

# TYPE MC - COPPER CONDUCTOR - STEEL ARMOR PVC JACKET

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; IEEE 1202 (70,000 Btu/hr) Vertical Cable Tray Flame Test, IEC 60332-29-520 (210,000 Btu/hr) Flame Test; NFPA 70 (NEC<sup>®</sup>) Article 330; ARRA 2009 Section 1605 "Buy American" Compliant; RoHS Compliant; MasterSpec Division 26 Sections 260519, 260523; UL Listing #E-301130



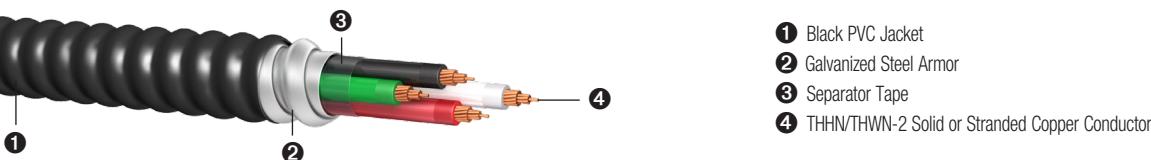
## APPLICATIONS

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 aluminum armor is applied over the entire assembly. A flame retardant, sunlight-resistant black PVC jacket is applied over the armor.



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'

<sup>1</sup> Ampacity of conductors are based on NFPA 70 (NEC) Table 310.15(B)(16). See 110.14(C), 240.4(D) and 310.15(B) 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(O):

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 4/2 cables shall be reduced by a factor of 0.80 per NEC 310.15(B)(3)(a).

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

### FEATURES

Installation costs reduced up to 50% over raceway and wire. Weight of aluminum armor is as much as 45% less than steel. Insulating anti-short bushings are supplied with each reel or coil, but not required per Section 330.40 of the NEC.

### 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

PRINT LEGEND: ENCORE WIRE CORPORATION (SIZE) WITH GROUND TYPE MC CABLE PVC JACKET THHN/THWN-2 CDRS SUN-RES 600V IEEE1202/FT4 DIR BUR (UL) DATE/TIME/OPER/QC



ENCORE WIRE<sup>®</sup>

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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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