

## Copper SIMpull XHHW-2®

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® 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® 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.

Note: Simpull technology on Sizes # 8 and Larger. Non-Simpull technology on #14, #12, #10.

#### FEATURES

- Sunlight resistant - #8 AWG and larger
- Gasoline and Oil Resistant II - #8 AWG and larger
- CT Rated - 1/0 AWG and Larger
- FT1 - #8 AWG and larger
- FT4 - 350 kcmil and larger
- SIS - Sizes 14 through 8 AWG
- -40°C cold bend - #8 AWG and larger
- RoHS Compliant

### 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



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- 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:**

14 AWG thru 10 AWG

SOUTHWIRE E30117 (UL) XX AWG (XXXmm<sup>2</sup>) CU TYPE XHHW-2 600V/1000V OR SIS 600 VOLTS NOM-ANCE

350 kcmil and Larger

{SQFTG} SOUTHWIRE® {NOLUBE}® {SIMPULL}® E30117 {UL} TYPE XHHW-2 XXX KCMIL (XXX{MM<sup>2</sup>}) CU 600V/1000V SR  
 FOR CT USE GRII PRII FT4 - {NOM}-ANCE LS - PAT WWW.PATENTSW.COM

**Table 1 – Weights and Measurements**

| Cond. Size<br>AWG/Kcmil | 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 |
|-------------------------|--------------------------------|---------------------------------|-------------------------|--------------------|----------------------------|-----------------------------|
| 12                      | Solid                          | 0.081                           | 30                      | 0.141              | 19                         | 25                          |
| 10                      | Solid                          | 0.102                           | 30                      | 0.162              | 30                         | 37                          |
| 14                      | 7                              | 0.071                           | 30                      | 0.131              | 12                         | 17                          |
| 12                      | 7                              | 0.089                           | 30                      | 0.147              | 20                         | 24                          |
| 10                      | 7                              | 0.113                           | 30                      | 0.173              | 32                         | 36                          |
| 8                       | 7                              | 0.142                           | 45                      | 0.238              | 50                         | 64                          |
| 6                       | 7                              | 0.178                           | 45                      | 0.274              | 81                         | 97                          |
| 4                       | 7                              | 0.225                           | 45                      | 0.321              | 128                        | 148                         |
| 3                       | 7                              | 0.252                           | 45                      | 0.348              | 162                        | 184                         |
| 2                       | 7                              | 0.283                           | 45                      | 0.379              | 204                        | 228                         |
| 1                       | 19                             | 0.322                           | 55                      | 0.435              | 258                        | 291                         |
| 1/0                     | 19                             | 0.362                           | 55                      | 0.480              | 326                        | 363                         |
| 2/0                     | 19                             | 0.405                           | 55                      | 0.524              | 410                        | 452                         |
| 3/0                     | 19                             | 0.456                           | 55                      | 0.574              | 518                        | 564                         |
| 4/0                     | 19                             | 0.512                           | 55                      | 0.630              | 655                        | 707                         |
| 250                     | 37                             | 0.558                           | 65                      | 0.700              | 771                        | 838                         |
| 300                     | 37                             | 0.611                           | 65                      | 0.753              | 926                        | 998                         |
| 350                     | 37                             | 0.661                           | 65                      | 0.803              | 1080                       | 1158                        |
| 400                     | 37                             | 0.706                           | 65                      | 0.848              | 1235                       | 1317                        |
| 500                     | 37                             | 0.789                           | 65                      | 0.908              | 1543                       | 1632                        |
| 600                     | 61                             | 0.866                           | 80                      | 1.038              | 1852                       | 1973                        |
| 750                     | 61                             | 0.968                           | 80                      | 1.140              | 2315                       | 2449                        |
| 1000                    | 61                             | 1.117                           | 80                      | 1.289              | 3087                       | 3240                        |

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 60°C | Allowable Ampacity At 75°C | Allowable Ampacity At 90°C |
|------------|--------------------|------------------|----------------------|----------------------|----------------------------|----------------------------|----------------------------|----------------------------|
| AWG/Kcmil  | inch               | lb               | Ω/1000ft             | Ω/1000ft             | Ω/1000ft                   | Amp                        | Amp                        | Amp                        |
| 12         | 0.5                | 52               | 1.662                | 2.002                | 0.054                      | 20                         | 25                         | 30                         |
| 10         | 0.6                | 83               | 1.040                | 1.253                | 0.050                      | 30                         | 35                         | 40                         |
| 14         | 0.5                | 32               | 2.631                | 3.170                | 0.058                      | 15                         | 20                         | 25                         |
| 12         | 0.5                | 52               | 1.662                | 2.002                | 0.054                      | 20                         | 25                         | 30                         |
| 10         | 0.6                | 83               | 1.040                | 1.253                | 0.050                      | 30                         | 35                         | 40                         |
| 8          | 0.9                | 132              | 0.653                | 0.786                | 0.052                      | 40                         | 50                         | 55                         |
| 6          | 1.0                | 209              | 0.411                | 0.495                | 0.051                      | 55                         | 65                         | 75                         |
| 4          | 1.2                | 333              | 0.258                | 0.310                | 0.048                      | 70                         | 85                         | 95                         |
| 3          | 1.3                | 420              | 0.205                | 0.246                | 0.047                      | 85                         | 100                        | 115                        |
| 2          | 1.5                | 530              | 0.162                | 0.195                | 0.045                      | 95                         | 115                        | 130                        |
| 1          | 1.7                | 669              | 0.128                | 0.154                | 0.046                      | 110                        | 130                        | 145                        |
| 1/0        | 1.9                | 844              | 0.102                | 0.122                | 0.044                      | 125                        | 150                        | 170                        |
| 2/0        | 2.0                | 1064             | 0.081                | 0.097                | 0.043                      | 145                        | 175                        | 195                        |
| 3/0        | 2.2                | 1342             | 0.064                | 0.078                | 0.042                      | 165                        | 200                        | 225                        |
| 4/0        | 2.5                | 1692             | 0.051                | 0.062                | 0.041                      | 195                        | 230                        | 260                        |
| 250        | 2.8                | 2000             | 0.043                | 0.053                | 0.041                      | 215                        | 255                        | 290                        |
| 300        | 3.0                | 2400             | 0.036                | 0.045                | 0.041                      | 240                        | 285                        | 320                        |
| 350        | 3.2                | 2800             | 0.031                | 0.0390               | 0.040                      | 260                        | 310                        | 350                        |
| 400        | 3.3                | 3200             | 0.027                | 0.035                | 0.040                      | 280                        | 335                        | 380                        |
| 500        | 3.6                | 4000             | 0.022                | 0.029                | 0.039                      | 320                        | 380                        | 430                        |
| 600        | 5.1                | 4800             | 0.018                | 0.025                | 0.039                      | 350                        | 420                        | 475                        |
| 750        | 5.7                | 6000             | 0.014                | 0.022                | 0.038                      | 400                        | 475                        | 535                        |
| 1000       | 6.4                | 8000             | 0.011                | 0.018                | 0.037                      | 455                        | 545                        | 615                        |

\* Ampacities based upon 2023 NEC Table 310.16 and do not take into account 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 Reactance is based on non-ferrous conduit with one diameter spacing.



## Stock Code Colors and Standard Package

| Size       | Package                                | Black                                                                             | Red                                                                               | Blue                                                                              | White                                                                             | Brown                                                                              | Orange                                                                              | Yellow                                                                              | Gray                                                                                | Green                                                                               |
|------------|----------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|            |                                        |  |  |  |  |  |  |  |  |  |
| 14 (7)     | Reel: 2500'<br>Spool: 500'             | 112920                                                                            | 370932                                                                            | 370940                                                                            | 370924                                                                            | 370981                                                                             | 370973                                                                              | 370957                                                                              | 371005                                                                              | 370965                                                                              |
| 12 (Solid) | Reel: 2500'<br>Spool: 500'             | 550220                                                                            | 550222                                                                            | 550224                                                                            | 550221                                                                            | 550227                                                                             | 550226                                                                              | 550225                                                                              |                                                                                     | 550223                                                                              |
| 12 (7)     | Reel: 2500'<br>Spool: 500'             | 112938                                                                            | 371039                                                                            | 371047                                                                            | 371021                                                                            | 371088                                                                             | 371070                                                                              | 371054                                                                              | 371104                                                                              | 371062                                                                              |
| 10 (Solid) | Reel: 2500'<br>Spool: 500'             | 137240                                                                            | 550213                                                                            | 550215                                                                            | 550212                                                                            | 550218                                                                             | 550217                                                                              | 550216                                                                              |                                                                                     | 550214                                                                              |
| 10 (7)     | Reel: 2500'<br>Spool: 500'             | 112946                                                                            | 371138                                                                            | 371146                                                                            | 371120                                                                            | 371187                                                                             | 371179                                                                              | 371153                                                                              | 371203                                                                              | 371161                                                                              |
| 8          | Reel: 1000'/2500'/5000'<br>Spool: 500' | 112953                                                                            | 952713                                                                            | 588683                                                                            | 952721                                                                            | 553060                                                                             | 550361                                                                              | 553062                                                                              | 553063                                                                              | 952739                                                                              |
| 6          | Reel: 1000'/2500'/5000'<br>Spool: 500' | 112961                                                                            | 952705                                                                            | 959916                                                                            | 678607                                                                            | 683383                                                                             | 683391                                                                              | 553067                                                                              | 553068                                                                              | 553230                                                                              |
| 4          | Reel: 1000'/2500'/5000'<br>Spool: 500' | 112979                                                                            | 952697                                                                            | 553846                                                                            | 678599                                                                            | 553847                                                                             | 553848                                                                              | 553849                                                                              | 553850                                                                              | 558627                                                                              |
| 3          | Reel: 1000'<br>Spool: 500'             | 267278                                                                            |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     | 890469                                                                              |
| 2          | Reel: 1000'/2500'/5000'<br>Spool: 500' | 112987                                                                            | 218115                                                                            | 553087                                                                            | 218107                                                                            | 553088                                                                             | 553089                                                                              | 553090                                                                              | 553091                                                                              | 474122                                                                              |
| 1          | Reel: 1000'/2500'/5000'<br>Spool: 500' | 112995                                                                            | 550761                                                                            | 550762                                                                            | 550808                                                                            | 553854                                                                             | 553855                                                                              | 553856                                                                              | 553857                                                                              | 550766                                                                              |
| 1/0        | Reel: 1000'/2500'/5000'<br>Spool: 500' | 113001                                                                            | 553860                                                                            | 553861                                                                            | 553858                                                                            | 553863                                                                             | 553864                                                                              | 553865                                                                              | 553866                                                                              | 553862                                                                              |
| 2/0        | Reel: 1000'/2500'/5000'<br>Spool: 500' | 113019                                                                            | 553871                                                                            | 553872                                                                            | 553870                                                                            | 553873                                                                             | 553874                                                                              | 553876                                                                              | 553877                                                                              | 552070                                                                              |
| 3/0        | Reel: 1000'/2500'/5000'<br>Spool: 500' | 113027                                                                            | 553881                                                                            | 553882                                                                            | 553880                                                                            | 553885                                                                             | 553886                                                                              | 553887                                                                              | 553888                                                                              | 553884                                                                              |
| 4/0        | Reel: 1000'/2500'/5000'<br>Spool: 500' | 113035                                                                            | 553078                                                                            | 553079                                                                            | 553077                                                                            | 553080                                                                             | 553082                                                                              | 553083                                                                              | 553084                                                                              | 552071                                                                              |
| 250        | Reel: 1000'/2500'/5000'<br>Spool: 500' | 113043                                                                            | 553893                                                                            | 553894                                                                            | 553892                                                                            | 553896                                                                             | 553897                                                                              | 553898                                                                              | 553899                                                                              | 553895                                                                              |
| 300        | Spool: 500'                            | 113050                                                                            |                                                                                   |                                                                                   |                                                                                   | 561129                                                                             | 561130                                                                              | 561131                                                                              | 584039                                                                              |                                                                                     |
| 350        | Reel: 1000'/2500'                      | 113068                                                                            | 553903                                                                            | 553904                                                                            | 553902                                                                            | 553906                                                                             | 553907                                                                              | 553908                                                                              | 553910                                                                              | 553905                                                                              |
| 400        | Reel: 1000'/2500'<br>Spool: 500'       | 113076                                                                            | 561701                                                                            | 561702                                                                            | 561132                                                                            | 561111                                                                             | 561112                                                                              | 561113                                                                              | 561703                                                                              | 558666                                                                              |
| 500        | Reel: 1000'/2500'<br>Spool: 500'       | 113084                                                                            | 550369                                                                            | 550261                                                                            | 553071                                                                            | 550260                                                                             | 550262                                                                              | 550259                                                                              | 553074                                                                              | 553072                                                                              |
| 600        | Reel: 1000'/2500'<br>Spool: 500'       | 113092                                                                            | 553914                                                                            | 553915                                                                            | 553913                                                                            | 553918                                                                             | 553919                                                                              | 553920                                                                              | 553921                                                                              | 553916                                                                              |
| 700        | N/A                                    | 586272                                                                            |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| 750        | Reel: 2500'                            | 113100                                                                            | 553927                                                                            | 553930                                                                            | 553926                                                                            | 553930                                                                             | 553931                                                                              | 553932                                                                              | 553934                                                                              | 553929                                                                              |
| 1000       | N/A                                    | 113134                                                                            |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

