



Document Title:  
**Galvanized Rigid Conduit (GRC)**

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**Engineering Standard**

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**4350.254**

Department:  
**Distribution Standards & Materials**

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**Version History**

| Version | Date          | Revision Comments                                    |
|---------|---------------|--|
| 1       | Aug. 10, 2022 | Initial Release. Converted from PREPA to LUMA format |
|         | Aug. 11, 2022 | Added Section 10.9. Added corresponding TOC          |



**Equipment Specification**  
**Document No.:** 4350.254  
**Item No.:** 038-83318  
**Asset Suite:** 83318  
**Originating Department:** Distribution Engineering



## **Galvanized Rigid Conduit (GRC)**

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### **1. Introduction**

This is a general specification that covers the minimum requirements for rigid galvanized steel pipe to be used in the 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 mechanical characteristics of the material.

### **2. Special Requirements**

Samples shall be furnished as requested by LUMA Energy. Vendors that have supplied this material to PREPA / 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. Containers shall be marked outside with LUMA Energy's purchase order and item number.
- 4.2. Labels and tags shall be waterproof.

### **5. Equal or Approved Equal to**

- 5.1. Rexel; Item #: 104924 Cat #: 600 UPC: 091111001147

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### **6. Packaging**

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.

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

One hundred (100) per package or as requested by LUMA Energy.

### **8. Acceptance Criteria**

8.1. Test required: certified by external qualified laboratories.

8.2. Latest applicable codes, standards, and other regulations:

- a. ANSI Standard: C80.1
- b. UL 6: Fourteenth Edition, the common ANCE, CSA, and UL (trilateral) standard for Electrical Rigid Metal Conduit-Steel, covering requirements for the United States.
- c. Federal Specification WW-C-581 (Class 1 Type A). This Federal specification may still be referenced; however, the federal government has cancelled it and adopted the UL 6 standard.

### **9. Description**

- a. Rigid metal conduit, or RMC, is heavy-duty galvanized steel tubing that is installed with threaded fittings. It is typically used outdoors to provide protection from damage and can also provide structural support for electrical cables, panels, and other equipment.
- b. Coatings- Hot-dip galvanized inside and out to provide galvanic corrosion protection. Also, top coated with a compatible organic layer to protect against white rust. The inside surface is evenly coated for wire-pulling ease, even through multiple 90° bends.
- c. Characteristics:
  1. Rigid Conduit: 6 Inch
  2. Material: Hot-Galvanized Steel
  3. Length: 10 feet
  4. Color: Metallic. Includes: Standard Threaded Coupling.

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# **Appendix**

**Equipment Specification**  
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### Appendix 1: Table of Compliance

| Line | Criteria           | Description  | Pass/Fail (P/F) | Comments |
|------|--------------------|--|-----------------|----------|
| 1    | Specification      | The Proponent complies with the corresponding specification document (4350.254)  |                 |          |
| 2    | Industry Standards | The Proponent complies with the industry standards established in the specification document. (ANSI, UL Standards, and Federal Specifications) |                 |          |
| 3    | Test required      | Certified by External Laboratories.  |                 |          |
| 4    | Material           | Hot-Galvanized Steel   |                 |          |
| 5    | Characteristics    | <ul style="list-style-type: none"> <li>• Rigid Conduit: 6 Inch</li> <li>• Length: 10 feet</li> </ul>   |                 |          |
| 6    | Color              | Metallic. Includes: Standard Threaded Coupling.  |                 |          |