



## SIMpull® T90 CU

Copper Conductor, 600V, Thermoplastic-Insulated Cable, All Sizes Rated TWN75.

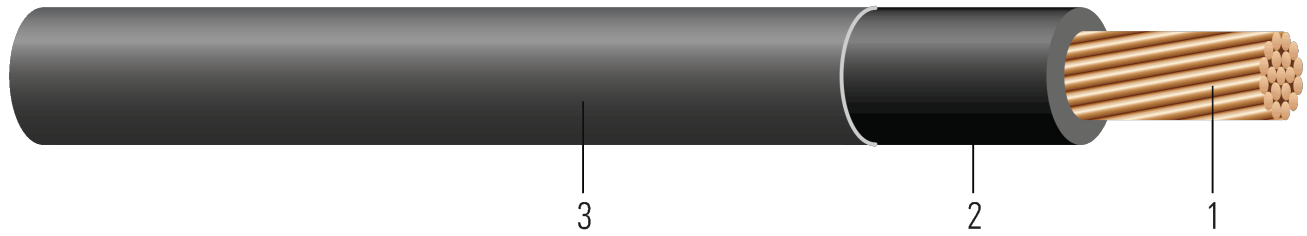


Image not to scale. See Table 1 for dimensions.

### CONSTRUCTION:

1. **Conductor:** Solid per ASTM B3 or Combination unilay-stranded copper conductors per ASTM B787.
2. **Insulation:** All phases are insulated with Polyvinyl Chloride with Nylon Sheath
3. **Jacket:** Polyvinyl Chloride PVC jacket utilizing SIMpull® Technology.

### APPLICATIONS AND FEATURES:

SIMpull® THHN, THWN-2, MTW - (UL)- Suitable for dry locations not exceeding 90°C. For Gasoline and Oil Resistant II applications not to exceed 75°C. MTW (UL) - suitable for dry locations not exceeding 90°C. For wet locations, Gasoline and Oil Resistant II applications not to exceed 60°C. T90 Nylon c(UL) - cables are primarily intended for installation in conduit (raceways) as exposed wiring in dry locations not exceeding 90°C. TWN75 c(UL) - suitable for wet or dry locations at not more than 75°C. The maximum voltage rating for all intended applications is 600 volts. Minimum installation handling temperature is limited to -25°C. Minimum operating temperature limited to -40°C. Non-SIMpull Silicone Free size 14, 12, 10.

### SPECIFICATIONS:

- ASTM B3 Soft or Annealed Copper Wire
- ASTM B8 Concentric-Lay-Stranded Copper Conductors
- ASTM B787 19 Wire Combination Unilay-Stranded Copper Conductors

### SAMPLE PRINT LEGEND:

SOUTHWIRE SIMpull{TM} E51583 {UL} (XX AWG) XX.X{mm<sup>2</sup>} CU TYPE MTW OR THWN-2 OR THHN OR GASOLINE AND OIL RESISTANT II OR AWM 600 VOLTS VW-1 --- {CSA} T90 NYLON OR TWN75 600 VOLTS FT1 {NOM}-ANCE 90°C - (X AWG) ---  
RoHS PAT www.patentSW.com





**Table 1 – Weights and Measurements**

Stock Number	Cond. Size	Strand Count	Diameter Over Conductor	Insul. Thickness	Jacket Thickness	Approx. OD	Copper Weight	Approx. Weight
	AWG/Kcmil	No. of Strands	inch	mil	mil	inch	lb/1000ft	lb/1000ft
507665◇	14	Solid	0.064	15	5	0.106	12	15
507699◇	14	Solid	0.064	15	5	0.106	12	15
507673◇	14	Solid	0.064	15	5	0.106	12	15
507723◇	14	Solid	0.064	15	5	0.106	12	15
610483◇	14	Solid	0.064	15	5	0.106	12	15
507707◇	14	Solid	0.064	15	5	0.106	12	15
553096◇	14	Solid	0.064	15	5	0.106	12	15
507681◇	14	Solid	0.064	15	5	0.106	12	15
672659◇	14	19	0.073	15	5	0.113	12	16
472019◇	14	19	0.073	15	5	0.113	12	16
472027◇	14	19	0.073	15	5	0.113	12	16
687517◇	14	19	0.073	15	5	0.113	12	16
472043◇	14	19	0.073	15	5	0.113	12	16
472035◇	14	19	0.073	15	5	0.113	12	16
507715◇	14	19	0.073	15	5	0.113	12	16
495770◇	12	Solid	0.080	15	5	0.122	19	23
507632◇	12	Solid	0.080	15	5	0.122	19	23
495812◇	12	Solid	0.080	15	5	0.122	19	23
495804◇	12	Solid	0.080	15	5	0.122	19	23
507640◇	12	Solid	0.080	15	5	0.122	19	23
495788◇	12	Solid	0.080	15	5	0.122	19	23
495796◇	12	Solid	0.080	15	5	0.122	19	23
507657◇	12	Solid	0.080	15	5	0.122	19	23
472068◇	12	19	0.090	15	5	0.132	20	24
672675◇	12	19	0.090	15	5	0.132	20	24
472092◇	12	19	0.090	15	5	0.132	20	24
472076◇	12	19	0.090	15	5	0.132	20	24
472084◇	12	19	0.090	15	5	0.132	20	24
552660◇	12	19	0.090	15	5	0.132	20	24
672667◇	12	19	0.090	15	5	0.132	20	24
484626◇	10	Solid	0.101	20	5	0.153	31	37
507756◇	10	Solid	0.101	20	5	0.153	31	37
507731◇	10	Solid	0.101	20	5	0.153	31	37
672683◇	10	Solid	0.101	20	5	0.153	31	37
507749◇	10	Solid	0.101	20	5	0.153	31	37
552663◇	10	19	0.117	20	5	0.165	32	38
610486◇	10	19	0.117	20	5	0.165	32	38
472134◇	10	19	0.117	20	5	0.165	32	38
472118◇	10	19	0.117	20	5	0.165	32	38
552662◇	10	19	0.117	20	5	0.165	32	38
472126◇	10	19	0.117	20	5	0.165	32	38





Stock Number	Cond. Size	Strand Count	Diameter Over Conductor	Insul. Thickness	Jacket Thickness	Approx. OD	Copper Weight	Approx. Weight
	AWG/Kcmil	No. of Strands	inch	mil	mil	inch	lb/1000ft	lb/1000ft
472142◇	10	19	0.117	20	5	0.165	32	38
611462◇	8	19	0.143	30	5	0.217	50	63
472175◇	8	19	0.143	30	5	0.217	50	63
472167◇	8	19	0.143	30	5	0.217	50	63
472191◇	8	19	0.143	30	5	0.217	50	63
472183◇	8	19	0.143	30	5	0.217	50	63
472217◇	6	19	0.179	30	5	0.253	81	95
472225◇	6	19	0.179	30	5	0.253	81	95
472241◇	6	19	0.179	30	5	0.253	81	95
472233◇	6	19	0.179	30	5	0.253	81	95
472282◇	4	19	0.226	40	5	0.324	128	154
684068◇	3	19	0.254	40	5	0.352	162	190
484675◇	3	19	0.254	40	5	0.352	162	190
684076◇	2	19	0.286	40	5	0.384	204	236
672394◇	2	19	0.286	40	5	0.384	204	236
688051◇	2/0	19	0.420	50	5	0.524	410	465
672402◇	2/0	19	0.420	50	5	0.524	410	464
471995◇	3/0	19	0.471	50	5	0.574	518	578
472001◇	14	19	0.070	15	5	0.113	12	16
472050◇	12	19	0.088	15	5	0.132	20	24
472100◇	10	19	0.113	20	5	0.165	32	38
472159◇	8	19	0.141	30	6	0.217	50	63
472209◇	6	19	0.177	30	6	0.253	81	95
472258◇	4	19	0.225	40	7	0.322	128	153
484667◇	3	19	0.252	40	7	0.350	162	190
672386◇	2	19	0.282	40	7	0.382	204	235
684084◇	1	19	0.322	50	8	0.439	258	301
471979◇	1/0	19	0.361	50	8	0.480	326	374
471987◇	3/0	19	0.456	50	8	0.574	518	579
677820◇	4/0	19	0.512	50	8	0.630	655	723

All dimensions are nominal and subject to normal manufacturing tolerances  
 ◇ Cable marked with this symbol is a standard stock item





**Table 2 – Electrical and Engineering Data**

Stock Number	Cond. Size	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
5076650	14	0.4	32	2.631	3.170	0.058	20	25
5076990	14	0.4	32	2.631	3.170	0.058	20	25
5076730	14	0.4	32	2.631	3.170	0.058	20	25
5077230	14	0.4	32	2.631	3.170	0.058	20	25
6104830	14	0.4	32	2.631	3.170	0.058	20	25
5077070	14	0.4	32	2.631	3.170	0.058	20	25
5530960	14	0.4	32	2.631	3.170	0.058	20	25
5076810	14	0.4	32	2.631	3.170	0.058	20	25
6726590	14	0.5	32	2.631	3.170	0.058	20	25
4720190	14	0.5	32	2.631	3.170	0.058	20	25
4720270	14	0.5	32	2.631	3.170	0.058	20	25
6875170	14	0.5	32	2.631	3.170	0.058	20	25
4720430	14	0.5	32	2.631	3.170	0.058	20	25
4720350	14	0.5	32	2.631	3.170	0.058	20	25
5077150	14	0.5	32	2.631	3.170	0.058	20	25
4957700	12	0.4	52	1.662	2.002	0.054	25	30
5076320	12	0.5	52	1.662	2.002	0.054	25	30
4958120	12	0.5	52	1.662	2.002	0.054	25	30
4958040	12	0.5	52	1.662	2.002	0.054	25	30
5076400	12	0.5	52	1.662	2.002	0.054	25	30
4957880	12	0.5	52	1.662	2.002	0.054	25	30
4957960	12	0.5	52	1.662	2.002	0.054	25	30
5076570	12	0.5	52	1.662	2.002	0.054	25	30
4720680	12	0.5	52	1.662	2.002	0.054	25	30
6726750	12	0.5	52	1.662	2.002	0.054	25	30
4720920	12	0.5	52	1.662	2.002	0.054	25	30
4720760	12	0.5	52	1.662	2.002	0.054	25	30
4720840	12	0.5	52	1.662	2.002	0.054	25	30
5526600	12	0.5	52	1.662	2.002	0.054	25	30
6726670	12	0.5	52	1.662	2.002	0.054	25	30
4846260	10	0.6	83	1.040	1.253	0.050	35	40
5077560	10	0.6	83	1.040	1.253	0.050	35	40
5077310	10	0.6	83	1.040	1.253	0.050	35	40
6726830	10	0.6	83	1.040	1.253	0.050	35	40
5077490	10	0.6	83	1.040	1.253	0.050	35	40
5526630	10	0.7	83	1.040	1.253	0.050	35	40
6104860	10	0.7	83	1.040	1.253	0.050	35	40
4721340	10	0.7	83	1.040	1.253	0.050	35	40
4721180	10	0.7	83	1.040	1.253	0.050	35	40
5526620	10	0.7	83	1.040	1.253	0.050	35	40





Stock Number	Cond. Size	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
4721260	10	0.7	83	1.040	1.253	0.050	35	40
4721420	10	0.7	83	1.040	1.253	0.050	35	40
6114620	8	0.9	132	0.653	0.786	0.052	50	55
4721750	8	0.9	132	0.653	0.786	0.052	50	55
4721670	8	0.9	132	0.653	0.786	0.052	50	55
4721910	8	0.9	132	0.653	0.786	0.052	50	55
4721830	8	0.9	132	0.653	0.786	0.052	50	55
4722170	6	1.0	209	0.411	0.495	0.051	65	75
4722250	6	1.0	209	0.411	0.495	0.051	65	75
4722410	6	1.0	209	0.411	0.495	0.051	65	75
4722330	6	1.0	209	0.411	0.495	0.051	65	75
4722820	4	1.3	333	0.258	0.310	0.048	85	95
6840680	3	1.4	420	0.205	0.246	0.047	100	115
4846750	3	1.4	420	0.205	0.246	0.047	100	115
6840760	2	1.5	530	0.162	0.195	0.045	115	130
6723940	2	1.5	530	0.162	0.195	0.045	115	130
6880510	2/0	2.1	1064	0.081	0.097	0.043	175	195
6724020	2/0	2.1	1064	0.081	0.097	0.043	175	195
4719950	3/0	2.3	1342	0.064	0.078	0.042	200	225
4720010	14	0.4	32	2.631	3.170	0.058	20	25
4720500	12	0.5	52	1.662	2.002	0.054	25	30
4721000	10	0.6	83	1.040	1.253	0.050	35	40
4721590	8	0.8	132	0.653	0.786	0.052	50	55
4722090	6	1.0	209	0.411	0.495	0.051	65	75
4722580	4	1.2	333	0.258	0.310	0.048	85	95
4846670	3	1.4	420	0.205	0.246	0.047	100	115
6723860	2	1.5	530	0.162	0.195	0.045	115	130
6840840	1	1.7	669	0.128	0.154	0.046	130	145
4719790	1/0	1.9	844	0.102	0.122	0.044	150	170
4719870	3/0	2.2	1342	0.064	0.078	0.042	200	225
6778200	4/0	2.5	1692	0.051	0.062	0.041	230	260

\* 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.

\* Ampacities have been adjusted for more than Three Current-Carrying Conductors.

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

\* Non-SIMPull Silicone Free sizes: 14, 12, 10.

