

# TYPE MC - ALUMINUM CONDUCTOR - STEEL ARMOR - PVC JACKET - 600V /1000V XHHW-2 CONDUCTORS (6 AWG - 4/0 AWG)

## ENGINEERING SPECIFICATIONS

### Standards

Underwriters Laboratories® Standards UL-44, UL-1569, UL-1581, UL-1685, UL-2556 for type MC; Federal Specification AA-59544; NFPA 70 (NEC®) Article 330; NEMA RV-1, NEMA WC70/CECA S-95-658; UL 1685-Method 1 (70,000 Btu/hr) Flame Test; Compact Stranded Aluminum Alloy 8000 Series per ASTM B800, ASTM B801, ASTM B836; ARRA 2009 Section 1605 "Buy American" Compliant; RoHS Compliant; MasterSpec Division 26 Sections 260519, 260523; VW-1 or IEEE 1202 (FT4) optional. UL Listing #E-301130



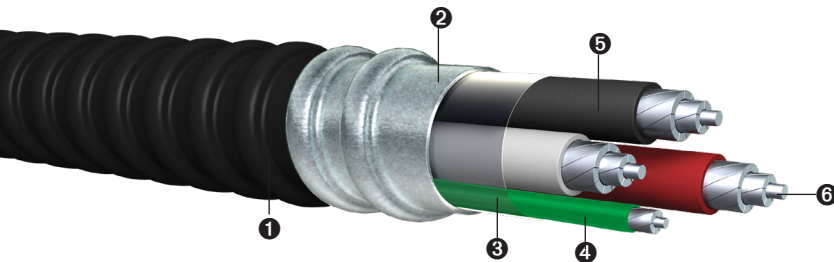
## APPLICATIONS

Type MC cable shall be permitted as follows:

- Permitted use for services, feeders, and branch circuits in residential, commercial, industrial, and non-patient care area/space of health care facilities (NEC 517.12);
- Permitted for direct burial in the earth or when embedded in concrete per NEC 330.12(2)(a);
- Acceptable for power, lighting, control, and signal units;
- Allowable in concealed or exposed installations;
- Permitted in wet locations per NEC 330.10(A)(11);
- 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 ariel cable on a messenger (NEC 396.10(A));
- Allowable installations in approved raceways and cable trays (NEC 392);
- Suitable for installations under raised floors for IT equipment (NEC 645.5(E));
- For use with branch circuits to swimming pool, hot tubs, and spa applications per 680.14 and 330.12(2)(a) and (b);
- 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 6 AWG through 750 KCMIL, Encore Wire's Metal-Clad Cable is constructed with Compact Stranded Conductors, Aluminum Alloy 8000 Series per ASTM B800, ASTM B801 and ASTM B836. Type XHHW-2 conductors rated 90°C dry or wet locations. Sizes 6 AWG through 750 KCMIL contain a green insulated aluminum grounding conductor. All conductors are cabled together with separator tape, which contains the identification print legend, to form the cabled core. Interlocked crush-resistant galvanized steel armor is applied over the assembly. Overall sunlight-resistant, flame-retardant black PVC jacket with print legend. AVAILABLE WITH A LIGHTWEIGHT ALUMINUM ARMOR.



- 1 Black PVC Jacket
- 2 Interlocked Steel Armor
- 3 Separator Tape
- 4 Green Insulated Compact Stranded Ground Conductor, AA-8000 Series
- 5 XLPE Insulation
- 6 Compact Stranded Conductor, AA-8000 Series

Phase Conductors			Ground Conductor			Outside Diameter over Armor (in)	PVC Jacket Thickness (in)	Outside Diameter over PVC Jacket (in)	Approximate Net Weight (lbs/1000 ft)	Allowable Ampacity (Amps) <sup>1</sup>		Standard Packaging (ft)	
AWG or KCMIL/ No. of Conductors	No. of Strands	Insulation Thickness (in)	Green Ground (AWG)	No. of Strands	Insulation Thickness (in)					75°C	90°C	Coils	Reels
6/3	7	0.045	6	7	0.045	0.842	0.050	0.942	428	50	55	250	1000' Reel
6/4	7	0.045	6	7	0.045	0.959	0.050	1.059	636	50	55	250	1000' Reel
4/3	7	0.045	6	7	0.045	0.965	0.050	1.065	652	65	75	250	1000' Reel
4/4	7	0.045	6	7	0.045	1.055	0.050	1.155	753	65	75	250	1000' Reel
3/3	7	0.045	6	7	0.045	1.012	0.050	1.112	711	75	85	250	1000' Reel
3/4	7	0.045	6	7	0.045	1.110	0.050	1.210	828	75	85	250	1000' Reel
2/3	7	0.045	4	7	0.045	1.091	0.050	1.191	813	90	100	250	1000' Reel
2/4	7	0.045	4	7	0.045	1.199	0.050	1.299	950	90	100	-	1000' Reel
1/3	8	0.055	4	7	0.045	1.187	0.050	1.287	932	100	115	-	1000' Reel
1/4	8	0.055	4	7	0.045	1.311	0.050	1.411	1101	100	115	-	1000' Reel
1/0-3	10	0.055	4	7	0.045	1.258	0.050	1.358	1039	120	135	-	1000' Reel
1/0-4	10	0.055	4	7	0.045	1.393	0.050	1.493	1236	120	135	-	1000' Reel
2/0-3	12	0.055	4	7	0.045	1.335	0.050	1.435	1165	135	150	-	1000' Reel
2/0-4	12	0.055	4	7	0.045	1.481	0.050	1.581	1397	135	150	-	1000' Reel
3/0-3	15	0.055	4	7	0.045	1.427	0.050	1.527	1320	155	175	-	1000' Reel
3/0-4	15	0.055	4	7	0.045	1.587	0.060	1.707	1626	155	175	-	1000' Reel
4/0-3	19	0.055	2	7	0.045	1.552	0.060	1.672	1574	180	205	-	1000' Reel
4/0-4	19	0.055	2	7	0.045	1.728	0.060	1.848	1905	180	205	-	1000' Reel

### Standard Conductor Color Coding

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

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

### FEATURES

Installation costs reduced up to 50% over conduit and wire; for ease of installation and pulling, cable is reverse wound on reels

### NOTE

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

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

NEC Article 310.15(B)(1) for ambient temperature correction factors for temperatures other than 30°C (86°F).  
NEC Table 310.15(C)(1) for ampacity adjustment factors, as applicable, for more than three current-carrying conductors.  
NEC Article 110.14(C) for conductor temperature limitations for equipment rated 100 amps or less, or for equipment rated for more than 100 amps.  
The above data is approximate and subject to manufacturing tolerances.

**PRINT LEGEND:** ENCORE WIRE CORP (SIZE) AA-8000 AL CDRS TYPE MC W/PVC JACKET 600V/1000V (UL) TYPE XHHW-2 CDRS SUN-RES IEEE1202/FT4 DIR-BUR DATE TIME OPERATOR QC P#M#

# TYPE MC - ALUMINUM CONDUCTOR - STEEL ARMOR - PVC JACKET - 600V/1000V XHHW-2 CONDUCTORS (250 KCMIL - 750 KCMIL)

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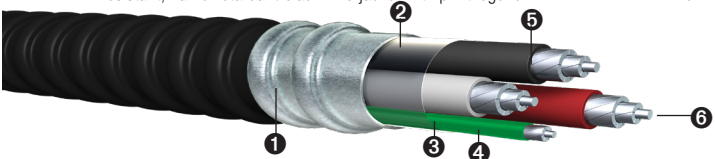
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AWG or KCMIL/ No. of Conductors	No. of Strands	Insulation Thickness (in)	Green Ground (AWG)	No. of Strands	Insulation Thickness (in)					75°C	90°C	
250/3	22	0.065	2	7	0.045	1.678	0.060	1.798	1785	205	230	1000' Reel
250/3	22	0.065	1	8	0.055	1.701	0.060	1.821	1821	205	230	1000' Reel
250/4	22	0.065	1	8	0.055	1.898	0.060	2.018	2211	205	230	1000' Reel
300/3	21	0.065	1	8	0.055	1.798	0.060	1.918	2026	230	260	1000' Reel
300/4	21	0.065	1	8	0.055	2.061	0.060	2.181	2709	230	260	1000' Reel
350/3	24	0.065	1	8	0.055	1.888	0.060	2.008	2227	250	280	1000' Reel
350/4	24	0.065	1/0	10	0.055	2.180	0.060	2.300	3013	250	280	1000' Reel
350/4	24	0.065	4/0	19	0.055	2.248	0.060	2.368	3166	250	280	1000' Reel
400/3	27	0.065	1	8	0.055	1.973	0.060	2.093	2424	270	305	1000' Reel
400/4	27	0.065	1/0	10	0.055	2.276	0.075	2.426	3343	270	305	1000' Reel
400/4	27	0.065	3/0	15	0.055	2.317	0.075	2.467	3436	270	305	1000' Reel
500/3	34	0.065	1	8	0.055	2.172	0.060	2.292	3048	310	350	1000' Reel
500/3	34	0.065	2/0	12	0.055	2.206	0.060	2.326	3122	310	350	1000' Reel
500/3	34	0.065	3/0	15	0.055	2.226	0.060	2.346	3171	310	350	1000' Reel
500/3	34	0.065	250	22	0.065	2.284	0.075	2.434	3366	310	350	1000' Reel
500/4	34	0.065	2/0	12	0.055	2.465	0.075	2.615	3897	310	350	1000' Reel
500/4	34	0.065	3/0	15	0.055	2.487	0.075	2.637	3948	310	350	1000' Reel
500/4	34	0.065	250	22	0.065	2.544	0.075	2.694	4079	310	350	1000' Reel
600/3	41	0.080	1/0	10	0.055	2.402	0.075	2.552	3652	340	385	1000' Reel
600/3	41	0.080	4/0	19	0.055	2.456	0.075	2.606	3797	340	385	1000' Reel
600/3	41	0.080	350	24	0.065	2.534	0.075	2.684	4000	340	385	1000' Reel
600/3	41	0.080	400	27	0.065	2.557	0.075	2.707	4066	340	385	1000' Reel
600/4	41	0.080	3/0	15	0.055	2.723	0.075	2.873	4591	340	385	1000' Reel
750/3	47	0.080	1/0	10	0.055	2.607	0.075	2.757	4239	385	435	1000' Reel
750/3	47	0.080	3/0	15	0.055	2.619	0.075	2.769	4312	385	435	1000' Reel
750/4	47	0.080	3/0	15	0.055	2.935	0.075	3.085	5334	385	435	1000' Reel
750/4	47	0.080	750	47	0.080	3.200	0.085	3.370	6189	385	435	1000' Reel

### Standard Conductor Color Coding

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