# SIMpull XHHW-2®/RW90 Aluminum with AlumaFlex® Brand Conductors

Power Cable 600 or 1000 Volts. Alumaflex® Brand Aluminum Alloy (AA-8176) Conductor. Cross-linked Polyethylene (XLPE) Insulation. Moisture Resistant High Heat.

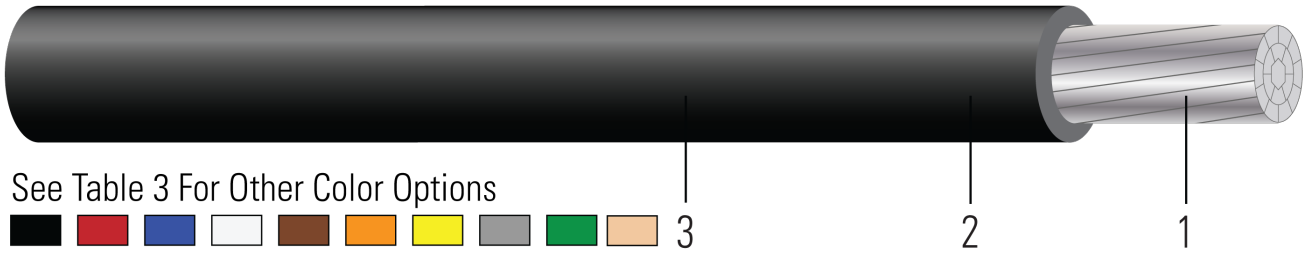


Image not to scale. See Table 1 for dimensions.

## CONSTRUCTION:

1. **Conductor:** Class B compact stranded bare aluminum per ASTM B800 and ASTM B801 or Single Input Wire (SIW) compact aluminum per ASTM B836
2. **Insulation:** Flame-Retardant and Moisture-Resistant Thermoset Cross-Linked Polyethylene (XLPE) with Patented SIMpull® Technology in various colors

## APPLICATIONS AND FEATURES:

Southwire SIMpull XHHW-2®/RW90 with AlumaFlex® Brand Conductors Wire & Cable with Alumaflex® Brand 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. XHHW-2/RW90 conductors is suitable for use in wet or dry locations at temperatures not to exceed 90°C. Voltage for all applications is up to 1000 volts. Suitable for use in Health Care Facilities per section 517.160 of the NEC where a dielectric constant of 3.5 or less may be specified. This cable can be installed without application of pulling lubricant. RW90 is for 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.

### Southwire Aluminum SIMpull® XHHW-2/RW90 conductors comply with the following:

- Federal Specification AA-59544
- NOM-ANCE, XHHW-2, 90ºC
- CT Rated- Sizes 1/0 AWG and larger
- FT4 350 Kcmil and larger
- National Electrical Code
- Gas and Oil Resistant II- All sizes
- Sunlight Resistant- Sizes 6 AWG and larger
- RoHS/Reach Compliant

## SPECIFICATIONS:

- ASTM B800 8000 Series Aluminum Alloy Wire
- ASTM B801 Concentric-Lay-Stranded Conductors of 8000 Series Aluminum Alloy
- ASTM B836 Compact Rounded Stranded Aluminum Conductors
- UL 44 Thermoset-Insulated Wires and Cables


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- 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
- NMX-J-451-ANCE Thermoset insulated wires and cables
- NOM-063-SCFI Electrical Products – Conductors – Safety Requirements

## SAMPLE PRINT LEGEND:

### 6 AWG thru 1 AWG

{SQFTG} SOUTHWIRE{R} {NOLUBE}{R} {SIMPULL}{R} {ALUMAFLEX}{R} E30117 {UL} TYPE XHHW-2 6 AWG (13.3{MM2}) AL AA8176 600V/1000V SR GRII PRII - LL90458 {CSA} RW90 XLPE 6 AWG (13.3{mm2}) AL AA8176 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} {ALUMAFLEX}{R} E30117 {UL} TYPE XHHW-2 1/0 AWG (53.5{MM2}) AL AA8176 600V/1000V SR FOR CT USE GRII PRII - LL90458 {CSA} RW90 XLPE 1/0 AWG (53.5{mm2}) AL AA8176 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} {ALUMAFLEX}{R} E30117 {UL} TYPE XHHW-2 350 KCMIL (177{MM2}) AL AA8176 600V/1000V SR FOR CT USE GRII PRII FT4 - LL90458 {CSA} RW90 XLPE 350 KCMIL (177{mm2}) AL AA8176 600V GRI PRI -40{D}C SR FT4 - {NOM}-ANCE LS - PAT WWW.PATENTSW.COM

## Table 1 – Weights and Measurements

| Cond. Size | Cond. Number | Strand Count | Diameter Over Conductor | Insul. Thickness | Insulation Color | Dia. Over Insulation | Approx. OD | Aluminum Weight | Approx. Weight |
|---|---|---|---|---|---|---|---|---|---|
| AWG/ Kcmil | | No. of Strands | inch | mil | | inch | inch | lb/1000ft | lb/1000ft |
| 350 | 1 | 35 | 0.616 | 65 | TN | 0.746 | 0.754 | 329 | 401 |

All dimensions are nominal and subject to normal manufacturing tolerances
◊ Cable marked with this symbol is a standard stock item
* Strand count meets minimum number per ASTM
TBA stock codes are estimations only and actual product may vary. Please wait until a stock code is assigned to purchase connectors and/or fittings.

## Table 2 – Electrical and Engineering Data

| Cond. Size | Cond. Number | 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 |
| 350 | 1 | 3 | 2100 | 0.051 | 0.064 | 0.04 | 250 | 280 |

***** 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 4 - for Raceway or Cable. Not more than 3 aluminum conductors on an ambient temperature of 30°C.
***** Inductive Reactance is based on non-ferrous conduit with one diameter spacing center-to-center.


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## Table 3 - Stock Code Colors

| Size (strand) | Black | Red | Blue | White | Brown | Orange | Yellow | Gray | Green | Purple | Pink | Tan |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8 (7) | 455950 | | | | | | | | 138627 | | | |
| 6 (7) | 112706 | 643836 | 643837 | 591212 | 591209 | 591210 | 591211 | | 585321 | | | |
| 4 (7) | 112714 | 591114 | 591115 | 591116 | 591201 | 591202 | 591203 | 598051 | 585320 | | | |
| 2 (6) | 112722 | 643620 | 643621 | 592621 | 591213 | 591214 | 591215 | 598052 | 585319 | | | |
| 1 (8) | 112730 | 591204 | 591205 | 591206 | 591207 | 591208 | 591216 | 596497 | 585318 | | | |
| 1/0 (10) | 112748 | 591284 | 591285 | 591286 | 585291 | 585292 | 585293 | 585294 | 585290 | 596423 | | |
| 2/0 (12) | 112755 | 591288 | 591289 | 591290 | 585296 | 585297 | 585298 | 585300 | 585295 | 596422 | | |
| 3/0 (16) | 112763 | 585302 | 585303 | 585304 | 585305 | 585306 | 585308 | 585309 | 585301 | | | |
| 4/0 (19) | | 585317 | 585316 | 585314 | 585313 | 585312 | 585311 | 585310 | 567439 | | | |
| 250 (22) | 278341 | 576390 | 576391 | 576392 | 576385 | 576386 | 576387 | 576388 | 567440 | 592468 | | |
| 300 (21) | 278358 | 576382 | 576383 | 576384 | 576133 | 576134 | 576135 | 576136 | 576361 | 593380 | | |
| 350 (35) | 278366 | 576378 | 576379 | 576380 | 576374 | 576375 | 576376 | 576377 | 567437 | 592562 | 669682 | 669683 |
| 400 (35) | 278374 | 576370 | 576372 | 576373 | 576127 | 576129 | 576130 | 576131 | 567384 | 593379 | 455994 | 455995 |
| 500 (34) | 278382 | 576367 | 576368 | 576369 | 576362 | 576364 | 576365 | 576366 | 576394 | 589196 | 669675 | 669681 |
| 600 (37) | 278390 | 576350 | 576351 | 576352 | 576345 | 576346 | 576347 | 576349 | 567375 | 589197 | | |
| 700 (58) | 278408 | | | | 576341 | 576342 | 576343 | 576344 | | | | |
| 750 (61) | 278416 | 592233 | 592234 | 592235 | 567432 | 567433 | 567434 | 567435 | 567436 | 592469 | | |
| 900 (56) | 554059 | 671912 | 671915 | 671918 | 560445 | 560446 | 560447 | 560448 | | | | |
| 1000 (61) | 278424 | 138626 | 138625 | 672168 | 662187 | 662321 | 662186 | 662541 | 653124 | | | |

Award Winning Patent Pending Building Wire Selector


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