

# Does Maretron N2K cabling have a fire resistance specification?

Maretron cabling has the following fire resistance specifications:

## NEC PLTC

(E) Type PLTC . Type PLTC nonmetallic-sheathed, power-limited tray cable shall be listed as being suitable for cable trays and shall consist of a factory assembly of two or more insulated conductors under a nonmetallic jacket. The insulated conductors shall be 22 AWG through 12 AWG. The conductor material shall be copper (solid or stranded). Insulation on conductors shall be suitable for 300 volts. The cable core shall be either (1) two or more parallel conductors, (2) one or more group assemblies of twisted or parallel conductors, or (3) a combination thereof. A metallic shield or a metallized foil shield with drain wire(s) shall be permitted to be applied either over the cable core, over groups of conductors, or both. The cable shall be listed as being resistant to the spread of fire. The outer jacket shall be a sunlight- and moisture-resistant nonmetallic material.

Exception No. 1: Where a smooth metallic sheath, continuous corrugated metallic sheath, or interlocking tape armor is applied over the nonmetallic jacket, an overall nonmetallic jacket shall not be required. On metallic sheathed cable without an overall nonmetallic jacket, the information required in 310.11 shall be located on the nonmetallic jacket under the sheath.

Exception No. 2: Conductors in PLTC cables used for Class 2 thermocouple circuits shall be permitted to be any of the materials used for thermocouple extension wire.

FPN: One method of defining resistant to the spread of fire is that the cables do not spread fire to the top of the tray in the vertical tray flame test in ANSI/UL 1581-1991, Reference Standard for Electrical Wires, Cables and Flexible Cords.

Another method of defining resistant to the spread of fire is for the damage (char length) not to exceed 1.5 m (4 ft 11 in.) when performing the CSA vertical flame test for cables in cable trays, as described in CSA C22.2 No. 0.3-M-1985, Test Methods for Electrical Wires and Cables.

## **CDC AWM-I/II A/B FT4**

AWM – Appliance Wiring Material

- I – Internal Wiring
- II – External Wiring
- A – without mechanical loading
- B – with mechanical loading

FT4 Vertical Flame Test — Cables in Cable Trays per C.S.A. C22.2 No. 0.3-92 Paragraph 4.11.4

The FT4 Vertical Flame Test — Cables in Cable Trays is similar to the UL-1685 Vertical Tray Flame Test, but is more severe. The FT4 test has its burner mounted at 20° from the horizontal with the burner ports facing up. The UL-1685 Vertical Tray has its burner at 0° from the horizontal. The FT4 samples must be larger than 13mm (.512 " ) in diameter. If not, then the cable samples are grouped in units of at least three (3) to obtain a grouped overall diameter of 13mm. The UL-1581 Vertical Tray does not distinguish on cable size. The FT4 has a maximum char height of 1.5 m (59 " ) measured from the lower edge of the burner face. The UL-1685 has a flame height allowable up to approximately 78 " measured from the burner. FT4 Cables

can be used in Non-Combustible buildings.

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