Armorlite® Type MC THHN/THWN Intermediate 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.

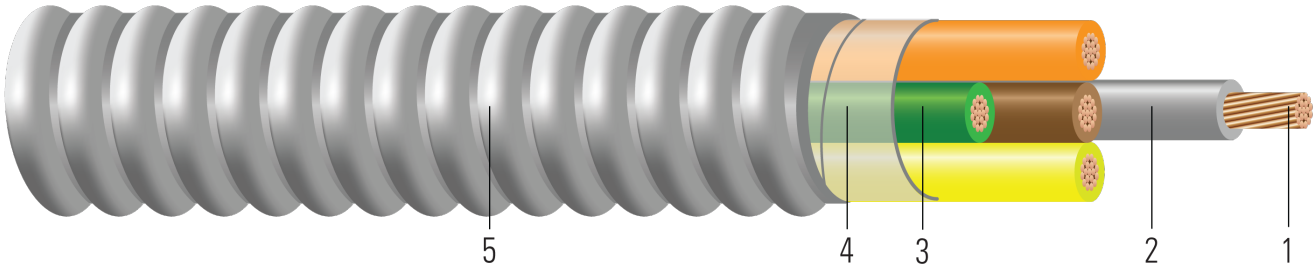

Image not to scale. See Table 1 for dimensions.

CONSTRUCTION:

1. **Conductor:** 19-strand class C compressed copper and ASTM B3 and B8 or 19-strand combination unilay copper per ASTM B3 and B787
2. **Insulation:** Polyvinyl Chloride with Nylon Sheath Type THHN/THWN
3. **Ground:** Green Polyvinyl Chloride with Nylon Sheath Type THHN/THWN insulated ground conductor
4. **Binder:** Mylar tape
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 Article 645
- 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 90ºC dry
- Unjacketed Type MC cables are rated for dry, indoor locations only per NEC 330.10(A)(10)

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

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- ASTM B787 19 Wire Combination Unilay-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.
- VW-1 (Vertical-Wire) Flame Test

SAMPLE PRINT LEGEND:

E96627 {UL} TYPE MC AWG XXTHHN 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
551172	8	2	BN,GY	0.143	19	30	1x10	0.641	135	217
551174	8	2	YW,GY	0.143	19	30	1x10	0.641	135	217
551173	8	2	OE,GY	0.143	19	30	1x10	0.641	135	217
551178	8	3	BN,OE,GY	0.143	19	30	1x10	0.688	187	286
551179	8	3	BN,YW,GY	0.143	19	30	1x10	0.761	187	233
550743	8	3	BN,OE,YW	0.143	19	30	1x10	0.688	187	286
550375	6	2	BN,GY	0.179	19	30	1x8	0.787	214	346
561235	6	2	YW,GY	0.179	19	30	1x8	0.787	215	349
553541	6	3	BN,OE,GY	0.179	19	30	1x8	0.855	297	455
556046	6	3	BN,OE,YW	0.179	19	30	1x8	0.855	296	451
552578	6	4	BN,OE,YW,GY	0.179	19	30	1x8	0.933	377	559
556478	4	3	BN,OE,YW	0.226	19	40	1x8	0.987	442	646
554580	4	4	BN,OE,YW,GY	0.226	19	40	1x8	1.089	572	830
554387	2	3	BN,OE,YW	0.286	19	40	1x6	1.088	702	949
580740	2	4	BN,OE,YW,GY	0.286	19	40	1x6	1.238	909	1221

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.

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Table 2 – Electrical and Engineering Data

Cond. Size	Conductor Number	Min. Bend Radius	Max Pull Tension	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	Lbs	Ω/1000ft	Ω/1000ft	Ω/1000ft	Amp	Amp
8	2	4.5	264	0.653	0.81	0.052	50	55
8	2	4.5	264	0.653	0.81	0.052	50	55
8	2	4.5	264	0.653	0.81	0.052	50	55
8	3	4.8	396	0.653	0.81	0.052	50	55
8	3	5.3	396	0.653	0.81	0.052	50	55
8	3	4.8	396	0.653	0.81	0.052	50	55
6	2	5.5	419	0.411	0.51	0.051	65	75
6	2	5.5	419	0.411	0.51	0.051	65	75
6	3	6	629	0.411	0.51	0.051	65	75
6	3	6	629	0.411	0.51	0.051	65	75
6	4	6.5	839	0.411	0.51	0.051	52	60
4	3	6.9	1001	0.258	0.32	0.048	85	95
4	4	7.6	1335	0.258	0.32	0.048	68	76
2	3	7.6	1592	0.162	0.201	0.045	115	130
2	4	8.7	2123	0.162	0.201	0.045	92	104

***** 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.

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