C-L-X® Type MC (XHHW-2)

600V Composite Power and Control MC Cable - Aluminum Sheath
600/1000V Marine Cable

Multiple Copper Conductors/90°C Wet or Dry Rating
For Cable Tray Use - Sunlight Resistant - For Direct Burial

Insulation
X-Olene® is Okonite’s trade name for its chemically cross-linked polyethylene, with high dielectric strength.

Assembly and Coverings
The individual conductors are cabled together with non-hygroscopic fillers, bare copper equipment grounding conductor, where indicated, and a binder tape overall. The C-L-X sheath exceeds the grounding conductor requirements of Table 250.122 of the NEC and UL 1569. The impervious, continuous, welded, corrugated aluminum C-L-X sheath provides complete protection against moisture, liquids and gases and has excellent mechanical strength. For direct burial in the ground, embedment in concrete, or for areas subjected to corrosive atmospheres, the C-L-X sheath is protected with a low temperature black Okoseal® (PVC) jacket.

Applications
C-L-X Type MC cables with the impervious, continuous, corrugated aluminum sheath are recommended as an economical alternate to a wire in conduit system. They are authorized for use on feeders and branch circuits for power, lighting, control and signaling circuits in accordance with Article 330 and 725 of the NEC.

C-L-X Type MC cables may be installed indoors or outdoors, in wet or dry locations, as open runs of cable secured to supports spaced not more than six feet apart, in cable tray, as aerial cable on a messenger, in any approved raceway, direct burial, or encased in concrete. C-L-X type MC cables are also approved for use in Class I & II, Division 2, Class III, Divisions 1 and 2, and Class I, Zone 2 hazardous locations per NEC Articles 501, 502, 503 and 505; in Zone 2, Class II Div 2, Class III Div 1 and Class III Div 2 per CEC.

Specifications

Conductor Identification: Conductors 9 AWG and smaller are color coded black, red, blue, yellow. When the control conductors are within one standard AWG size of the power conductors, the control conductors have an additional tracer to facilitate identification.

Grounding Conductor: Where indicated, bare soft copper per ASTM B-3. Stranded in accordance with UL 1581. Meets or exceeds requirements of NEC Table 250.122.

Sheath: Close fitting, impervious, continuous, welded, corrugated aluminum C-L-X per UL 1569. In addition, the aluminum CLX sheath exceeds the equipment grounding requirements of NEC Section 250.118 and 250.122, and can be used as the equipment grounding conductor.

Jacket: Black Okoseal (PVC) per UL 1569. Meets ASTM D746 brittle point at -40°C.

Product Features
- UL Listed as Type MC cable per E38916.
- UL 1309 (CWCMC) listed & UL classified in accord with IEEE 1580 as Marine Shipboard Cable rated 600/1000 volts.
- UL Listed for cable tray use, direct burial and sunlight resistant.
- Passes the IEEE 383-1974 and IEEE 1202 Vertical tray flame tests.
- Passes the 210,000 BTU ICEA T-29-520 Vertical Tray Flame Test.
- Complete pre-packaged, factory-tested wiring system — color coded.
- C-L-X cables are quality control inspected to meet or exceed applicable UL standards.
- 90°C continuous operating temperature in all types of installations.
- 130°C emergency rating.
- 250°C short circuit rating.
- Good EMI shielding characteristics.
- Impervious, continuous metalic sheath excludes moisture, gases and liquids.
- Lower installed system cost than conduit or EMT systems.
- Provides excellent grounding safety.
- Excellent compression and impact resistance.
- Continuous long lengths.
- Installation temperature of -40°C or °F.
- American Bureau of Shipping Type approved as CWCMC Type MC.
- CSA C22.2 No. 123 listed as RA90, FT4 and LTGG (-40°C).
- CSA Type RA90 complies with CEC Zone 2, Class II Div 2, Class III Div 1 and Class III Div 2 Hazardous Locations.

A Bare, Stranded Copper Power Conductors
B X-Olene Insulation-Color Coded for Identification
C Stranded Control Conductors
D Non-Hygroscopic Fillers, as necessary
E Binder Tape
F Impervious, Continuous, Welded Corrugated, Aluminum Sheath
G Black Okoseal Jacket
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**X-Olene Insulation:** #14 Through #10 AWG, 30 mils (0.76mm); #8 Through #2 AWG, 45 mils (1.14mm)

**Okoseal Jacket:** 50 mils (1.27mm)

For Cable Tray Use - Sunlight Resistant - For Direct Burial

Multiple Copper Conductors/90ºC Wet or Dry Rating

**Product Data**

**Section 4: Sheet 2**

**Catalog Number**

**Power Conductors**

**Control Conductors**

**Grounding Conductor**

**Rating**

**C-L-X O.D. - mm**

**Cable O.D. - mm**

**Cross-Sectional Area (sq. in.)†**

**Approx. Ship Weight (lbs.)**

| 571-31-3857 | 4X12 | 8 | 0.93 | 23.6 | 1.03 | 26.2 | 0.83 | 600 | 680 | 75 | 65 |
| 571-31-3858 | 4X12 | 10 | 0.93 | 23.6 | 1.03 | 26.2 | 0.83 | 600 | 680 | 75 | 65 |

**Authorized Stock Item.** Available from our Customer Service Centers. These stock items are listed as MC-HL. Copper or Bronze C-L-X is available on special order.

**Jackets**

Optional jacket types - consult local sales office.

**Cross-sectional area for calculation of cable tray fill in accordance with NEC Section 392.22.**

**†Optional jacket types - consult local sales office.**

**Ampacities**

- Based on Table 310.16 of the National Electrical Code for XHHW-2 conductors rated 90°C, in a multi-conductor cable, at an ambient temperature of 30°C (86°F). The 75°C column is provided for additional information.
- The ampacities shown apply to open runs of cable, installation in any approved raceway, direct burial in the earth, or as aerial cable on a messenger.
- Derating for more than three current carrying conductors within the cables is in accordance with NEC Section 310.15(C)(1).
- The ampacities shown also apply to cable installed in cable tray in accordance with NEC Section 392.80

Okonite's web site, www.okonite.com contains the most up to date information.

*Current limited to 15, 20 and 30 amps per Section 240.4(D) of the NEC for #14, #12 and #10 AWG, respectively.

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Ramsey, New Jersey 07446