowable Ampacity<br>At 75°C<br>Amp | Allowable Ampacity<br>At 90°C<br>Amp |
|-----------------------------|--------------|-------------------------------|---------------------------|-------------------------------------|-------------------------------------|---|--------------------------------------|--------------------------------------|
| 1                           | 1            | 1.7                           | 669                       | 0.128                               | 0.154                               | 0.046                                     | 130                                  | 145                                  |

\* Ampacities based upon 2023 NEC Table 310.16 Raceway or Cable, Not more than 3 copper conductors on an ambient temperature of 30°C.

\* 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.

\* Inductive Reactance is based on non-ferrous conduit with one diameter spacing.





**Table 3 - Stock Code Colors**

| Size (Strand) | Black          | Red            | Blue           | White          | Brown  | Orange         | Yellow | Gray   | Purple | Green  |
|---------------|----------------|----------------|----------------|----------------|--------|----------------|--------|--------|--------|--------|
| 12 (Solid)    | 583470         | 583471         | 583472         | 583473         |        |                |        |        |        | 583479 |
| 10 (Solid)    | 584407         | 584408         | 584410         | 584411         |        |                | 557931 |        |        |        |
| 14 (7)        |                |                |                | 955351         |        |                |        |        |        |        |
| 12 (7)        | 583086         | 583087         | 583091         | 955344, 583089 |        |                |        |        |        | 583090 |
| 10 (7)        | 583103         | 583105         | 583108         | 955336, 583106 |        |                |        |        |        | 583107 |
| 8 (7)         | 112953         | 952713         | 553059         | 952721         | 553060 | 553061, 581529 | 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, 552007 | 652973         | 677646 | 677647         | 652975 | 677648 |        | 890469 |
| 2 (7)         | 112987         | 218115, 552001 | 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, 951822 | 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 |

