

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

SCOPE:

This specification covers Aetna Insulated Wire's standard construction for shielded multi-conductor tray cables insulated with flame retardant cross-linked polyethylene (XLP), the insulated conductors cabled with an optional ground wire, a bare copper tape shield and covered 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 600 V and conductor temperatures for continuous operation of 90°C, for emergency overload of 130°C and for short circuit of 250°C The cables meet the requirements for application in NEC Class I and II, Div 2, Hazardous Locations. Cables are listed "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 is located in one of the outer interstices.

Assembly - Conductors and ground wire are cabled together with a left hand lay and suitable fillers to make the cable round. A binder tape is applied.

Shielding - Over the assembly is a helically applied uncoated copper metallic tape shield.

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) RHW-2 or USE-2, VW-1 type conductors
- c) Aluminum polyester backed tape shield or corrugated copper tape shield
- d) Aetna 3742 non-halogen, flame resistant, low smoke, low corrosion, non toxic jacket.
- e) (-40°C) PVC jacket.