

CROSS-LINKED POLYETHYLENE INSULATION (XHHW-2) TYPE TC, TYPE TC-ER TRAY CABLE 600 VOLT, MULTI-CONDUCTOR

SCOPE:

This specification covers Aetna Insulated Wire's standard construction for multi-conductor tray cables rated 600V, insulated with flame retardant cross-linked polyethylene (XLP), the insulated conductors cabled with an ground wire, optional fillers, and with a protective polyvinyl chloride (PVC) or chlorinated polyethylene (CPE) jacket overall.

PRODUCT SPECIFICATIONS AND RATINGS:

- i) National Fire Protection Association (NFPA)70, National Electric Code (NEC)
- ii) UL 44 Thermoset-Insulated Wire and Cables
- iii) UL 1277 Electrical Power and Control Tray Cables
- iv) ICEA S-95-658/NEMA WC70 Nonshielded 0-2KV Cables
- v) For ratings see the individual product specification sheets.

APPLICATION:

All cables produced to this specification are recognized by the NEC either as Type TC or Type TC-ER. NEC Article 336 defines the construction and applications for Type TC & Type TC-ER cables. Specifically constructions designated TC-ER are suitable for "Extended Runs" permitted "between a cable tray and the utilization equipment or device". Article 392 specifies installation practices and ratings for tray cable in tray. The cables are rated 600V and conductor temperatures rated for continuous operation at 90°C, for emergency overload at 130°C and for short circuit at 250°C The cables meet the requirements for application in NEC Class I and II, Div 2, Hazardous Locations. Cables are listed as "sunlight resistant" and are suitable for direct burial. The cables are intended to be used in aerial applications, tray, wireways, troughs, channels, duct and conduit in wet or dry applications.

CONSTRUCTION DATA:

Conductors - The conductors consist of uncoated soft, copper strands meeting the requirements of ASTM B3. Unless otherwise specified the conductor shall be supplied as Class B compressed per ASTM B8.

Insulation - The insulation is flame-retardant cross-linked polyethylene (XHHW-2) extruded concentrically over the conductor to the wall thickness for Type XHHW-2 as specified in the governing specifications listed.

Conductor Coding - Phase identification is provided by number code on each insulated conductor.

Ground Wire - One stranded bare copper ground wire will be located in one of the outer interstices.

Assembly - Conductors and ground wire are cabled together. "Filled" cables include suitable fillers with a binder to develop a round cable cross section.

Jacket - A protective sunlight and ozone resistant jacket of polyvinyl chloride (PVC) or chlorinated polyethylene (CPE) is extruded overall.

AVAILABLE OPTIONS:

- a) Custom ground configurations
- b) Aetna 3742 non-halogen, flame resistant, low smoke, low corrosion, non toxic jacket.
- c) (-40°C) PVC jacket.