



## CU 600V LSZH XHHW-2 SOLONONplus™

SOLONONplus™ 600Volt Single Conductor Copper Cross Linked Polyolefin Low Smoke Zero Halogen (XLPO LSZH) Insulation Type XHHW-2



### CONSTRUCTION:

1. **Conductor:** Class B compressed stranded bare copper per ASTM B3 and ASTM B8
2. **Insulation:** SOLONONplus™ Cross Linked Polyolefin Low Smoke Zero Halogen (XLPO LSZH) Type XHHW-2

### APPLICATIONS AND FEATURES:

Southwire's 600 Volt SOLONONplus™ Type XHHW-2 cables are suited for use in wet and dry areas, conduits, ducts, troughs, trays, and aerially when supported by a messenger. These cables are ideal for use in establishments where low smoke and low acid emissions are desired for public safety and health and where superior electrical properties are desired. These cables are capable of operating continuously at the conductor temperature not in excess of 90°C for normal operation in wet and dry locations, 130°C for emergency overload, and 250°C for short circuit conditions.

- a. The conductors are available in tinned and flexible copper stranding upon request.
- b. NEC compliant
- c. The halogen content is less than 0.2% and Acid gas less than 2.0%
- d. Passes UL VW-1 # 8 AWG and larger
- e. 70,000 BTU/Hr. Vertical Flame Test
- f. UL listed for CT use on 1/0 and Larger
- g. UL listed FT4/IEEE 1202 and ST-1 (#8 and larger)
- h. -40°C Cold impact and cold bend
- i. Oil Resistant I and II
- j. UV/Sunlight resistant black color
- k. Color Available upon request

### SPECIFICATIONS:

- ASTM B3 Soft or Annealed Copper Wire
- ASTM B8 Concentric-Lay-Stranded Copper Conductors
- ASTM B170 Oxygen Free Electrolytic Copper (available upon request)
- UL 44 Thermoset-Insulated Wires and Cables
- UL 1685 Vertical-Tray Fire Propagation and Smoke Release Test (1/0 and Larger)
- UL 2885 Acid Gas, Acidity and conductivity of combusted materials and assessment of halogens
- ICEA S-95-658 (NEMA WC70) Power Cables Rated 2000 Volts or Less for the Distribution of Electrical Energy
- ICEA T-33-655/MIL-C-24643 Low Smoke Halogen Free (LSHF) Polymeric Jackets





- IEEE 1202 FT4 Flame Test (70,000) BTU/hr Vertical Tray Test
- RoHS-2 (European Directive 2011/65/EU)
- ISO 9001 Quality management
- NFPA 130 Standard for Fixed Guideway Transit and Passenger Rail Systems
- NFPA 502 Standard for Road Tunnels, Bridges, and Other Limited Access Highways

**SAMPLE PRINT LEGEND:**

SOUTHWIRE SOLONONplus{TM} E30117 {UL} AWG XX BARE OR TINNED CU LSZH XLPO TYPE XHHW-2 HF -40°C SR PRI  
PRII FT4 ST-1 600V {SEQUENTIAL FOOTAGE MARKS} SEQ FEET





**Table 1 – Physical and Electrical Data**

| Stock Number        | Cond. Size | Strand Class | Strand Count   | Cond. Cmil | Diameter Over Conductor | Insul. Thickness | Jacket Color | Approx. OD | Approx. Weight | DC Resistance @ 25°C | AC Resistance @ 75°C |
|---------------------|------------|--------------|----------------|------------|-------------------------|------------------|--------------|------------|----------------|----------------------|----------------------|
|                     | AWG/kcmil  |              | No. of Strands | cmil       | inch                    | mil              |              | inch       | lb/1000ft      | Ω/1000ft             | Ω/1000ft             |
| 649593              | 14         | Solid        | Solid          | 4110       | 0.070                   | 30               | BK           | 0.128      | 18             | 2.631                | 3.170                |
| 599254 <sup>◇</sup> | 12         | Solid        | Solid          | 6530       | 0.080                   | 30               | BK           | 0.144      | 26             | 1.662                | 2.002                |
| 599255 <sup>◇</sup> | 12         | Solid        | Solid          | 6530       | 0.080                   | 30               | RD           | 0.144      | 26             | 1.662                | 2.002                |
| 599256 <sup>◇</sup> | 12         | Solid        | Solid          | 6530       | 0.080                   | 30               | BE           | 0.144      | 26             | 1.662                | 2.002                |
| 599253 <sup>◇</sup> | 12         | Solid        | Solid          | 6530       | 0.080                   | 30               | WE           | 0.144      | 26             | 1.662                | 2.002                |
| 599258 <sup>◇</sup> | 12         | Solid        | Solid          | 6530       | 0.080                   | 30               | BN           | 0.144      | 26             | 1.662                | 2.002                |
| 599259 <sup>◇</sup> | 12         | Solid        | Solid          | 6530       | 0.080                   | 30               | OE           | 0.144      | 26             | 1.662                | 2.002                |
| 599260 <sup>◇</sup> | 12         | Solid        | Solid          | 6530       | 0.080                   | 30               | YW           | 0.144      | 26             | 1.662                | 2.002                |
| 599257 <sup>◇</sup> | 12         | Solid        | Solid          | 6530       | 0.080                   | 30               | GY           | 0.144      | 26             | 1.662                | 2.002                |
| 599252 <sup>◇</sup> | 12         | Solid        | Solid          | 6530       | 0.080                   | 30               | GN           | 0.144      | 26             | 1.662                | 2.002                |
| 647516 <sup>◇</sup> | 12         | Solid        | Solid          | 6530       | 0.080                   | 30               | PE           | 0.144      | 26             | 1.662                | 2.002                |
| 599263 <sup>◇</sup> | 10         | Solid        | Solid          | 10380      | 0.101                   | 30               | BK           | 0.165      | 39             | 1.040                | 1.253                |
| 599264 <sup>◇</sup> | 10         | Solid        | Solid          | 10380      | 0.101                   | 30               | RD           | 0.165      | 39             | 1.040                | 1.253                |
| 599265 <sup>◇</sup> | 10         | Solid        | Solid          | 10380      | 0.101                   | 30               | BE           | 0.165      | 39             | 1.040                | 1.253                |
| 599262 <sup>◇</sup> | 10         | Solid        | Solid          | 10380      | 0.101                   | 30               | WE           | 0.165      | 39             | 1.040                | 1.253                |
| 599281 <sup>◇</sup> | 10         | Solid        | Solid          | 10380      | 0.101                   | 30               | BN           | 0.165      | 39             | 1.040                | 1.253                |
| 599282 <sup>◇</sup> | 10         | Solid        | Solid          | 10380      | 0.101                   | 30               | OE           | 0.165      | 39             | 1.040                | 1.253                |
| 599283 <sup>◇</sup> | 10         | Solid        | Solid          | 10380      | 0.101                   | 30               | YW           | 0.165      | 39             | 1.040                | 1.253                |
| 599280 <sup>◇</sup> | 10         | Solid        | Solid          | 10380      | 0.101                   | 30               | GY           | 0.165      | 39             | 1.040                | 1.253                |
| 599261 <sup>◇</sup> | 10         | Solid        | Solid          | 10380      | 0.101                   | 30               | GN           | 0.165      | 39             | 1.040                | 1.253                |
| 647361              | 14         | B            | 7              | 4110       | 0.070                   | 30               | BK           | 0.133      | 18             | 2.631                | 3.170                |
| 643917              | 14         | B            | 7              | 4110       | 0.070                   | 30               | RD           | 0.133      | 18             | 2.631                | 3.170                |
| 649601              | 12         | B            | 7              | 6530       | 0.088                   | 30               | GY           | 0.151      | 27             | 1.662                | 2.002                |
| 677425*             | 12         | B            | 7              | 6530       | 0.088                   | 30               | RD           | 0.151      | 27             | 1.662                | 2.002                |
| 646526              | 12         | B            | 7              | 6530       | 0.088                   | 30               | BN           | 0.151      | 27             | 1.662                | 2.002                |
| 646527              | 12         | B            | 7              | 6530       | 0.088                   | 30               | OE           | 0.151      | 27             | 1.662                | 2.002                |
| 646528              | 12         | B            | 7              | 6530       | 0.088                   | 30               | YW           | 0.151      | 27             | 1.662                | 2.002                |
| 646529              | 12         | B            | 7              | 6530       | 0.088                   | 30               | GN           | 0.151      | 27             | 1.662                | 2.002                |
| 646542              | 10         | B            | 7              | 10380      | 0.113                   | 30               | BK           | 0.177      | 40             | 1.040                | 1.253                |
| 646530              | 10         | B            | 7              | 10380      | 0.113                   | 30               | RD           | 0.177      | 40             | 1.040                | 1.253                |
| 646531              | 10         | B            | 7              | 10380      | 0.113                   | 30               | BE           | 0.177      | 40             | 1.040                | 1.253                |
| 646532              | 10         | B            | 7              | 10380      | 0.113                   | 30               | WE           | 0.177      | 40             | 1.040                | 1.253                |
| 646533              | 10         | B            | 7              | 10380      | 0.113                   | 30               | GN           | 0.177      | 40             | 1.040                | 1.253                |
| 599331 <sup>◇</sup> | 8          | B            | 7              | 16510      | 0.141                   | 45               | RD           | 0.236      | 67             | 0.653                | 0.786                |
| 599329 <sup>◇</sup> | 8          | B            | 7              | 16510      | 0.141                   | 45               | BE           | 0.236      | 67             | 0.653                | 0.786                |





| Stock Number        | Cond. Size | Strand Class | Strand Count   | Cond. Cmil | Diameter Over Conductor | Insul. Thickness | Jacket Color | Approx. OD | Approx. Weight | DC Resistance @ 25°C | AC Resistance @ 75°C |
|---------------------|------------|--------------|----------------|------------|-------------------------|------------------|--------------|------------|----------------|----------------------|----------------------|
|                     | AWG/kcmil  |              | No. of Strands | cmil       | inch                    | mil              |              | inch       | lb/1000ft      | Ω/1000ft             | Ω/1000ft             |
| 599333 <sup>◇</sup> | 8          | B            | 7              | 16510      | 0.141                   | 45               | BN           | 0.236      | 67             | 0.653                | 0.786                |
| 599335 <sup>◇</sup> | 8          | B            | 7              | 16510      | 0.141                   | 45               | OE           | 0.236      | 67             | 0.653                | 0.786                |
| 599336 <sup>◇</sup> | 8          | B            | 7              | 16510      | 0.141                   | 45               | YW           | 0.236      | 67             | 0.653                | 0.786                |
| 599334 <sup>◇</sup> | 8          | B            | 7              | 16510      | 0.141                   | 45               | GY           | 0.236      | 67             | 0.653                | 0.786                |
| 599330 <sup>◇</sup> | 8          | B            | 7              | 16510      | 0.141                   | 45               | GN           | 0.236      | 67             | 0.653                | 0.786                |
| 599328 <sup>◇</sup> | 8          | B            | 7              | 16510      | 0.141                   | 45               | BK           | 0.236      | 67             | 0.653                | 0.786                |
| 599340              | 6          | B            | 7              | 26240      | 0.177                   | 45               | RD           | 0.272      | 100            | 0.411                | 0.495                |
| 599338              | 6          | B            | 7              | 26240      | 0.177                   | 45               | BE           | 0.272      | 100            | 0.411                | 0.495                |
| 599341              | 6          | B            | 7              | 26240      | 0.177                   | 45               | WE           | 0.272      | 100            | 0.411                | 0.495                |
| 599342              | 6          | B            | 7              | 26240      | 0.177                   | 45               | BN           | 0.272      | 100            | 0.411                | 0.495                |
| 599344              | 6          | B            | 7              | 26240      | 0.177                   | 45               | OE           | 0.272      | 100            | 0.411                | 0.495                |
| 599345              | 6          | B            | 7              | 26240      | 0.177                   | 45               | YW           | 0.272      | 100            | 0.411                | 0.495                |
| 599343              | 6          | B            | 7              | 26240      | 0.177                   | 45               | GY           | 0.272      | 100            | 0.411                | 0.495                |
| 599339              | 6          | B            | 7              | 26240      | 0.177                   | 45               | GN           | 0.272      | 100            | 0.411                | 0.495                |
| 6790700             | 6          | B            | 7              | 26240      | 0.177                   | 45               | BK           | 0.272      | 100            | 0.411                | 0.495                |
| 599337 <sup>◇</sup> | 6          | B            | 7              | 26240      | 0.177                   | 45               | BK           | 0.272      | 100            | 0.411                | 0.495                |
| 599349 <sup>◇</sup> | 4          | B            | 7              | 41740      | 0.225                   | 45               | RD           | 0.319      | 152            | 0.258                | 0.310                |
| 599347 <sup>◇</sup> | 4          | B            | 7              | 41740      | 0.225                   | 45               | BE           | 0.319      | 152            | 0.258                | 0.310                |
| 599350 <sup>◇</sup> | 4          | B            | 7              | 41740      | 0.225                   | 45               | WE           | 0.319      | 152            | 0.258                | 0.310                |
| 599351 <sup>◇</sup> | 4          | B            | 7              | 41740      | 0.225                   | 45               | BN           | 0.319      | 152            | 0.258                | 0.310                |
| 599353 <sup>◇</sup> | 4          | B            | 7              | 41740      | 0.225                   | 45               | OE           | 0.319      | 152            | 0.258                | 0.310                |
| 599354 <sup>◇</sup> | 4          | B            | 7              | 41740      | 0.225                   | 45               | YW           | 0.319      | 152            | 0.258                | 0.310                |
| 599352 <sup>◇</sup> | 4          | B            | 7              | 41740      | 0.225                   | 45               | GY           | 0.319      | 152            | 0.258                | 0.310                |
| 599348 <sup>◇</sup> | 4          | B            | 7              | 41740      | 0.225                   | 45               | GN           | 0.319      | 152            | 0.258                | 0.310                |
| 599346 <sup>◇</sup> | 4          | B            | 7              | 41740      | 0.225                   | 45               | BK           | 0.319      | 152            | 0.258                | 0.310                |
| 641691              | 3          | B            | 7              | 52620      | 0.252                   | 45               | BK           | 0.346      | 188            | 0.205                | 0.246                |
| 599358 <sup>◇</sup> | 2          | B            | 7              | 66360      | 0.282                   | 45               | RD           | 0.371      | 233            | 0.162                | 0.195                |
| 599356 <sup>◇</sup> | 2          | B            | 7              | 66360      | 0.282                   | 45               | BE           | 0.371      | 233            | 0.162                | 0.195                |
| 599359 <sup>◇</sup> | 2          | B            | 7              | 66360      | 0.282                   | 45               | WE           | 0.371      | 233            | 0.162                | 0.195                |
| 599360 <sup>◇</sup> | 2          | B            | 7              | 66360      | 0.282                   | 45               | BN           | 0.371      | 233            | 0.162                | 0.195                |
| 599507 <sup>◇</sup> | 2          | B            | 7              | 66360      | 0.282                   | 45               | OE           | 0.371      | 233            | 0.162                | 0.195                |
| 599508 <sup>◇</sup> | 2          | B            | 7              | 66360      | 0.282                   | 45               | YW           | 0.371      | 233            | 0.162                | 0.195                |
| 599505 <sup>◇</sup> | 2          | B            | 7              | 66360      | 0.282                   | 45               | GY           | 0.371      | 233            | 0.162                | 0.195                |
| 599357 <sup>◇</sup> | 2          | B            | 7              | 66360      | 0.282                   | 45               | GN           | 0.371      | 233            | 0.162                | 0.195                |
| 599355 <sup>◇</sup> | 2          | B            | 7              | 66360      | 0.282                   | 45               | BK           | 0.371      | 233            | 0.162                | 0.195                |





| Stock Number | Cond. Size | Strand Class | Strand Count   | Cond. Cmil | Diameter Over Conductor | Insul. Thickness | Jacket Color | Approx. OD | Approx. Weight | DC Resistance @ 25°C | AC Resistance @ 75°C |
|--------------|------------|--------------|----------------|------------|-------------------------|------------------|--------------|------------|----------------|----------------------|----------------------|
|              | AWG/kcmil  |              | No. of Strands | cmil       | inch                    | mil              |              | inch       | lb/1000ft      | Ω/1000ft             | Ω/1000ft             |
| 643752       | 1          | B            | 19             | 83690      | 0.322                   | 55               | BK           | 0.438      | 299            | 0.128                | 0.154                |
| 641693       | 1/0        | B            | 19             | 105600     | 0.361                   | 55               | BK           | 0.478      | 371            | 0.102                | 0.122                |
| 641694       | 1/0        | B            | 19             | 105600     | 0.361                   | 55               | GN           | 0.478      | 371            | 0.102                | 0.122                |
| 599509       | 2/0        | B            | 19             | 133100     | 0.405                   | 55               | BK           | 0.522      | 461            | 0.081                | 0.097                |
| 679228*      | 2/0        | B            | 19             | 133100     | 0.405                   | 55               | GN           | 0.522      | 461            | 0.081                | 0.097                |
| 599519       | 4/0        | B            | 19             | 211600     | 0.512                   | 55               | BK           | 0.614      | 714            | 0.051                | 0.062                |
| 641699       | 250        | B            | 37             | 250000     | 0.558                   | 65               | BK           | 0.678      | 849            | 0.043                | 0.053                |
| 679131*      | 250        | B            | 37             | 250000     | 0.558                   | 65               | BN           | 0.678      | 849            | 0.043                | 0.053                |
| 649645       | 300        | B            | 37             | 300000     | 0.610                   | 65               | BK           | 0.747      | 1012           | 0.036                | 0.045                |
| 641702       | 500        | B            | 37             | 500000     | 0.789                   | 65               | GN           | 0.919      | 1635           | 0.022                | 0.029                |
| 641703       | 600        | B            | 61             | 600000     | 0.865                   | 80               | BK           | 1.034      | 2000           | 0.018                | 0.025                |

All dimensions are nominal and subject to normal manufacturing tolerances

◇ Cable marked with this symbol is a standard stock item

^ # 6AWG Stock Number 679070 is Tinned Copper Conductor

**Table 3 - Stock Code Colors**

| Size (Strand) | Black  | Red    | Blue   | White  | Brown  | Orange | Yellow | Gray   | Green  | Purple |
|---------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 14 (Solid)    | 649593 |        |        |        |        |        |        |        |        |        |
| 12 (Solid)    | 599254 | 599255 | 599256 | 599253 | 599258 | 599259 | 599260 | 599257 | 599252 | 647516 |
| 10 (Solid)    | 599263 | 599264 | 599265 | 599262 | 599281 | 599282 | 599283 | 599280 | 599261 |        |
| 14 (7)        | 647361 | 643917 |        |        |        |        |        |        |        |        |
| 12 (7)        |        | 677425 |        |        | 646526 | 646527 | 646528 | 649601 | 646529 |        |
| 10 (7)        | 646542 | 646530 | 646531 | 646532 |        |        |        |        | 646533 |        |
| 8 (7)         | 599328 | 599331 | 599329 |        | 599333 | 599335 | 599336 | 599334 | 599330 |        |
| 6 (7)         | 679070 | 599340 | 599338 | 599341 | 599342 | 599344 | 599345 | 599343 | 599339 |        |
| 4 (7)         | 599346 | 599349 | 599347 | 599350 | 599351 | 599353 | 599354 | 599352 | 599348 |        |
| 3 (7)         | 641691 |        |        |        |        |        |        |        |        |        |
| 2 (7)         | 599355 | 599358 | 599356 | 599359 | 599360 | 599507 | 599508 | 599505 | 599357 |        |
| 1 (19)        | 643752 |        |        |        |        |        |        |        |        |        |
| 1/0 (19)      | 641693 |        |        |        |        |        |        |        | 641694 |        |
| 2/0 (19)      | 599509 |        |        |        |        |        |        |        | 679228 |        |
| 4/0 (19)      | 599519 |        |        |        |        |        |        |        |        |        |
| 250 (37)      | 641699 |        |        |        | 679131 |        |        |        |        |        |
| 300 (37)      | 649645 |        |        |        |        |        |        |        |        |        |
| 500 (37)      |        |        |        |        |        |        |        |        | 641702 |        |
| 600 (61)      | 641703 |        |        |        |        |        |        |        |        |        |

