

# MC-AP™ HCF Type MC All Purpose Health Care Facility THHN/THWN Circuit Size Copper Conductor 277/480V Colors Green Aluminum Armor

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

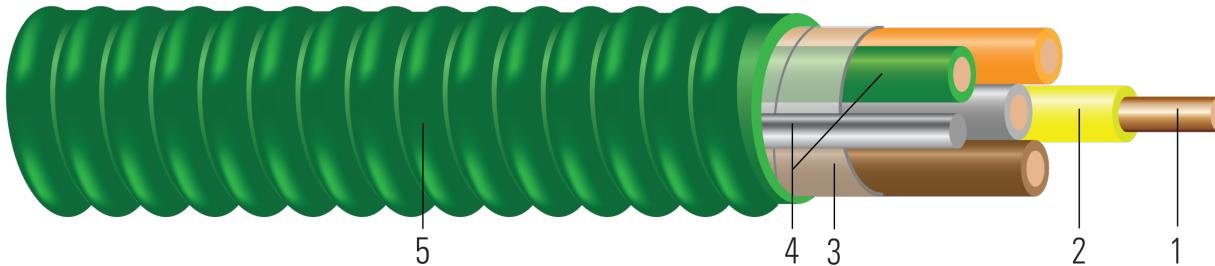


Image not to scale. See Table 1 for dimensions.

## CONSTRUCTION:

- Conductor:** Solid or 19 strands class C compressed copper per ASTM B3 and ASTM B8
- Insulation:** All phases are insulated with Polyvinyl Chloride with Nylon Sheath Type THHN/THWN
- Binder:** Mylar tape
- Ground:** A Green insulated Polyvinyl Chloride with Nylon Sheath Type THHN/THWN ground. Redundant grounding provided by a bare 8000 series aluminum grounding/bonding conductor and armor.
- Armor:** Green Aluminum Interlocked Armor

## APPLICATIONS AND FEATURES:

Southwire MC-AP HCF Type MC All Purpose Health Care Facility Cable is suitable for use as follows:

- Branch-circuit wiring for patient care areas of hospitals, medical centers, and other health care facilities (when installed in accordance with NEC® Articles 517 and 330, and mechanically protected per Article 300.4). Such areas include nursing homes, dental offices, clinics, and outpatient facilities. Use in hazardous anesthetizing areas is prohibited.
- Applications requiring redundant, dedicated or isolated grounding paths.
- 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(E)
- Class I Div. 2, Class II Div 2, & Class III Div. 1 Hazardous Locations.
- Use with UL Listed MCI-A fittings.
- Binder tape with print legend wrapped around assembly.
- Type THHN/THWN rated 90°C Dry.
- Armor is in contact with aluminum grounding/bonding conductor and serves as a redundant equipment grounding path component

Southwire Armorlite® Type 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)
- 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:**

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



**Table 1 – Weights and Measurements**

Stock Number	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
12 AWG   Solid										
596280	12	2	PE,WE,GN	0.08	Solid	20	1x10	0.506	59	117
677421	12	2	PE,GY,GN	0.08	Solid	20	1x10	0.506	59	117
590167	12	4	BN,OE,GY/BN,GY/ OE,GN	0.08	Solid	20	1x12	0.573	99	172
567400	12	6	BN,OE,YW,GY/BN,GY/ OE,GY/YW,GN	0.08	Solid	20	1x12	0.61	139	223
555739◊	12	2	BN,GY	0.080	Solid	20	1x10	0.512	59	118
555544◊	12	2	YW,GY	0.080	Solid	20	1x10	0.506	59	117
555543◊	12	2	OE,GY	0.080	Solid	20	1x10	0.506	59	117
555741◊	12	3	BN,OE,GY	0.080	Solid	20	1x10	0.538	79	144
555743◊	12	4	BN,OE,YW,GY	0.080	Solid	20	1x10	0.573	99	172
12 AWG   19 Strands										
561383	12	2	YW,GY,GN	0.088	19	20	1x10	0.528	60	122
564027	12	4	BN,GY,OE,YW,GN	0.088	19	20	1x10	0.6	100	179
10 AWG   Solid										
555745◊	10	2	BN,GY	0.101	Solid	25	1x8	0.580	92	169
565839	10	2	OE,GY,GN	0.101	Solid	25	1x8	0.58	92	169
565841	10	2	YW,GY,GN	0.101	Solid	25	1x8	0.58	92	169
555747◊	10	3	BN,OE,GY	0.101	Solid	25	1x8	0.619	123	210
596349	10	4	BN,OE,GY/BN,GY/ OE,GN	0.101	Solid	25	1x10	0.663	154	251
555750◊	10	4	BN,OE,YW,GY	0.101	Solid	25	1x8	0.663	154	251
573237	10	6	BN,OE,YW,GY/BN,GY/ OE,GY/YW,GN	0.101	Solid	25	1x10	0.709	216	329
10 AWG   19 Strands										
593402	10	4	BN,OE,GY,YW,GN	0.113	19	25	1x8	0.705	161	269
599142	10	6	BN,OE,YW,GY/BN,GY/ OE,GY/YW,GN	0.113	19	25	1x10	0.761	226	351
12 AWG   19 Strands										
560977◊	12	2	OE,GY	0.090	19	20	1x10	0.528	60	122
558724◊	12	2	BN,GY	0.090	19	20	1x10	0.528	60	122
559791◊	12	3	BN,OE,GY	0.090	19	20	1x10	0.562	80	151

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.

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	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	3.5	1.662	2.002	0.054	25	30
12	4	4	1.662	2.002	0.054	20	24
12	6	4.3	1.662	2.002	0.054	17	21
12	2	3.6	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	3.8	1.662	2.002	0.054	25	30
12	4	4.0	1.662	2.002	0.054	20	24
12 AWG   19 Strands							
12	2	3.7	1.662	2.002	0.054	25	30
12	4	4.2	1.662	2.002	0.054	20	24
10 AWG   Solid							
10	2	4.1	1.040	1.253	0.050	35	40
10	2	4.1	1.04	1.253	0.05	35	40
10	2	4.1	1.04	1.253	0.05	35	40
10	3	4.3	1.040	1.253	0.050	35	40
10	4	4.6	1.04	1.253	0.05	28	32
10	4	4.6	1.040	1.253	0.050	28	32
10	6	5	1.04	1.253	0.05	24	28
10 AWG   19 Strands							
10	4	4.9	1.04	1.253	0.05	28	32
10	6	5.3	1.04	1.253	0.05	24	28
12 AWG   19 Strands							
12	2	3.7	1.662	2.002	0.054	25	30
12	2	3.7	1.662	2.002	0.054	25	30
12	3	3.9	1.662	2.002	0.054	25	30

\* 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.

[MCAP Savings Calculator](#)
