

# TYPE MC - ALUMINUM CONDUCTOR - ALUMINUM 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-56544; NFPA 70 (NEC®) Article 330; NEMA RV-1, NEMA WC70/ICEA 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



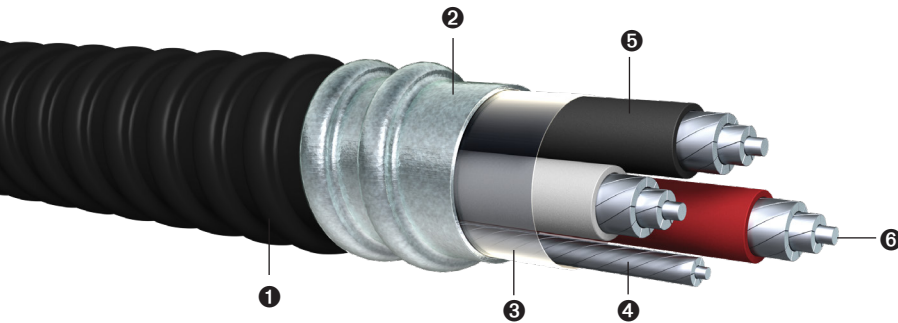
## APPLICATIONS

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;
- 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);
- 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 and listed for use in UL 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. Sizes 6 AWG through 750 KCMIL contain a bare aluminum ground wire. All conductors are cabled together with separator tape, which contains the identification print legend. Interlocked aluminum armor is applied. Overall sunlight-resistant, flame-retardant black PVC jacket. AVAILABLE WITH LIGHTWEIGHT GALVANIZED STEEL ARMOR.



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

Phase Conductors			Ground Conductor		Diameter over Armor (in)	PVC Jacket Thickness (in)	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)	Bare Ground (AWG)	No. of Strands					75°C	90°C	Coils	Reels
6/3	7	.045	6	7	0.801	0.050	0.901	302	50	55	250'	1000'
6/4	7	.045	6	7	0.844	0.050	0.944	348	50	55	250'	1000'
4/3	7	.045	6	7	0.892	0.050	0.992	368	65	75	250'	1000'
4/4	7	.045	6	7	0.950	0.050	1.050	441	65	75	250'	1000'
3/3	7	.045	6	7	0.931	0.050	1.031	410	75	85	250'	1000'
3/4	7	.045	6	7	1.008	0.050	1.108	498	75	85	250'	1000'
2/3	7	.045	4	7	0.988	0.050	1.088	487	90	100	250'	1000'
2/4	7	.045	4	7	1.081	0.050	1.181	591	90	100	250'	1000'
1/3	8	.055	4	7	1.095	0.050	1.195	584	100	115	250'	1000'
1/4	8	.055	4	7	1.213	0.050	1.313	739	100	115	250'	1000'
1/0-3	10	.055	4	7	1.187	0.050	1.287	696	120	135	250'	1000'
1/0-4	10	.055	4	7	1.327	0.050	1.427	853	120	135	250'	1000'
2/0-3	12	.055	4	7	1.274	0.050	1.374	800	135	150	250'	1000'
2/0-4	12	.055	4	7	1.423	0.050	1.523	987	135	150	-	1000'
3/0-3	15	.055	4	7	1.373	0.050	1.473	935	155	175	-	1000'
3/0-4	15	.055	4	7	1.539	0.060	1.659	1186	155	175	-	1000'
4/0-3	19	.055	2	7	1.487	0.060	1.607	1147	180	205	-	1000'
4/0-4	19	.055	2	7	1.655	0.060	1.775	1513	180	205	-	1000'

<sup>1</sup> Ampacity of conductors are based on the National Electrical Code (NFPA 70) Table 310.15(B)(16). See 110.14(C), 240.4(D) and 310.15(B) for other limitations where applicable.

NEC Article 310.15(B)(2)(a) for ambient temperature correction factors for temperatures other than 30°C (86°F).  
NEC Table 310.15(B)(3)(a) 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.

### Standard Conductor Color Coding

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

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

Additional colors available subject to ERQ

### FEATURES

Installation costs reduced up to 50% over conduit and wire; aluminum armor weight is up to 45% less than steel; while not required by Section 330.40, insulating anti-short bushings are supplied with each reel; for ease of installation and pulling, cable is reverse wound on reels.

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

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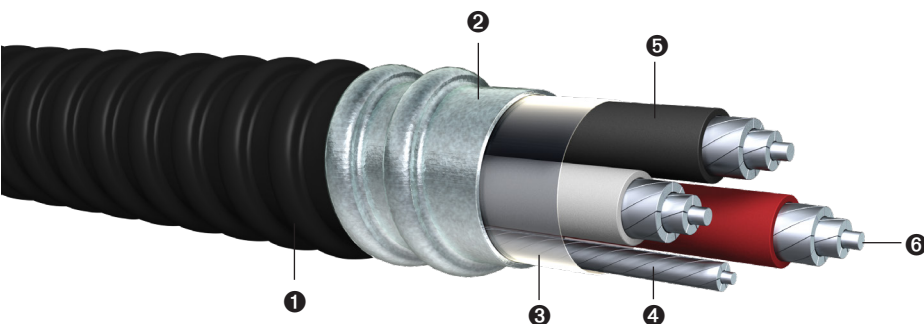
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AWG or KCMIL/ No. of Conductors	No. of Strands	Insulation Thickness (in)	Bare Ground (AWG)	No. of Strands					75°C	90°C	
250/3	22	0.065	2	7	1.627	0.060	1.747	1330	205	230	1000' Reels
250/3	22	0.065	3/0	15	1.695	0.060	1.815	1438	205	230	1000' Reels
250/4	22	0.065	1	8	1.811	0.060	1.931	1766	205	230	1000' Reels
300/3	21	0.065	1	8	1.769	0.060	1.889	1632	230	260	1000' Reels
300/4	21	0.065	1	8	1.942	0.060	2.062	1992	230	260	1000' Reels
350/3	24	0.065	1	8	1.868	0.060	1.988	1822	250	280	1000' Reels
350/4	24	0.065	1/0	10	2.061	0.060	2.181	2287	250	280	1000' Reels
400/3	27	0.065	1	8	1.958	0.060	2.078	2002	270	305	1000' Reels
400/4	27	0.065	1/0	10	2.145	0.060	2.265	2487	270	305	1000' Reels
500/3	34	0.065	1	8	2.124	0.060	2.244	2359	310	350	1000' Reels
500/3	34	0.065	2/0	12	2.135	0.060	2.255	2409	310	350	1000' Reels
500/3	34	0.065	3/0	15	2.144	0.060	2.264	2445	310	350	1000' Reels
500/4	34	0.065	3/0	15	2.360	0.075	2.510	3079	310	350	1000' Reels
600/3	41	0.065	1	8	2.359	0.075	2.509	2830	340	385	1000' Reels
600/3	41	0.065	1/0	10	2.359	0.075	2.509	2853	340	385	1000' Reels
600/4	41	0.065	3/0	15	2.624	0.075	2.774	3652	340	385	1000' Reels
750/3	47	0.080	1/0	10	2.562	0.075	2.712	3375	385	435	1000' Reels
750/3	47	0.080	3/0	15	2.574	0.075	2.724	3437	385	435	1000' Reels
750/4	47	0.080	3/0	15	2.850	0.075	3.000	4325	385	435	1000' Reels
750/4	47	0.080	750	47	3.245	0.085	3.415	5075	385	435	1000' Reels

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