

Specifications

Teck cable

Teck cable derived its name from one of its first users, the Teck-Hughes Gold Mines in Kirkland Lake, Ontario. Teck 90 is a CSA Type designation. Trade designation of this cable is armoured cable.

Teck cables up to 5,000 volts working potential are manufactured in accordance with CSA Standard C22.2 No. 131 and are provided with a bare ground conductor and an optional outer jacket. Depending on phase conductor insulation, the cables are designated as Teck 90 (X-LINK) when insulation is cross-linked polyethylene and Teck 90 (EP) when insulation is ethylene propylene. Both cables are rated for 90 °C service (dry location) and 75 °C (wet locations). Teck cable suitable for installation down to -40 °C is marked Teck 90 (X-LINK) minus 40 or Teck 90 (EP) minus 40.

Over 5,000 volts working potential Teck cables are manufactured in accordance with IPCEA standards and are certified by CSA. Cables are provided with or without ground wire as required.

Teck cables with outer jacket may be used for exposed or concealed wiring in wet or dry locations, indoors/outdoors and in corrosive environments. Teck cables are suitable for use in ventilated, non-ventilated and ladder type cable troughs, in ventilated flexible cable ways in both dry and wet locations. Teck cable with outer jacket is suitable for direct earth burial and for Class II Division 2, Class III, Divisions 1 and 2 hazardous locations per Canadian Electrical Code.

Some of the features of Teck cable are its flexibility and ease of installation. Absence of dead air space within the cable increases heat transfer and minimizes condensation. Overall protective covering provides good environmental protection.

Bend radius for permanent training during installation usually varies between 7 to 12 times the cable diameter depending on cable construction and manufacturer's recommendations. Larger radius bends are required for other conditions. Section 12-3028 of the Canadian Electrical Code requires that the terminating fittings used must provide adequate strain relief to terminal connections and ensure electrical continuity without injury to nonmetallic sheath. Continuity is mandatory whether or not the armour is used as a grounding conductor. Except for dry locations free from corrosive atmosphere, the nonmetallic jacket is not permitted to be stripped back to a point where armour is exposed after installation.

Where single conductor cables carrying 200 amps or more enter metal boxes through separate openings, certain precautions are required to prevent overheating of the metal by induction. Use of non-ferrous or nonmetallic box connectors, locknuts and bushings and installation of non-magnetic panel inserts is suggested in the code.

Please refer to the following for further details and complete information:

1. CEC Section 12...Wiring methods
CEC section 4...Conductors
2. CSA C22.2 No. 131...Safety standard for type Teck cable
3. CSA C22.2 No. 18.1...Safety standards for outlet boxes
4. CSA C22.2 No. 18.3...Safety standards for conduit, tubing and cable fittings

Please note:

The excerpts and other material herein, whether relating to the National Electrical Code, the Underwriters Laboratories, Inc. listing, to industry practice or otherwise, are not intended to provide all relevant information required for use and installation. Reference to original or primary source material and data is mandatory before any application or use is made of the product.

CSA Certified

CSA Certified for use in hazardous locations of class I, II, III. Suitable for locations of Class I with a Class I certified anti-explosion firewall. cCSAus Certified for use in hazardous locations; i.e. e II, Class I, Zone I, AEx e II compliant with CCC and NEC.



Specifications

Metal-clad cable and aluminum-sheathed cable

“Metal clad cable type MC is a factory assembly of one or more conductors, each individually insulated and enclosed in a metallic sheath of interlocking tape, or a smooth or corrugated tube.”

Metal clad cable type MC is rated for use up to 5,000 volts. The National Electrical Code permits use of metallic sheath as an equipment grounding conductor.

Metal clad cables are available with a variety of phase conductor insulations such as cross-linked polyethylene, and silicone rubber ethylene propylene, depending on rated temperature of conductors and working potential. Metallic sheath can be of galvanized steel, aluminum, copper or bronze. A special outer covering such as PVC or neoprene over metallic sheath is usually provided for environmental protection.

Metal clad cable is not permitted in locations where it could be subject to physical damage. Metal clad cable can be used exposed, concealed, in cable tray, in any approved raceway, and, with minor exceptions, in hazardous locations. Type MC cable can also be used for services, feeders, branch circuits, power, lighting, control and signal circuits.

Use of metal clad cable is permitted in wet locations, or where exposed to destructive corrosive conditions or directly buried in earth, concrete or exposed to cinder fills, strong chlorides, caustic alkalis, vapors, chlorine or hydrochloric acids provided the construction of cable, the conductors within the metallic sheath, the metallic sheath and protective cover over metallic sheath comply with requirements enumerated in Sec. 334-3 of the National Electrical Code.

Bend radius restrictions are dependent on the size of the cable and the type of sheath, i.e. smooth, interlocked armour, corrugated sheath or shielded conductors, and varies from 7 to 15 times cable external diameter.

NEC Article 330 requires that approved fittings be used for termination. Where single-conductor cables carrying alternating current enter a ferrous metal box or enclosure, procedures described in NEC Section 300-20 must be followed to reduce effects of heating due to induced currents. These procedures include recommended arrangements of conductors, cutting of slots in metal between individual conductor holes, passing of conductors through insulating walls or use of non-magnetic aluminum sheathed cable and aluminum terminating fittings.

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Please refer to the following for further details and complete information:

1. NEC Article 330...Metal clad cable (type MC)
2. UL 4, ANSI C33.9...Safety standards for type MC metal clad cable
3. ANSI C33.84...Safety standards for outlet boxes and fittings
4. W-F-406...Federal specification. Fittings for cable, power electrical and conduit metal, flexible
5. NEMA FM-1...Standards publication. Fittings and supports for conduit and cable assemblies
6. UL514A...Safety standards for metallic outlet boxes
7. UL514C...Safety standards for conduit, tubing and cable fittings

