

## SIMpull XHHW-2<sup>®</sup>/RW90 Copper

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



See Table 3 For Other Color Options



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<sup>®</sup> Technology. Silicone-Free, Abrasion, High-Heat, Moisture Resistant

### APPLICATIONS AND FEATURES:

#### APPLICATION

Southwire Copper SIMpull XHHW-2<sup>®</sup>/RW90 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<sup>®</sup>/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 cable troughs 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 AWG/Kcmil	Cond. Number	Strand Count No. of Strands	Diameter Over Conductor inch	Insul. Thickness mil	Approx. OD inch	Copper Weight lb/1000ft	Approx. Weight lb/1000ft
12	1	Solid	0.080	30	0.140	19	24
10	1	Solid	0.101	30	0.161	31	36
12	1	7	0.088	30	0.153	20	25
10	1	7	0.113	30	0.177	32	39
8	1	7	0.141	45	0.238	50	64
6	1	7	0.177	45	0.274	81	97
4	1	7	0.225	45	0.321	128	148
3	1	7	0.252	45	0.348	162	184
2	1	7	0.282	45	0.379	204	228
1	1	19	0.322	55	0.435	258	291
1/0	1	19	0.361	55	0.480	326	363
2/0	1	19	0.405	55	0.524	410	452
3/0	1	19	0.456	55	0.574	518	564
4/0	1	19	0.512	55	0.630	655	707
250	1	37	0.558	65	0.700	771	838
300	1	37	0.610	65	0.753	926	998
350	1	37	0.661	65	0.803	1080	1158
400	1	37	0.705	65	0.848	1235	1317
500	1	37	0.789	65	0.908	1543	1632
600	1	61	0.865	80	1.038	1852	1973
700	1	61	0.935	80	1.103	2161	2284
750	1	61	0.968	80	1.140	2315	2449
1000	1	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

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
12	1	0.6	52	1.662	2.002	0.054	25	30
10	1	0.6	83	1.040	1.253	0.050	35	40
12	1	0.6	52	1.662	2.002	0.054	25	30
10	1	0.7	83	1.040	1.253	0.050	35	40
8	1	1.0	132	0.653	0.786	0.052	50	55
6	1	1.1	209	0.411	0.495	0.051	65	75
4	1	1.3	333	0.258	0.310	0.048	85	95
3	1	1.4	420	0.205	0.246	0.047	100	115
2	1	1.5	530	0.162	0.195	0.045	115	130
1	1	1.7	669	0.128	0.154	0.046	130	145
1/0	1	1.9	844	0.102	0.122	0.044	150	170
2/0	1	2.1	1064	0.081	0.097	0.043	175	195
3/0	1	2.3	1342	0.064	0.078	0.042	200	225
4/0	1	2.5	1692	0.051	0.062	0.041	230	260
250	1	2.8	2000	0.043	0.053	0.041	255	290
300	1	3.0	2400	0.036	0.045	0.041	285	320
350	1	3.2	2800	0.031	0.039	0.040	310	350
400	1	3.4	3200	0.027	0.035	0.040	335	380
500	1	3.6	4000	0.022	0.029	0.039	380	430
600	1	5.2	4800	0.018	0.025	0.039	420	475
700	1	5.5	5600	0.015	0.022	0.038	460	520
750	1	5.7	6000	0.014	0.022	0.038	475	535
1000	1	6.4	8000	0.011	0.018	0.037	545	615

\* 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 impedance is based on non-ferrous conduit with one diameter spacing center-to-center.





**Table 3 - Stock Code Colors**

Size (Strand)	Black	Red	Blue	White	Brown	Orange	Yellow	Gray	Purple	Green
14 (7)				955351						
12 (7)				955344						
10 (7)				955336						
8 (7)	112953	952713	553059	952721	553060	553061	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	652973	677646	677647	652975	677648		890469
2 (7)	112987	218115	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	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

