Armorlite® Type MC THHN/THWN Intermediate Size Copper Conductor 120/208V Colors

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

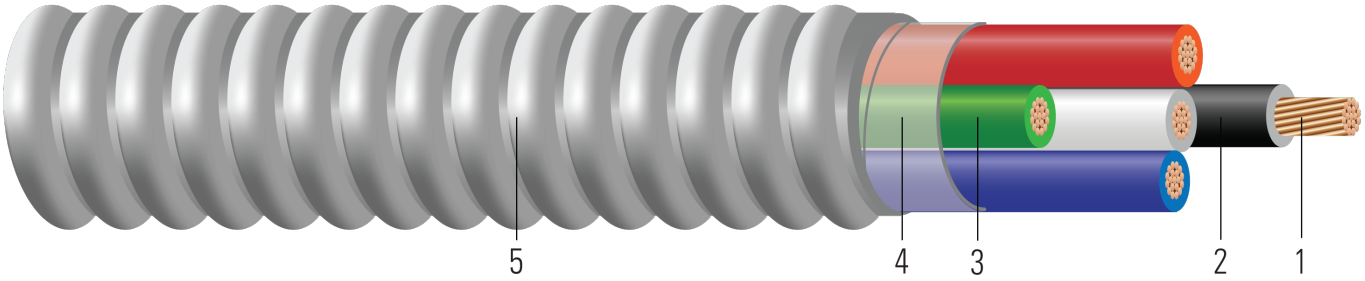


Image not to scale. See Table 1 for dimensions.

CONSTRUCTION:

1. **Conductor:** 19 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. **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.

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

Copyright © 2024 Southwire Company, LLC. All Rights Reserved

- 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:

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
687095◊	8	2	BK/WE	0.143	19	35	1x10	0.650	135	218
551175◊	8	2	RD/WE	0.143	19	35	1x10	0.650	135	218
551177◊	8	2	BE/WE	0.143	19	35	1x10	0.650	135	218
687137◊	8	3	BK/RD/ WE	0.143	19	35	1x10	0.697	186	286
551180◊	8	3	RD/BE/ WE	0.143	19	35	1x10	0.697	186	286
687210◊	8	4	BK/RD/ BE/WE	0.143	19	35	1x10	0.826	238	389
687103◊	6	2	BK/WE	0.179	19	35	1x8	0.786	215	348
687145◊	6	3	BK/RD/ WE	0.179	19	35	1x8	0.855	296	454
687251◊	6	4	BK/RD/ BE/WE	0.179	19	35	1x8	0.929	378	561
687152◊	4	3	BK/RD/ WE	0.226	19	50	1x8	0.985	442	643
687228◊	4	4	BK/RD/ BE/WE	0.226	19	50	1x8	1.085	572	823
687160◊	3	3	BK/RD/ WE	0.254	19	50	1x6	1.058	574	797
687236◊	3	4	BK/RD/ BE/WE	0.254	19	50	1x6	1.162	738	1000
687178◊	2	3	BK/RD/ WE	0.286	19	50	1x6	1.159	702	947
687244◊	2	4	BK/RD/ BE/WE	0.286	19	50	1x6	1.233	909	1210

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.

Copyright © 2024 Southwire Company, LLC. All Rights Reserved

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 60°C	Allowable Ampacity Raceway 75°C	Allowable Ampacity Raceway 90°C
AWG/ Kcmil		Inches	Lbs	Ω/1000ft	Ω/1000ft	Ω/1000ft	Amp	Amp	Amp
8	2	4.6	264	0.653	0.786	0.052	40	50	55
8	2	4.6	264	0.653	0.786	0.052	40	50	55
8	2	4.6	264	0.653	0.786	0.052	40	50	55
8	3	4.9	396	0.653	0.786	0.052	40	50	55
8	3	4.9	396	0.653	0.786	0.052	40	50	55
8	4	5.8	422	0.653	0.786	0.052	32	40	44
6	2	5.5	419	0.411	0.495	0.051	55	65	75
6	3	6.0	629	0.411	0.495	0.051	55	65	75
6	4	6.5	671	0.411	0.495	0.051	44	52	60
4	3	6.9	1001	0.258	0.310	0.048	70	85	95
4	4	7.6	1068	0.258	0.310	0.048	56	68	76
3	3	7.4	1262	0.205	0.246	0.047	85	100	115
3	4	8.1	1347	0.205	0.246	0.047	68	80	92
2	3	8.1	1592	0.162	0.195	0.045	95	115	130
2	4	8.6	1698	0.162	0.195	0.045	76	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.