

Exception No. 3: The information required in 310.8(A) shall be permitted to be durably marked on the outer nonmetallic covering of Type MC, Type ITC, or Type PLTC cables at intervals not exceeding 1.0 m (40 in.).

Exception No. 4: The information required in 310.8(A) shall be permitted to be durably marked on a nonmetallic covering under the metallic sheath of Type ITC or Type PLTC cable at intervals not exceeding 1.0 m (40 in.).

Informational Note: Included in the group of metal-covered cables are Type AC cable, Type MC cable, and lead-sheathed cable.

(3) Tag Marking. The following conductors and cables shall be marked by means of a printed tag attached to the coil, reel, or carton:

- (1) Type MI cable
- (2) Switchboard wires
- (3) Metal-covered, single-conductor cables
- (4) Type AC cable

(4) Optional Marking of Wire Size. The information required in 310.8(A)(4) shall be permitted to be marked on the surface of the individual insulated conductors for the following multi-conductor cables:

- (1) Type MC cable
- (2) Tray cable
- (3) Irrigation cable
- (4) Power-limited tray cable
- (5) Power-limited fire alarm cable
- (6) Instrumentation tray cable

(C) Suffixes to Designate Number of Conductors. A type letter or letters used alone shall indicate a single insulated conductor. The letter suffixes shall be indicated as follows:

- (1) D — For two insulated conductors laid parallel within an outer nonmetallic covering
- (2) M — For an assembly of two or more insulated conductors twisted spirally within an outer nonmetallic covering

(D) Optional Markings. All conductors and cables contained in Chapter 3 shall be permitted to be surface marked to indicate special characteristics of the cable materials. These markings include, but are not limited to, markings for limited smoke, sunlight resistant, and so forth.

Cable insulations that have special characteristics are permitted to carry surface markings that indicate their characteristics. For example, limited-smoke cables are permitted to be marked "LS" or "ST1." Other characteristics permitted to be marked include sunlight resistance and low corrosiveness. For a detailed list of optional wire and cable marking, see the UL *Wire Marking Guide*.

Part III. Installation

310.10 Uses Permitted. The conductors described in 310.4 shall be permitted for use in any of the wiring methods covered

in Chapter 3 and as specified in their respective tables or as permitted elsewhere in this *Code*.

(A) Dry Locations. Insulated conductors and cables used in dry locations shall be any of the types identified in this *Code*.

(B) Dry and Damp Locations. Insulated conductors and cables used in dry and damp locations shall be Types FEP, FEPB, MTW, PFA, RHH, RHW, RHW-2, SA, THHN, THW, THW-2, THHW, THWN, THWN-2, TW, XHH, XHHW, XHHW-2, XHHN, XHWN, XHWN-2, Z, or ZW.

(C) Wet Locations. Insulated conductors and cables used in wet locations shall comply with one of the following:

- (1) Be moisture-impervious metal-sheathed
- (2) Be types MTW, RHW, RHW-2, TW, THW, THW-2, THHW, THWN, THWN-2, XHHW, XHHW-2, XHWN, XHWN-2 or ZW
- (3) Be of a type listed for use in wet locations

(D) Locations Exposed to Direct Sunlight. Insulated conductors or cables used where exposed to direct rays of the sun shall comply with one of the following:

- (1) Conductors and cables shall be listed as being sunlight resistant.
- (2) Conductors and cables shall be covered with insulating material, such as tape or sleeving, that is listed as being sunlight resistant.

(E) Direct-Burial Conductors. Conductors used for direct-burial applications shall be of a type identified for such use.

(F) Corrosive Conditions. Conductors exposed to oils, greases, vapors, gases, fumes, liquids, or other substances having a deleterious effect on the conductor or insulation shall be of a type suitable for the application.

Nylon-jacketed conductors, such as Type THWN, are suitable for use where exposed to gasoline. The UL *Guide Information for Electrical Equipment* states in the category for Thermoplastic-Insulated Wire (ZLGR) in part:

THWN — wire that is suitable for exposure to mineral oil, and to liquid gasoline and gasoline vapors at ordinary ambient temperature, is marked "Gasoline and Oil Resistant I" if suitable for exposure to mineral oil at 60°C, or "Gasoline and Oil Resistant II" if the compound is suitable for exposure to mineral oil at 75°C. Gasoline-resistant wire has been tested at 23°C when immersed in gasoline and is considered inherently resistant to gasoline vapors within the limits of the temperature rating of the wire type.

Before a wire-pulling compound is used, it should first be investigated to determine compliance with 310.10(F).

(G) Conductors in Parallel.

(1) General. Aluminum, copper-clad aluminum, or copper circuit conductors for each ungrounded conductor, grounded conductor, or neutral conductor shall be permitted to be connected in