



# **SIMpull MC™ THHN/THWN Circuit Size Copper Conductor 277/480V Colors**

Copper THHN/THWN Insulated Singles. Green Insulated Copper Grounding Conductor. UL Listed. 600 Volts Rated VW-1. Lightweight Aluminum Interlocked Armor.

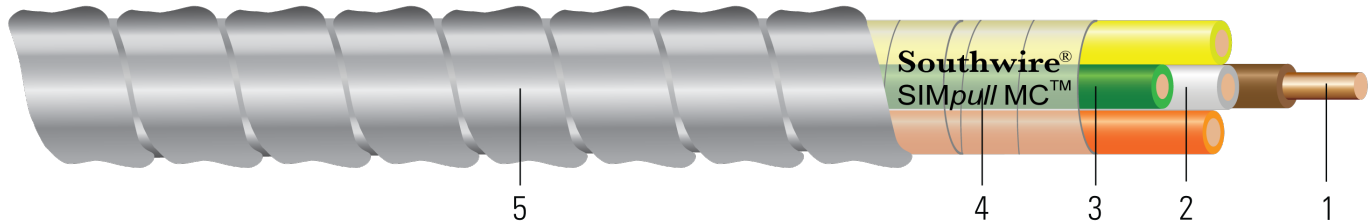


Image not to scale. See Table 1 for dimensions.

## **CONSTRUCTION:**

1. **Conductor:** Solid or 19 strands class C compressed copper per ASTM B3 and ASTM B8
2. **Insulation:** All phases are insulated with Polyvinyl Chloride with Nylon Sheath Type THHN/THWN
3. **Ground:** Green insulated ground. Polyvinyl Chloride with Nylon Sheath Type THHN/THWN
4. **Binder:** Mylar tape
5. **Aarmor:** Aluminum Interlocked Armor

## **APPLICATIONS AND FEATURES:**

**Southwire SIMpull MC™ Cable is suitable for use as follows:**

- Branch, feeder and service power distribution in commercial, industrial, institutional, and multi-residential buildings.
- Fished or embedded in plaster.
- Concealed or exposed installations.
- Environmental air-handling spaces per NEC 300.22 (C).
- Places of Assembly per NEC 518.4 and theaters per NEC 520.5.
- Installation in cable tray and approved raceways.
- Under raised floors for information technology equipment conductors and cables per NEC Article 645
- Binder tape with print legend wrapped around assembly.
- Type THHN/THWN rated 90°C Dry.
- Anti-Short bushing not required

**Southwire SIMpull MC™ Cable - meets or exceeds the following requirements:**

- UL Online Product Guide Info - Metal-Clad Cable (PJAZ) ( [www.ul.com](http://www.ul.com) )
- Federal Specification A-A59544 (formerly J-C-30B)
- NFPA 70 (National Electrical Code), Article 330
- Listed for use in UL 1, 2 and 3 Hour Through Penetration Firestop Systems

## **SPECIFICATIONS:**

- ASTM B3 Soft or Annealed Copper Wire
- ASTM B8 Concentric-Lay-Stranded Copper Conductors
- UL 83 Thermoplastic Insulated Wires and Cables





- UL 1569 Metal-Clad Cables
- UL 1479 Standard for Safety Fire Tests of Penetration Firestops
- UL 1685 FT4 Vertical-Tray Fire Propagation and Smoke Release Test
- IEEE 1202 FT4 Flame Test (70,000) BTU/hr Vertical Tray Test
- RoHS-2 (European Directive 2011/65/EU)
- 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
- VW-1 (Vertical-Wire) Flame Test

**SAMPLE PRINT LEGEND:**

SOUTHWIRE E96627 {UL} TYPE MC XX AWG THHN OR THWN CDRS FOR USE IN CABLE TRAYS 600 VOLTS

**Table 1 – Weights and Measurements**

Cond. Size	Conductor Number	Color	Diameter Over Conductor	Conductor Stranding	Insulation Thickness	Ground Size	Diameter Over Armor	Copper Weight	Overall Weight
AWG/ Kcmil			inch		mils	No. x AWG	inch	lbs/1000ft	lbs/1000ft
<b>14 AWG   Solid</b>									
14	4	BN,OE,YW,GY	0.064	Solid	20	1x14	0.493	62	116
<b>12 AWG   Solid</b>									
12	2	PE,GY	0.080	Solid	20	1x12	0.471	59	107
12	2	OE,GY	0.080	Solid	20	1x12	0.471	59	107
12	2	BN,GY	0.080	Solid	20	1x12	0.471	59	107
12	2	YW,GY	0.080	Solid	20	1x12	0.471	59	107
12	3	OE,YW,GY	0.080	Solid	20	1x12	0.502	79	134
12	3	BN,OE,GY	0.080	Solid	20	1x12	0.502	79	134
12	3	BN,YW,GY	0.080	Solid	20	1x12	0.502	79	134
12	4	BN,OE,YW,GY	0.080	Solid	20	1x12	0.536	99	162
<b>10 AWG   Solid</b>									
10	2	BN,GY	0.101	Solid	25	1x10	0.538	92	154
10	2	YW,GY	0.101	Solid	25	1x10	0.538	92	154
10	2	BN,GY	0.101	Solid	25	1x10	0.538	92	154
10	3	BN,OE,GY	0.101	Solid	25	1x10	0.577	123	194
10	4	BN,OE,YW,GY	0.101	Solid	25	1x10	0.620	154	235
<b>12 AWG   19 Strands</b>									
12	2	BN,GY	0.090	19	20	1x12	0.493	60	112
12	2	YW,GY	0.090	19	20	1x12	0.493	60	112
12	2	OE,GY	0.090	19	20	1x12	0.493	60	112
12	3	BN,OE,GY	0.090	19	20	1x12	0.527	80	140
<b>10 AWG   19 Strands</b>									
10	2	BN,GY	0.117	19	25	1x10	0.573	97	166
10	3	BN,OE,GY	0.117	19	25	1x10	0.616	129	209
10	4	BN,OE,YW,GY	0.117	19	25	1x10	0.663	161	254

All dimensions are nominal and subject to normal manufacturing tolerances

◊ Cable marked with this symbol is a standard stock item





**Note:** Conductor number = number of phase conductors plus neutral. Does not include green ground.

**Table 2 – Electrical and Engineering Data**

Cond. Size	Conductor Number	Min. Bend Radius	DC Resistance at 25°C	AC Resistance at 75°C	Inductive Reactance @ 60Hz	Allowable Ampacity Raceway 75°C	Allowable Ampacity Raceway 90°C
AWG/Kcmil		Inches	Ω/1000ft	Ω/1000ft	Ω/1000ft	Amp	Amp
14 AWG   Solid							
14	4	4.2	2.631	3.170	0.058	16	20
12 AWG   Solid							
12	2	4.0	1.662	2.002	0.054	25	30
12	2	4.0	1.662	2.002	0.054	25	30
12	2	4.0	1.662	2.002	0.054	25	30
12	2	4.0	1.662	2.002	0.054	25	30
12	3	4.2	1.662	2.002	0.054	25	30
12	3	4.2	1.662	2.002	0.054	25	30
12	3	4.2	1.662	2.002	0.054	25	30
12	4	4.5	1.662	2.002	0.054	20	24
10 AWG   Solid							
10	2	4.5	1.040	1.253	0.050	35	40
10	2	4.5	1.040	1.253	0.050	35	40
10	2	4.5	1.040	1.253	0.050	35	40
10	3	4.7	1.040	1.253	0.050	35	40
10	4	5.0	1.040	1.253	0.050	28	32
12 AWG   19 Strands							
12	2	4.2	1.662	2.002	0.054	25	30
12	2	4.2	1.662	2.002	0.054	25	30
12	2	4.2	1.662	2.002	0.054	25	30
12	3	4.4	1.662	2.002	0.054	25	30
10 AWG   19 Strands							
10	2	4.7	1.040	1.253	0.050	35	40
10	3	5.0	1.040	1.253	0.050	35	40
10	4	5.3	1.040	1.253	0.050	28	32

\* 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.

