

# TYPE MC - COPPER CONDUCTOR - STEEL ARMOR PVC JACKET - 600V THHN/THWN-2 INNERS

## ENGINEERING SPECIFICATIONS

### Standards

Underwriters Laboratories Standards UL-83, UL-1569, UL-1581, UL-2556 for Type MC; Federal Specification A-A59544; NEMA RV 1-2014, NEMA WC70/ICEA S-95-658; IEEE 1202 (70,000 Btu/hr) Vertical Cable Tray Flame Test, ICEA T-29-520 (210,000 Btu/hr) Flame Test; NFPA 70 (NEC®) Article 330; ARRA 2009 Section 1605 "Buy American" Compliant; RoHS Compliant; MasterSpec Division 26 Sections 260519, 260523; UL Listing #E-301130



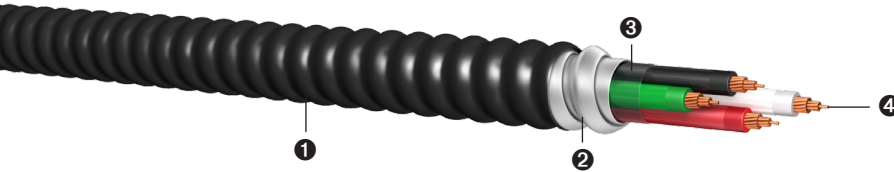
## APPLICATIONS

Type MC cable shall be permitted as follows:

- Permitted use for service, feeders and branch circuits in residential, commercial, industrial, and non-patient care areas/spaces of health care facilities;
- Acceptable for power, lighting, control, and signal circuits;
- Utilized for indoor or outdoor applications, and allowable for concealed or exposed systems;
- Permitted in wet locations per NEC 330.10(A)(11)(a);
- Permitted for direct burial in the earth or embedded in concrete per NEC 330.12(2)(a);
- Acceptable for direct burial where identified for such use;
- Allowable in assembly occupancies (NEC 518.4);
- Permissible in theaters, audience areas of motion pictures, television studios, and similar locations (NEC 520.5);
- Permitted as aerial cable on a messenger and allowable installations in approved raceways and cable trays (NEC 392);
- For use with branch circuits to swimming pool, hot tubs, and spa applications per 680.14 and 330.12(2)(a) and (b);
- Suitable for installation under raised floors for IT equipment (NEC 645.5(E)) and permitted in Class I Div. 2, Class II Div. 2, and Class III Div. 1 Hazardous Locations;
- Listed for use with UL 1479 - 1, 2, and 3 Hour Through-Penetration Firestop Systems.

## CONSTRUCTION

Available in sizes 14 AWG through 750 KCMIL, Encore's Metal-Clad Cable is constructed with soft-drawn copper, Type THHN/THWN-2 conductors rated 90°C dry or wet locations. Sizes 14 AWG through 1 AWG contain a green insulated grounding conductor. Larger sizes are supplied with a bare ground conductor. All conductors are cabled together with separator tape containing the identification print legend to form the cable core. Interlocked steel armor is applied over the entire assembly. A flame retardant, sunlight-resistant black PVC jacket is applied over the armor.



- 1 Black PVC Jacket
- 2 Interlocked Steel Armor
- 3 Separator Tape
- 4 THHN/THWN-2 Solid or Stranded Copper Conductor

Conductors			Outside Diameter Over Armor (in)	Outside Diameter Over Jacket (in)	PVC Thickness (in)	Approximate Net Weight (lbs/1000 ft)	Allowable Ampacity (Amps) <sup>1</sup>		Standard Packaging	
AWG/No.	Type	Ground					75°C	90°C	Coils	Reels
14/2	Solid	14 AWG Green Insulated	0.426	0.526	0.050	176.39	20	25	250'	1000'
14/3	Solid	14 AWG Green Insulated	0.452	0.552	0.050	200.08	20	25	250'	1000'
14/4	Solid	14 AWG Green Insulated	0.481	0.581	0.050	224.84	20	25	250'	1000'
12/2	Solid	12 AWG Green Insulated	0.461	0.561	0.050	211.31	25	30	250'	1000'
12/3	Solid	12 AWG Green Insulated	0.492	0.592	0.050	244.46	25	30	250'	1000'
12/4	Solid	12 AWG Green Insulated	0.526	0.626	0.050	279.00	25	30	250'	1000'
10/2	Solid	10 AWG Green Insulated	0.527	0.627	0.050	273.94	35	40	250'	1000'
10/3	Solid	10 AWG Green Insulated	0.570	0.670	0.050	324.87	35	40	250'	1000'
10/4	Solid	10 AWG Green Insulated	0.608	0.708	0.050	373.80	35	40	250'	1000'
14/2	Stranded	14 AWG Green Insulated	0.442	0.542	0.050	182.62	20	25	250'	1000'
14/3	Stranded	14 AWG Green Insulated	0.470	0.570	0.050	207.30	20	25	250'	1000'
14/4	Stranded	14 AWG Green Insulated	0.501	0.601	0.050	233.37	20	25	250'	1000'
12/2	Stranded	12 AWG Green Insulated	0.479	0.579	0.050	218.61	25	30	250'	1000'
12/3	Stranded	12 AWG Green Insulated	0.511	0.611	0.050	252.86	25	30	250'	1000'
12/4	Stranded	12 AWG Green Insulated	0.547	0.647	0.050	288.17	25	30	250'	1000'
10/2	Stranded	10 AWG Green Insulated	0.550	0.650	0.050	284.59	35	40	250'	1000'
10/3	Stranded	10 AWG Green Insulated	0.591	0.691	0.050	335.79	35	40	250'	1000'
10/4	Stranded	10 AWG Green Insulated	0.636	0.736	0.050	388.07	35	40	250'	1000'
8/2	Stranded	10 AWG Green Insulated	0.650	0.750	0.050	365.96	50	55	200'	500'/1000'
8/3	Stranded	10 AWG Green Insulated	0.706	0.806	0.050	445.11	50	55	200'	500'/1000'
8/4	Stranded	10 AWG Green Insulated	0.771	0.871	0.050	527.39	50	55	200'	500'/1000'
6/2	Stranded	8 AWG Green Insulated	0.744	0.844	0.050	483.56	65	75	125'	500'/1000'
6/3	Stranded	8 AWG Green Insulated	0.837	0.937	0.050	607.27	65	75	125'	500'/1000'
6/4	Stranded	8 AWG Green Insulated	0.958	1.058	0.050	943.69	65	75	100'	500'/1000'
4/2	Stranded	8 AWG Green Insulated	0.863	0.963	0.050	601.18	85	95	100'	500'
4/3	Stranded	8 AWG Green Insulated	0.972	1.072	0.050	949.63	85	95	100'	500'
4/4	Stranded	8 AWG Green Insulated	1.085	1.185	0.050	1,152.94	85	95	100'	500'
3/3	Stranded	6 AWG Green Insulated	1.063	1.163	0.050	1,130.79	100	115	100'	500'
3/4	Stranded	6 AWG Green Insulated	1.152	1.252	0.050	1,355.95	100	115	100'	500'
2/3	Stranded	6 AWG Green Insulated	1.102	1.202	0.050	1,280.60	115	130	100'	500'
2/4	Stranded	6 AWG Green Insulated	1.229	1.329	0.050	1,568.99	115	130	100'	500'

### FEATURES

Installation costs reduced up to 50% over raceway and wire. Weight of aluminum armor is as much as 45% less than steel.

### NOTE

MC Cable Connectors are required to be listed for use with MC Cable per 330.6. Anti-Short Bushings are not required.

### Standard Conductor Color Coding

No.	120V/208V/240V
2	Black/White
3	Black/Red/White
4	Red/Black/White/Blue
Ground	Green

No.	277V/480V
2	Brown/Gray
3	Brown/Orange/Gray
4	Brown/Orange/Yellow/Gray
Ground	Green

<sup>1</sup> Ampacity of conductors are based on NFPA 70 (NEC) Table 310.16. See 110.14(C), 240.4(D) and 310.15(B)&(C) for other limitations where applicable.

For equipment marked for use at higher temperatures, the conductor ampacity shall be limited to the following per NEC 110.14(C):

60°C when terminated to equipment for circuits rated 100 amperes or less or marked for size 14 AWG through 1 AWG conductor.

75°C when terminated to equipment for circuits rated over 100 amperes or marked for conductors larger than 1 AWG.

90°C for ampacity derating purposes.

When the neutral is considered current-carrying conductor, the ampacity of 4/C cables shall be reduced by a factor of 0.80 per NEC 310.15(C)(1).

The above data is approximate and subject to normal manufacturing tolerances.

**PRINT LEGEND:** ENCORE WIRE CORP (SIZE) TYPE MC W/PVC JACKET 600 VOLTS (UL) TYPE THHN OR THWN-2 CDRS SUN-RES IEEE1202/FT4 DIR-BUR DATE TIME OPERATOR  
QC P#M#

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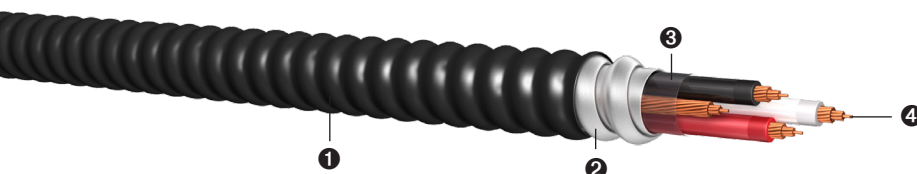
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AWG/No.	Type	Ground					75°C	90°C	
1/3	Stranded	6 AWG Green Insulated	1.224	1.324	0.050	1,530.59	130	145	1000' Reels
1/4	Stranded	6 AWG Green Insulated	1.337	1.437	0.050	1,874.58	130	145	1000' Reels
1/0-3	Stranded	6 AWG Bare	1.288	1.388	0.050	1,755.84	150	170	1000' Reels
1/0-4	Stranded	6 AWG Bare	1.431	1.531	0.050	2,183.67	150	170	1000' Reels
2/0-3	Stranded	6 AWG Bare	1.376	1.476	0.050	2,059.11	175	195	1000' Reels
2/0-4	Stranded	6 AWG Bare	1.516	1.636	0.060	2,601.27	175	195	1000' Reels
3/0-3	Stranded	4 AWG Bare	1.484	1.584	0.050	2,483.24	200	225	1000' Reels
3/0-4	Stranded	4 AWG Bare	1.636	1.756	0.060	3,141.52	200	225	1000' Reels
4/0-3	Stranded	4 AWG Bare	1.604	1.724	0.060	2,982.73	230	260	1000' Reels
4/0-4	Stranded	4 AWG Bare	1.771	1.891	0.060	3,755.38	230	260	1000' Reels
250-3	Stranded	4 AWG Bare	1.721	1.841	0.060	3,456.79	255	290	1000' Reels
250-4	Stranded	4 AWG Bare	1.900	2.020	0.060	4,373.33	255	290	1000' Reels
300-3	Stranded	3 AWG Bare	1.833	1.953	0.060	4,013.71	285	320	1000' Reels
300-4	Stranded	3 AWG Bare	2.077	2.197	0.060	5,296.62	285	320	1000' Reels
350-3	Stranded	3 AWG Bare	1.934	2.054	0.060	4,536.67	310	350	1000' Reels
350-4	Stranded	3 AWG Bare	2.191	2.311	0.060	6,028.19	310	350	1000' Reels
400-3	Stranded	3 AWG Bare	2.079	2.199	0.060	5,289.32	335	380	1000' Reels
400-4	Stranded	3 AWG Bare	2.297	2.447	0.075	6,784.33	335	380	1000' Reels
500-3	Stranded	2 AWG Bare	2.253	2.403	0.075	6,396.68	380	430	1000' Reels
500-4	Stranded	2 AWG Bare	2.494	2.644	0.075	8,143.19	380	430	1000' Reels
600-3	Stranded	2 AWG Bare	2.521	2.671	0.075	7,551.45	420	475	1000' Reels
600-4	Stranded	2 AWG Bare	2.790	2.940	0.075	9,642.22	420	475	1000' Reels
750-3	Stranded	1 AWG Bare	2.738	2.888	0.075	9,126.06	475	535	1000' Reels
750-4	Stranded	1 AWG Bare	3.036	3.186	0.075	11,754.11	475	535	1000' Reels

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