

## **PREASSEMBLED AERIAL CABLE, CROSS-LINKED POLYETHYLENE INSULATION (XLP) THREE CONDUCTOR, NON-SHIELDED, 2400V (5000V\*)**

### **SCOPE:**

This specifications covers Aetna Insulated Wire's standard construction for single conductor non shielded power cables, Type MV-90, insulated with solid dielectric cross-linked polyethylene (XLP) to the 2400 V level, with an overall jacket and lashed with like cables to a strength messenger to form an aerial power cable. These cables meet the specifications of ICEA S-96-569 for 5000V (100% and 133%) per Table 4-3, the UL 1072 requirements for 2400V per Table 15.3 Col C and the NEC requirements for 2400V per Table 310.63.

\*Note: NEC 2005 no longer recognizes non-shielded 5000V construction and only recognizes 2400V non-shielded with the specific constructions attributes included in this specification.

### **PRODUCT SPECIFICATIONS AND RATINGS:**

- i) National Fire Protection Association (NFPA) 70, National Electric Code (NEC)
- ii) UL 1072 Standard for Medium Voltage Power Cables
- iii) ICEA S-96-659/NEMA WC71 Standard for Non-Shielded Cables Rated 2001-5000V
- iv) ICEA P-79-561 Guide for Selecting Aerial Cable Messengers and Lashing Wires
- v) For product ratings see specific product data sheets

### **APPLICATION:**

These cables comply with the exception notes of NEC Article 310.6 with respect to non-shielded cables above 2000V and with the jacketing requirements of Table 310.63 for wet and dry locations. Consequently, where NEC requirements apply, this cable is suitable for use in wet or dry locations at operating temperatures of 90°C continuous, 130°C overload and at 250°C emergency. These cables are specifically for the transmission and distribution of electrical energy when cables are required to be suspended in an aerial power system.

### **CONSTRUCTION DATA:**

**Conductors** - The conductor consists of uncoated soft, copper strands meeting the requirements of ASTM B3. Unless otherwise specified the conductor is supplied as Class B compact per ASTM B496.

**Conductor Shield** - The conductor shielding consists of an extruded semi-conducting layer meeting the requirements of the governing specifications.

**Insulation** - The insulation is cross-linked polyethylene (XLP) extruded concentrically over the conductor to the wall thickness as specified in the governing specifications listed and as shown on the individual product specification sheets.

**Jacket** - A sunlight and ozone resistant jacket of polyvinyl chloride (PVC) or chlorinated polyethylene (CPE) is extruded over the insulation.

**Conductor Coding** - Phase identification is provided by a colored stripe.

**Messenger** - The messenger is galvanized steel per ASTM Specification A475 and is sized per ICEA P-79-561.

**Assembly** - The required number of conductors will be twisted together. The messenger is laid straight, not part of the twisted group but paralleled against the group and firmly bound to the group by means of a polyethylene coated rectangular shaped galvanized steel binding strap. A 5 ft. length of messenger is left out on both ends length.

### **AVAILABLE OPTIONS:**

- a) CPE jacket or (-40°C) PVC jacket or LLD Polyethylene jacket.
- b) Aetna 3742 non-halogen, flame resistant, low smoke, low corrosion, non toxic jacket.
- c) Multi conductor cable components
- d) Copper clad steel messenger/copper binder
- e) Stainless steel messenger/stainless binder
- f) Jacketed messenger.