Aluminum AlumaFlex® SIMpull THHN/THWN-2®

600 Volt Alumaflex® Brand Aluminum Alloy (AA-8176) Conductor. PVC Insulation/SIM Nylon Sheath, Heat, Moisture, Gasoline and Oil Sunlight Resistant. Also Rated THWN-2. SIM Technology® for Easier Pulling

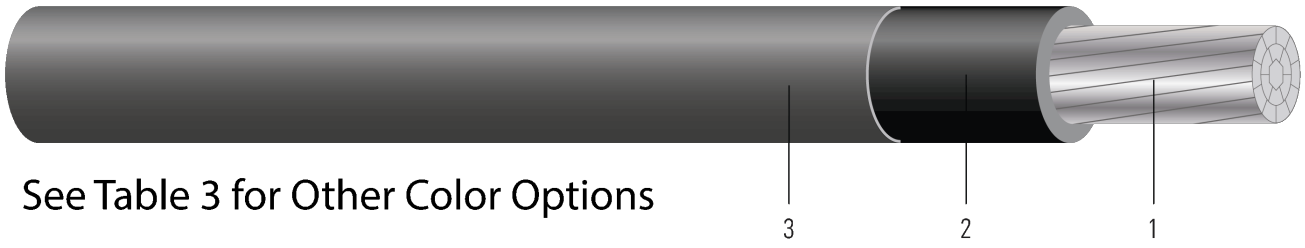


Image not to scale. See Table 1 for dimensions.

CONSTRUCTION:

1. **Conductor:** Class B compact stranded bare aluminum per ASTM B800 and ASTM B801 or Single Input Wire (SIW) Compact AL per ASTM B836
2. **Insulation:** Heat and moisture resistant PVC insulation in various colors
3. **Insulation:** Nylon jacket utilizing SIMpull® Technology

APPLICATIONS AND FEATURES:

APPLICATION

Southwire SIMpull THHN® 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 2011 National Electrical Code. When used as Type THHN or T90 Nylon conductor is suitable for use in dry locations at temperatures not to exceed 90°C. When used as Type THWN-2 or TWN75, conductor is suitable for use in wet or dry locations at temperatures not to exceed 90°C or not to exceed 75°C when exposed to oil or coolant. Voltage for all applications is 600 volts. This cable should be installed without application of pulling lubricant.

FEATURES

- Sunlight Resistant - Sizes #2 and larger
- Oil and Gasoline Resistant II
- CT - Sizes 1/0 AWG and larger
- VW-1 - All Sizes
- FT1 - All Sizes
- T90 Nylon – Sizes 4 AWG through 750 kcmil
- TWN 75 – Sizes 8 AWG through 750 kcmil
- National Electrical Code, NFPA 70, 2020 Edition
- NEMA WC-70 Construction Requirements
- RoHS 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 83 Thermoplastic Insulated Wires and Cables
- CSA C22.2 No. 75 Thermoplastic Insulated Wires and Cables

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- Federal Specification A-A-59544

SAMPLE PRINT LEGEND:

SOUTHWIRE SIMpull{TM} E23919 {UL} 600 VOLTS (XXX KCMIL) XXX{mm2} COMPACT AL. --- {ALUMAFLEX}® AA8176 TYPE THWN-2 OR THHN OR GASOLINE AND OIL RESISTANT II FOR CT USE SUNLIGHT RESISTANT VW-1 --- {CUL} T90 NYLON OR TWN75 600 VOLTS FT1 90°C --- RoHS SOUTHWIRE® {NOLUBE}® {900} {SIMpull} {THHN}® {SIMpull} {T90}{TM} {listed THWN-2} PAT www.patentSW.com

Table 1 – Weights and Measurements

Cond. Size	Strand Count	Diameter Over Conductor	Insul. Thickness	Jacket Thickness	Approx. OD	Aluminum Weight	Approx. Weight
AWG/Kcmil	No. of Strands	inch	mil	mil	inch	lb/1000ft	lb/1000ft
6	7	0.169	30	6	0.243	24	39
4	7	0.212	40	7	0.309	39	63
2	6	0.268	40	7	0.364	62	92
1	8	0.298	50	8	0.417	78	118
1/0	10	0.336	50	8	0.456	99	143
2/0	12	0.376	50	8	0.496	125	174
3/0	15	0.422	50	8	0.543	158	213
4/0	19	0.474	50	8	0.595	199	261
250	22	0.520	60	9	0.662	235	314
300	21	0.569	60	9	0.712	282	372
350	35	0.615	60	9	0.758	329	424
400	35	0.659	60	9	0.801	376	475
500	35	0.735	60	9	0.878	471	581
600	58	0.812	70	10	0.969	565	704
700	58	0.877	70	10	1.041	659	811
750	58	0.908	70	10	1.072	706	867
900	58	0.999	70	10	1.163	847	1034
1000	58	1.060	70	10	1.224	941	1124

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

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Table 2 – Electrical and Engineering Data

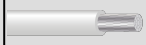
Cond. Size	Min Bending Radius	Max Pull Tension	DC Resistance @ 25°C	AC Resistance @ 75°C	Inductive Reactance @ 60Hz	Allowable Ampacity At 60°C	Allowable Ampacity At 75°C	Allowable Ampacity At 90°C
AWG/ Kcmil	inch	lb	Ω/1000ft	Ω/1000ft	Ω/1000ft	Amp	Amp	Amp
6	0.9	157	0.674	0.812	0.051	40	50	55
4	1.2	250	0.424	0.510	0.048	55	65	75
2	1.4	398	0.267	0.321	0.045	75	90	100
1	1.6	502	0.211	0.254	0.046	85	100	115
1/0	1.8	633	0.168	0.201	0.044	100	120	135
2/0	1.9	798	0.133	0.160	0.043	115	135	150
3/0	2.1	1006	0.105	0.126	0.042	130	155	175
4/0	2.3	1269	0.084	0.100	0.041	150	180	205
250	2.6	1500	0.071	0.086	0.041	170	205	230
300	2.8	1800	0.059	0.071	0.041	195	230	260
350	3.0	2100	0.050	0.062	0.040	210	250	280
400	3.2	2400	0.044	0.054	0.040	225	270	305
500	3.5	3000	0.035	0.044	0.039	260	310	350
600	3.8	3600	0.029	0.037	0.039	285	340	385
700	5.2	4200	0.025	0.033	0.038	315	375	425
750	5.4	4500	0.024	0.031	0.038	320	385	435
900	5.8	5400	0.020	0.027	0.037	355	425	480
1000	6.1	6000	0.018	0.025	0.037	375	445	500

* 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.

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Stock Code Colors

Size	Black	Brown	Orange	Yellow	Gray	White	Red	Blue	Purple	Green
										
6	563768					578332	573834	573835		566358
4	563769					577628	573544	573833		562211
2	563770	587026	587027	587028	578329	563493	573541	573542		562745
1	563771	587023	587024	587025	578327	578328	583155	583156		562746
1/0	562747	562753	562754	562752	562755	562750	562748	562749	573380	562756
2/0	562212	562758	562759	562757	562760	562213	562214	562621	573370	562761
3/0	562663	562763	562764	562762	562765	562664	562665	562666	573371	562766
4/0	562671	561805	561806	561807	562767	562672	562673	562674	573372	562768
250	560444	561863	561864	561865	561866	562625	562626	562627	573373	561867
300	562667	562771	562772	562770	562773	562668	562669	562670	573374	562774
350	560443	561858	561859	561861	561862	562622	562623	562624	573375	562775
400	562677	562781	562782	562780	562783	562779	562776	562778	573376	562699
500	560442	561853	561854	561855	561856	562698	562696	562697	573377	561857
600	560441	561847	561848	561849	561850	562628	562630	562631	573379	561851
700	562689	561843	561844	561846	562693	562692	562690	562691		
750	562632	561838	561839	561840	561841	562633	562634	562635	573481	561842
900	562679	561782	561783	561785	561786	562683	562681	562682		562684
1000	562680	564280	564281	564282	564283					