



MC-AP™ Type MC All Purpose THHN/THWN Circuit Size Copper Conductor 277/480V Colors

Copper THHN Insulated Conductors. Full-Sized Aluminum Equipment Grounding/Bonding Conductor. UL Listed 600 Volt. Rated VW1. Lightweight Aluminum Interlocked Armor is Part of Equipment Bonding/Grounding Path.



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. **Binder:** Mylar tape
4. **Ground:** Full-sized bare 8000 series aluminum grounding/bonding conductor. Armor and bare aluminum conductor form the equipment ground path.
5. **Armor:** Aluminum Interlocked Armor

APPLICATIONS AND FEATURES:

Southwire Armorlite® Type 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 645.5(D) & 645.5(D)(2)
- Class I Div. 2, Class II Div. 2, & Class III Div. 1 Hazardous Locations.
- Binder tape with print legend wrapped around assembly.
- Type THHN/THWN rated 90°C Dry.

Southwire Armorlite® Type MC Cable - meets or exceeds the following requirements:

- UL Online Product Guide Info - Metal-Clad Cable (PJAZ) (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)
- Buy American: Compliant with Buy American Requirements, found in 49 U.S.C. § 5323(j); specify “Made in the USA Only!” when ordering to ensure your project receives American made products.

SAMPLE PRINT LEGEND:

E96627 {UL} TYPE MC XX AWG THHN OR THWN CDRS FOR USE IN CABLE TRAYS 600 VOLTS -- ARMOR IS EQUIPMENT GROUNDING PATH COMPONENT

Table 1 – Weights and Measurements

Stock Number	Cond. Size	Conductor Number	Color	Diameter Over Conductor	Conductor Stranding	Insulation Thickness	Diameter Over Armor	Copper Weight	Overall Weight
	AWG/ Kcmil			inch		mils	inch	lbs/1000ft	lbs/1000ft
12 AWG Solid									
555539◇	12	2	YW,GY	0.080	Solid	20	0.493	39	92
555726◇	12	2	BN,GY	0.080	Solid	20	0.487	39	92
555538◇	12	2	OE,GY	0.080	Solid	20	0.493	39	92
555541◇	12	3	BN,YW,GY	0.080	Solid	20	0.506	59	117
555728◇	12	3	BN,OE,GY	0.080	Solid	20	0.512	59	118
555731◇	12	4	BN,OE,YW,GY	0.080	Solid	20	0.538	79	144
10 AWG Solid									
555733◇	10	2	BN,GY	0.101	Solid	25	0.555	61	130
555735◇	10	3	BN,OE,GY	0.101	Solid	25	0.580	92	169
555737◇	10	4	BN,OE,YW,GY	0.101	Solid	25	0.619	123	210
12 AWG 19 Strands									
558793◇	12	2	YW,GY	0.090	19	20	0.507	40	95
558743◇	12	2	BN,GY	0.090	19	20	0.507	40	95
558790◇	12	2	OE,GY	0.090	19	20	0.507	40	95
558745◇	12	3	BN,OE,YW	0.090	19	20	0.528	60	122
558747◇	12	4	BN,OE,YW,GY	0.090	19	20	0.562	80	151

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

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
12 AWG Solid							
12	2	3.5	1.662	2.002	0.054	25	30
12	2	3.4	1.662	2.002	0.054	25	30
12	2	3.5	1.662	2.002	0.054	25	30
12	3	3.5	1.662	2.002	0.054	25	30
12	3	3.6	1.662	2.002	0.054	25	30
12	4	3.8	1.662	2.002	0.054	20	24
10 AWG Solid							
10	2	3.9	1.040	1.253	0.050	35	40
10	3	4.1	1.040	1.253	0.050	35	40
10	4	4.3	1.040	1.253	0.050	28	32
12 AWG 19 Strands							
12	2	3.5	1.662	2.002	0.054	25	30
12	2	3.5	1.662	2.002	0.054	25	30
12	2	3.5	1.662	2.002	0.054	25	30
12	3	3.7	1.662	2.002	0.054	25	30
12	4	3.9	1.662	2.002	0.054	20	24

* 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.

