



Aluminum Alumaflex® SIMpull XHHW-2®/RW90

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
2. **Insulation:** Heat and moisture resistant cross-linked polyethylene (XLPE) insulation in various colors

APPLICATIONS AND FEATURES:

Southwire SIMpull XHHW-2®/RW90 Aluminum 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 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 cabletroughs 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, 90°C
- 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
- 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 GR II PR II - 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 GR II PR II - 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 GR II PR II 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

Stock Number	Cond. Size	Strand	Diameter Over Conductor	Insul. Thickness	Approx. OD	Approx. Weight
	AWG/Kcmil	No.	inch	mil	inch	lb/1000ft
278382◊	500	34	0.735	65	0.876	557

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

Table 2 – Electrical and Engineering Data

Cond. Size	Min Bending Radius	Max Pull Tension	DC Resistance @ 25°C	AC Resistance @ 90°C	Inductive Reactance @ 60Hz	Allowable Ampacity In Raceway 90°C
AWG/Kcmil	inch	lb	Ω/1000ft	Ω/1000ft	Ω/1000ft	Amp
500	3.5	3000	0.035	0.044	0.039	350

* 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.

Table 3 – Weights and Measurements (Metric)

Stock Number	Cond. Size	Strand	Diameter Over Conductor	Insul. Thickness	Approx. OD	Approx. Weight
	AWG/Kcmil	No.	mm	mm	mm	kg/km
278382◊	500	34	18.67	1.65	22.25	829

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



Table 4 – Electrical and Engineering Data (Metric)









Cond. Size	Min Bending Radius	Max Pull Tension	DC Resistance @ 25°C	AC Resistance @ 90°C	Inductive Reactance @ 60Hz	Allowable Ampacity In Raceway 90°C
AWG/ Kcmil	mm	newton	Ω/km	Ω/km	Ω/km	Amp
500	88.90	13350	0.1148	0.14	0.1280	350

* 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.

Stock Code Colors and Standard Package

Size	Package	Black	Brown	Orange	Yellow	Gray	White	Red	Blue	Green
	US/Canada									
6	US Reel: 2500'/1000'/5000' CAN Reel: 984'/4921'/9842'	112706	591209	591210	591211					585321
4	US Reel: 2500'/1000'/5000' CAN Reel: 984'/4921'/9842'	112714	591201	591202	591203		591116	591114	591115	585320
2	US Reel: 2500'/1000'/5000' CAN Reel: 984'/4921'/9842'/492'	112722	591213	591214	591215					585319
1	US Reel: 2500'/1000' CAN Reel: 984'/4921'	112730	591207	591208	591216	596497	591206	591204	591205	585318
1/0	US Reel: 500'/2500'/1000' CAN Reel: 984'/4921'	112748	585291	585292	585293	585294	591286	591284	591285	585290
2/0	US Reel: 500'/2500'/1000'/5000' CAN Reel: 984'/4921'	112755	585296	585297	585298	585300	591290	591288	591289	585295
3/0	US Reel: 2500'/1000'/5000' CAN Reel: 984'/4921'	112763	585305	585306	585308	585309	585304	585302	585303	585301
4/0	US Reel: 500'/2500'/1000'/5000' CAN Reel: 984'/4921'/246'	112771	585313	585312	585311	585310	585314	585317	585316	567439
250	US Reel: 2500'/1000'/5000' CAN Reel: 984'/4921'	278341	576385	576386	576387	576388	576392	576390	576391	567440
300	US Reel: 2500'/1000' CAN Reel: 984'/4921'	278358	576133	576134	576135	576136	576384	576382	576383	576361
350	US Reel: 2500'/1000'/5000' Reel: 984'/4921'	278366	576374	576375	576376	576377	576380	576378	576379	567437
400	US Reel: 1000'/5000' CAN Reel: 984'/4921'	278374	576127	576129	576130	576131	576373	576370	576372	567384
500	US Reel: 500'/2500'/1000'/5000' CAN Reel: 984'/2952'/4921'	278382	576362	576364	576365	576366	576369	576367	576368	576394
600	US Reel: 500'/2500'/5000' CAN Reel: 984'/2952'	278390	576345	576346	576347	576349	576352	576350	576351	567375
700	N/A	278408	576341	576342	576343	576344	591295	591293	591294	591296
750	US Reel: 500'/2500'/1000' CAN Reel: 984'/2952'/4921'	278416	567432	567433	567434	567435	592235	592233	592234	567436
900	N/A	554059	560445	560446	560447	560448				
1000	US Reel: 1000' CAN Reel: 984'/1969'	278424								

