



## Equipment Specification

Document No.: 4350.057

Item No.: 006-01500

Asset Suite: 56080

Originating Department: Distribution Engineering



## 5 kV Copper Cable, #6 AWG

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### 1. Introduction

This is a general specification that covers the minimum requirements for a #6 AWG copper cable, 5 kV, XLP to be used in the underground distribution system in Puerto Rico. Further information will be provided by LUMA Energy at the time of order placement and will provide information on site specific conditions, quantity, and other requirements. This document includes the general electrical and mechanical characteristics of the material.

### 2. Special Requirements

Samples shall be furnished as requested by LUMA Energy. Vendors that have supplied this material to LUMA on previous orders, will not have to furnish samples at bid opening. The material will be received at the LUMA's general warehouse (011) at Palo Seco, Puerto Rico. Shipping will include transportation and unloading at the indicated warehouse.

### 3. Quantity/Literature

Descriptive and technical literature must be supplied by vendor at time of bidding. This literature may include, but is not limited to details of material, drawings, documented testing, and instructions for use and installation. Failure to submit documents on time will cause bidder disqualification. For products described in this specification as requiring qualification, awards will be made only for such products that, prior to the time for opening of bids, had been tested and/or approved by LUMA. Evidence of PREPA's and/or LUMA Energy's approval of the equipment or material shall be supplied by vendor if requested by LUMA Energy.

### 4. Markings

- 4.1. Cable reels shall be marked outside with LUMA Energy's purchase order, item number, name & size, net & gross weight, manufacturer's name, & lot number.
- 4.2. Packaging labels and tags shall be waterproof.

### 5. Equal or Approved Equal to

- 5.1. Viakon
- 5.2. American Wire Group
- 5.3. Southwire



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### **6. Packaging**

- 6.1. All material and equipment shall be packaged and marked in such a way as to facilitate handling and protection from damage and that the receiving warehouse can readily identify it and send it, in one complete unit, to a field location without opening crates or boxes to sort items and/or parts.
- 6.2. The cable shall be shipped in a non-returnable reel, containing approximately 1,000 ft. (305 m). Cable won't be accepted by sections.
- 6.3. Reels shall be made of steel with a finishing consisting of a high-pressure hot phosphate wash and bonding agent, zinc chromate-iron oxide primer and final enamel coat to provide the necessary extra durability.
- 6.4. Reels shall have a minimum arbor hole diameter of 2.5 in (6.35 cm).
- 6.5. Each end of the cable shall be firmly and properly secured to reel.
- 6.6. Reels shall be protected against damage in ordinary handling and shipping.
  - a. Manufacturer shall protect the upper layers with pieces of wood along the transverse section of reel for cable protection.
  - b. Manufacturer shall protect cable ends from water entrance or damage by means of an adequate seal.
- 6.7. Other types of reels will be evaluated by Luma Energy.

### **7. Number Per Package (Logistics)**

Approximately 1,000 ft (305 m) per reel or as requested by LUMA.

### **8. Acceptance Criteria**

- 8.1. Test required: certified by external laboratories.
- 8.2. Latest applicable codes, standards, and other regulations: National Electrical Code (NEC), ASTM B3, NEMA WC-71. This product requires qualification or pre-approval by PREPA/LUMA energy.

### **9. Description**

- 9.1. Used for maintenance of underground public series street lighting system.
- 9.2. Shall be solid copper wire, #6 AWG, and rated for 5 kV.
- 9.3. Shall have such characteristics that comply with ASTM B3.



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9.4. Shall have not less than 145 mils (3.68 mm) of 90° C (194° F) temperature cross-linked polyethylene (XLPE) insulation and jacketed with a non-conductive PVC or black polyethylene of 30 mils (0.76 mm) thickness in accordance with NEMA WC-71.

9.5. Overall diameter: 0.534” (13.56 mm).

**10. Inspection**

The acceptance of any material or equipment shall in no way relieve the vendor from his responsibility to meet all the requirements of this specification, and it would not prevent subsequent rejection if such materials were found later to be defective.

— End of Specification —

**Document History**

<b>Version</b>	8
<b>Date</b>	02/08/2022
<b>Author</b>	Miguel J. Rios
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