CROSS-LINKED POLYETHYLENE INSULATION (XLP) POWER CABLE, NON-SHIELDED, 2400V (5000V*) TYPE MV-90, WET OR DRY, SINGLE AND MULTI-CONDUCTOR

SCOPE:
This specification covers Aetna Insulated Wire's standard construction for single and multi 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 a wet or dry rating.

*Note: NEC 2005 no longer recognizes non-shielded 5000 V construction and only recognizes 2400 V non-shielded with the specific constructions attributes included in this specification. These cables meet the current relevant ICEA and UL standards for 5000 V non shielded cables.

PRODUCT SPECIFICATIONS AND RATINGS:
i) National Fire Protection Association (NFPA) 70: National Electric Code (NEC)
ii) Underwriters Laboratories 1072 for Medium Voltage Power Cables
iii) ICEA S-96-659/NEMA WC71 Nonshielded 2001V - 5KV Cables
iv) See individual product sheets for specific listings and ratings.

APPLICATION:
These cables comply with the exception notes of NEC Article 310.6 with respect to non-shielded cables above 2000V and the requirements of Table 310.63 for wet and dry locations. Consequently, where NEC requirements apply, this cable is suitable for use in wet and dry locations at a continuous conductor operating temperature of 90°C, at an emergency overload conductor temperature of 130°C and at a short circuit conductor temperature of 250°C. These cables may be installed in duct or conduit or properly supported aerially. Cables that are rated for use in cable tray applications are shown on the individual product specification sheets.

CONSTRUCTION DATA:
Conductors - The conductor consists of uncoated soft, copper strands meeting the requirements of ASTM B3. Unless otherwise specified the conductor shall be 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 in a single pass with the conductor shield to the wall thickness as specified in the governing specifications listed and as shown on the individual product specification sheets.

Conductor Coding - Phase identification for multi conductor cables is provide by a printed stripe on each of the conductors.

Ground Wire - Standard multi conductor cables include one stranded bare copper ground in one of the outer cable interstices. The ground wire is sized per UL requirements however, custom ground wire sizes and configurations are available upon request.

Assembly - The assembly of multi conductor cables is done by cabling together the required number of insulated non-shielded conductors and the ground wires (if applicable) with a suitable left hand lay. Suitable fillers will be used in the interstices to round out the cable cross section. A mylar binder is applied over the assembly.

Jacket - A sunlight and ozone resistant jacket of polyvinylchloride (PVC) or chlorinated polyethylene (CPE) is extruded over the single and multi conductor assembly. Optional jacket materials are available that offer enhanced ratings and performance.

AVAILABLE OPTIONS:
a) Four conductor cables.
b) With or without ground wire – insulated grounds – multiple grounds
c) Alternate shielding constructions – coated copper tape shield
d) (-40°C) PVC jacket or LLD Polyethylene jacket.
e) Aetna 3742 non-halogen, flame resistant, low smoke, low corrosion, non toxic jacket.

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