TYPE MC-SG (SMARTGROUND™) - COPPER CONDUCTOR - STEEL ARMOR - 600V
THHN/THWN-2 INNERS

ENGINEERING SPECIFICATIONS

Standards
Underwriters Laboratories Standards UL-93, 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; NFPA 70 (NEC®) Article 330; ARRA 2009 Section 1605 “Buy American” Compliant; RoHS Compliant; MasterSpec Division 26 Sections 260519, 260523, UL Listing IE-301130

Applications
Type MC cable shall be permitted as follows:
- Permitted use for branch circuits in residential, commercial, industrial, and non-patient care areas/spaces of health care facilities;
- Acceptable for power, lighting, control, and signal circuits;
- Allowable in concealed or exposed systems;
- Permitted use in dry locations and embedded in plaster finish on brick or other masonry except in damp or wet locations;
- Utilized for environmental air-handling spaces (NEC 300.22(C)(1));
- 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 installation under raised floors for IT equipment (NEC 645.56(C));
- 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 10 AWG. Encore’s Metal-Clad Cable is constructed with soft-drawn copper, Type THHN/THWN-2 conductors rated 90°C dry. All conductors are individually wrapped with flame retardant colored protective paper with print legend and cabled together to form the cable core. The bare aluminum grounding/bonding conductor is located outside the paper wrap and is cabled with the insulated conductors and in constant contact with sheathing per NEC 250.118(10)(b). Interlocked galvanized lightweight steel armor is applied over the entire assembly.

FEATURES
The NEC 250.118(10)(b) recognizes the combination of interlocking armor and bond wire as an equipment grounding conductor. Installation costs reduced by up to 50% over raceway and wire. Insulating anti-short bushings are supplied with each reel or coil, but not required per Section 330.40 of the NEC. Suitable for type MO-A fittings. SmartColorID® labels are spaced at regular intervals on the exterior of the metal sheathing and are removable. For ease of installation and pulling, cable is reverse wound on reels. Coils are designed to be pulled from the inside.

### Conductor Data

**Conductors**

<table>
<thead>
<tr>
<th>AWG/No.</th>
<th>Type</th>
<th>Grounding/Bonding Wire</th>
<th>Outside Diameter Over Armor (in)</th>
<th>Total Weight of Type MC-Copper Conductor (lbs/1000 ft)</th>
<th>Allowable Ampacity (Amps)</th>
<th>Standard Packaging (ft)</th>
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</thead>
<tbody>
<tr>
<td>14/2</td>
<td>Solid</td>
<td>12 Solid AL</td>
<td>0.453</td>
<td>128.77</td>
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<td>221.17</td>
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<td>180.81</td>
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1. SmartColorID® manufactured under Patent No. 7,854,530, 8,454,785, 8,626,960 & 8,905,108
2. Ampacity of conductors is 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.
3. These data is approximate and subject to normal manufacturing tolerances.

### Standard Conductor Color Coding

- **120V/208V/240V**
  - Black/White
  - Brown/Gray
  - Brown/Orange/Gray
  - Brown/Orange/Yellow/Gray

- **277V/480V**
  - Black/Red/White
  - Black/Red/Blue/White
  - Brown/Gray
  - Brown/Orange/Gray
  - Brown/Orange/Yellow/Gray

Additional colors available subject to ERQ

SmartColorID® Legend:

1. Removable SmartColorID® Label
2. Interlocked Galvanized Lightweight Steel Armor
3. Colored Flame-Redardant Protective Paper Covering
4. Aluminum Bonding Wire
5. PVC Insulation with Nylon Jacket
6. THHN/THWN-2 Copper Conductor

Encore Metals-Clad Cable is designed for installation in compliance with the Voluntary Standard for Health and Safety of Electronics Products, Title 21 CFR 1040.10 – Compliance with the Voluntary Standard for Health and Safety of Electronics Products.

### Thittmann Wire

800.962.9473
www.encorewire.com