

# Armorlite® Type MC THHN/THWN Circuit Size Copper Conductor Isolated Ground

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

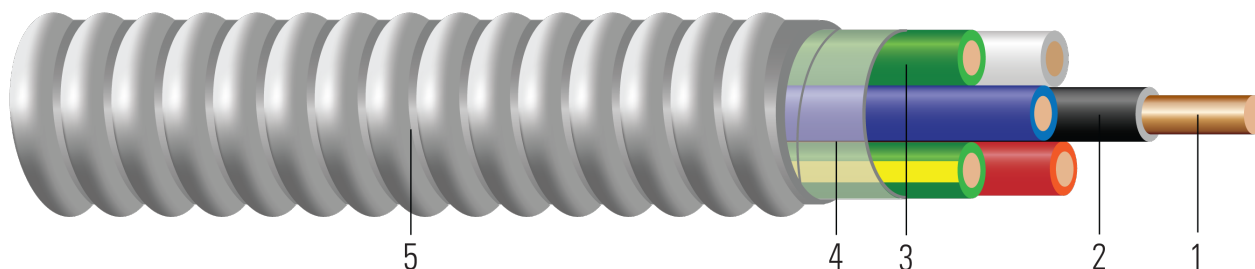


Image not to scale. See Table 1 for dimensions.

## 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:** Two insulated Green and Green/Yellow grounds. 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 - Isolated Ground is suitable for use as follow:**

- Applications requiring redundant, dedicated or isolated grounding paths.
- 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 - Isolated Ground 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



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- 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
- 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.
- REACH - European Community Regulation

## SAMPLE PRINT LEGEND:

E96627 MASTER-DESIGN {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	Num x Neutral Size	Diameter Over Armor	Overall Weight
	AWG/ Kcmil			inch		mils	No. x AWG	No. x AWG	inch	lbs/1000ft
695965◇	12	2	BK/WE	0.080	Solid	20	2x12	1x12	0.518	134
556323◇	12	2	RD/WE	0.080	Solid	20	2x12	1x12	0.518	134
556325◇	12	2	BE/WE	0.080	Solid	20	2x12	1x12	0.518	134
695973◇	12	3	BK/RD/ WE	0.080	Solid	20	2x12	1x12	0.553	162
560950◇	12	3	BK/BE/ WE	0.080	Solid	20	2x12	1x12	0.553	162
695981◇	12	4	BK/RD/ BE/WE	0.080	Solid	20	2x12	1x12	0.590	189
562419◇	12	4	BK/RD/ BE/WE	0.080	Solid	20	2x12	2x12	0.590	189
587697◇	12	6	See Table	0.080	Solid	20	2x12	1x12	0.628	240
695999◇	10	2	BK/WE	0.101	Solid	25	2x10	1x10	0.593	194
555636◇	10	2	BE/WE	0.101	Solid	25	2x10	1x10	0.593	194
696005◇	10	3	BK/RD/ WE	0.101	Solid	25	2x10	1x10	0.637	239
696013◇	10	4	BK/RD/ BE/WE	0.101	Solid	25	2x10	1x10	0.683	278
551104◇	12	2	BK/WE	0.090	19	20	2x12	1x12	0.542	140
551106◇	12	3	BK/RD/ WE	0.090	19	20	2x12	1x12	0.565	159
551296◇	12	4	BK/RD/ BE/WE	0.090	19	20	2x12	1x12	0.617	200
551298◇	10	2	BK/WE	0.117	19	25	2x10	1x10	0.630	209
551302◇	10	3	BK/RD/ WE	0.117	19	25	2x10	1x10	0.678	254
555184◇	8	2	BK/WE	0.143	19	35	2x10	1x8	0.685	263
555189◇	8	4	BK/RD/ BE/WE	0.143	19	35	2x10	1x8	0.872	437

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.



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**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 60°C	Allowable Ampacity Raceway 75°C	Allowable Ampacity Raceway 90°C
AWG/ Kcmil		Inches	Ω/1000ft	Ω/1000ft	Ω/1000ft	Amp	Amp	Amp
12	2	3.6	1.662	2.002	0.030	20	25	30
12	2	3.6	1.662	2.002	0.030	20	25	30
12	2	3.6	1.662	2.002	0.030	20	25	30
12	3	3.8	1.662	2.002	0.030	20	25	30
12	3	3.8	1.662	2.002	0.030	20	25	30
12	4	4.1	1.662	2.002	0.038	16	20	24
12	4	4.1	1.662	2.002	0.038	16	20	24
12	6	4.3	1.662	2.002	0.038	16	20	24
10	2	4.1	1.040	1.253	0.030	30	35	40
10	2	4.1	1.040	1.253	0.030	30	35	40
10	3	4.4	1.040	1.253	0.030	30	35	40
10	4	4.7	1.040	1.253	0.038	24	28	32
12	2	3.7	1.662	2.002	0.030	20	25	30
12	3	3.9	1.662	2.002	0.030	20	25	30
12	4	4.3	1.662	2.002	0.038	16	20	24
10	2	4.4	1.040	1.253	0.029	30	35	40
10	3	4.7	1.040	1.253	0.029	30	35	40
8	2	4.7	0.653	0.786	0.031	40	50	55
8	4	6.1	0.653	0.786	0.039	32	40	44

\* 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.

