**TYPE MC - ALUMINUM CONDUCTOR - STEEL ARMOR - PVC JACKET - 600V**

**THHN/THWN-2 CONDUCTORS (6 AWG - 4/0 AWG)**

**ENGINEERING SPECIFICATIONS**

**Standards**
Underwriters Laboratories® Standards UL-93, UL-1569, UL-1581, UL-2556 for type MC; Federal Specification AA-59544; IEEE 1202 (70,000 Btu/hr) Flame Test; NFPA 70 (NEC®) Article 330; NEMA RV-1; 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; UL Listing #E-301130

**APPLICATIONS**
Type MC Cable shall be permitted as follows:
- Permitted 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 circuits;
- 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 THHN/THWN-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 steel armor is applied. Overall sunlight-resistant, flame-retardant black PVC jacket.

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### Table: Standard Conductor Color Coding

<table>
<thead>
<tr>
<th>No.</th>
<th>Color Coding</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Black/White</td>
</tr>
<tr>
<td>3</td>
<td>Black/Red/White</td>
</tr>
<tr>
<td>4</td>
<td>Brown/Orange/Gray</td>
</tr>
</tbody>
</table>

**FEATURES**
- Installation costs reduced up to 50% over conduit and wire; 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.

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**Additional colors available subject to ERQ**

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**Notes:**
1. 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)(6)(a) for ambient temperature correction factors for temperatures other than 30°C (86°F).

NEC Article 310.15(B)(6)(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.
**ENGINEERING SPECIFICATIONS**

**Standards**
Underwriters Laboratories® Standards UL-83, UL-1569, UL-1581, UL-2556 for type MC; Federal Specification AA-5944; IEEE 1202 (70,000 Btu/hr) Flame Test; NFPA 70 (NEC®) Article 330; NEMA RV-1; 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; 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 circuits;
- Suitable for installations under raised floors for IT equipment (NEC 645.5(E));
- Permissible in theaters, audience areas of motion pictures, television studios, and similar locations (NEC 520.5);
- Permissible in approved raceways and cable trays (NEC 392);
- 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 THHN/THWN-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 steel armor is applied. Overall sunlight-resistant, flame-retardant black PVC jacket.

**FEATURES**
Installation costs reduced up to 50% over conduit and wire; 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.

**Standard Conductor Color Coding**
1. Black PVC Jacket
2. Interlocked Steel Armor
3. Separator Tape
4. Bare Compact Stranded Ground Conductor, AA-8000 Series
5. Nylon Jacket
6. PVC Insulation
7. Compact Stranded Conductor, AA-8000 Series

Additional colors available subject to ERQ

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**Phase Conductors**

<table>
<thead>
<tr>
<th>AWG or KCMIL/ No. of Conductors</th>
<th>No. of Strands</th>
<th>Insulation Thickness (in)</th>
<th>Nylon Thickness (in)</th>
<th>Bare Ground (AWG)</th>
<th>PVC Jacket Thickness (in)</th>
<th>Outside Diameter over Armor (in)</th>
<th>Allowable Ampacity (Amps)</th>
<th>Standard Packaging (ft)</th>
</tr>
</thead>
<tbody>
<tr>
<td>250/3</td>
<td>22</td>
<td>0.090</td>
<td>0.080</td>
<td>2 AWG</td>
<td>0.060</td>
<td>1.897</td>
<td>2 AWG</td>
<td>1949</td>
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<td>250/3</td>
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<td>0.090</td>
<td>0.080</td>
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<td>0.080</td>
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<td>1.929</td>
<td>1 AWG</td>
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<tr>
<td>300/3</td>
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<td>0.090</td>
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<td>1.874</td>
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<td>0.080</td>
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<td>1 AWG</td>
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<td>1 AWG</td>
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Note: Nominal insulation thickness is 0.090 inches (0.080 inches if not specified).

**Allowable Weight (lbs/1000 ft)**

1. Nominal insulation thickness is 0.090 inches (0.080 inches if not specified).
2. Nominal insulation thickness is 0.090 inches (0.080 inches if not specified).
3. Nominal insulation thickness is 0.090 inches (0.080 inches if not specified).

**Approximate Net Weight**

- 1 AWG: 1.80 lbs/1000 ft
- 3/0 AWG: 3.12 lbs/1000 ft

**Standard Packaging**

- 1 AWG: 205 lbs
- 3/0 AWG: 305 lbs

**Allowable Ampacity (Amps)**

- 1 AWG: 205 230 1000 Reels
- 3/0 AWG: 270 305 1000 Reels

**Standard Conductor Color Coding**

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

**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.**

**NEC Table 310.15(B)(3)(a) for ampacity adjustment factors, as applicable, for more than three current-carrying conductors.**

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