

CONTINUOUSLY CORRUGATED WELDED ALUMINUM ARMOR POWER CABLE, 600 VOLT FR-CROSS-LINKED POLYETHYLENE INSULATION (XHHW-2) TYPE MC, MULTI-CONDUCTOR

SCOPE:

This specification covers Aetna Insulated Wire's standard construction for multi-conductor power cables insulated with flame retardant cross-linked polyethylene (XLP). The insulated conductors cabled with a ground wire or wires and the assembly encased in a moisture impervious continuously corrugated and welded aluminum armor, with a protective polyvinyl chloride (PVC) jacket overall.

PRODUCT SPECIFICATIONS AND RATINGS:

- i) National Fire Protection Association (NFPA) 70: National Electric Code (NEC)
- ii) Underwriters Laboratories 1569 Metal Clad Cables
- iii) Underwriters Laboratories 44 Thermoset-Insulated Wires and Cables
- iv) ICEA S-95-658/NEMA WC70 Nonshielded 0-2 kV Cables
- v) IEEE 1202 - Flame Testing of Cable for use in Cable Tray in Industrial and Commercial Occupancies (70,000 BTU)
- vi) ICEA T-29-520 Vertical Cable Tray Flame Tests (210,000 BTU)
- vii) For ratings see the individual product specification sheets.

APPLICATION:

All cables produced to this specification are recognized by the NEC as Type MC-HL and are suitable for use as described in the code. The cables are rated 600 V and conductor temperatures for continuous operation of 90 degC, for emergency overload of 130 degC and for short circuit of 250 degC. The cables meet the requirements for application in NEC Class I, Class II and Class III, Div 1 and 2, Hazardous Locations covered under NEC Articles 501, 502 and 503. The cables are intended for use in industrial applications where aluminum armor protection is necessary. The continuously welded sheath serves to provide a completely moisture impervious barrier for the core as well as providing superior electro static shielding characteristics. In addition the cables are manufactured with three symmetrically placed grounds making them advantageous for use in pulse-width modulated

cables and variable frequency drive applications. The cables may be used in wet or dry applications, installed in racks, trays or aerially. These cables have an overall jacket and can be direct buried in earth and buried in concrete.

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 relevant governing specification.

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

Ground Wire - Three stranded bare copper ground wire will be located in each of the outer interstices (3 conductor) or one in each of the two opposite interstices (4 conductor). The total ground wire cross section meets the minimum UL requirements for ground size.

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.

Armor - Over the taped assembly there is a continuously corrugated welded aluminum armor.

Jacket - A protective sunlight and ozone resistant jacket of PVC is extruded for a tight fit over the interlocked armor.

AVAILABLE OPTIONS:

- a) Custom ground configurations
- b) CPE jacket.
- c) Aetna 3742 non-halogen, flame resistant, low smoke, low corrosion, non toxic jacket.