



Document Title:

### Insulation Heat-Shrinkable Tape

Document Type:  
**Specification**

Engineering Type  
**Material Specification**

Document No.:  
**4350.293**

Department  
**Distribution**

Version:  
**02**

Effective Date:  
**Jul 11, 2024**

**Shared document with: N/A**

*\*Select the Departments impacted by the document*

**For others, specify here**

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N/A

### Related/Referenced Documents

N/A

### Version History

Version	Date	Revision Comments
1	Jan. 20, 2023	Initial Release
2	Jul. 11, 2024	General format revision.



## Item Version History

Warehouse Catalog #	Asset Suite #	Version	Date
127-68818	51944	2	07/11/2024



## **1. Introduction**

This is a general specification that covers the minimum requirements for an insulation heat-shrinkable tape 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 electrical and mechanical characteristics of the equipment/material.

## **2. Special Requirements**

Samples shall be furnished as requested by LUMA Energy. Vendors that have supplied this equipment/material to LUMA on previous orders, will not have to furnish samples at bid opening. The equipment/material will be received at the LUMA's general warehouse (O11) at Palo Seco, Puerto Rico. Shipping will include transportation and unloading at the indicated warehouse.

## **3. Literature**

Descriptive and technical literature must be supplied by the 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. If required by LUMA, final drawings shall be submitted by the vendor before the manufacturing and shipping process for approval.

## **4. Compatible with**

For compatible manufacturer and model see Table 1. These models are examples of the equipment/material described in this document and do not represent a preference. LUMA will evaluate equally any model not listed here during any acquisition event.

## **5. Markings**

- 5.1. Containers shall be marked outside with LUMA Energy's purchase order and item number.
- 5.2. Packaging labels and tags shall be waterproof.

## **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)**

Standard Package: Four (4) rolls per box, or as requested by LUMA.

## **8. Acceptance Criteria**

- 8.1. Test required: certified by external laboratories.
- 8.2. Product shall be manufactured in accordance with the latest issue below (section 8.3). When conflicts occur between purchaser's specifications and the latest issue below, the purchaser's specification shall prevail.
- 8.3. Latest applicable codes, standards, and other regulations:
  - a. ASTM D149: For dielectric strength.
  - b. ASTM D638: For accelerating aging (tensile strength and ultimate elongation).
  - c. ASTM D257: For volume resistivity.
- 8.4. If any other standard different from the ones indicated in this document are used, the supplier must provide information showing compatibility with the required ones.

## **9. Description**

- 9.1. Used in transformers connections as part of the insulation.
- 9.2. Shall be adhesive-coated and heat-shrinkable providing a good seal to avoid water and contamination ingress.
- 9.3. Shall be 25kV class with continuous operating temperature up to 90°C (194°F) as minimum and a dielectric strength of 130kV/cm as minimum.
- 9.4. Suitable for indoor and outdoor use covering a wide variety of shapes including complex connections. Shall be water and oil resistant.
- 9.5. Shall be made of materials that do not cause toxic and corrosive effects in case of fire.
- 9.6. Dimensions: 2" X 25' (5 X 762 cm) rolls.

## **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.



## 11. Proposal Information

11.1. Submitted proposals must include:

- a. Technical information, tests, and drawings.
- b. Table of Compliance completed by the bidder with reference (see Appendix 1).

## 12. Table 1: Warehouse and Asset Suite Identification Number

Warehouse Catalog #	Asset Suite #	Compatible Manufacturer	Part #
127-68818	51944	Raychem	HVBT-2-R-01 (B4)

— End of Specification —



## Appendix

## Appendix 1: Table of Compliance

Line	Criteria	Description	Pass/Fail (P / F)	Comments
1	Specification	The Proponent complies with the corresponding specification document (4350.293).		
2	Industry Standards	The Proponent complies with the industry standards established in the specification document. (ASTM)		
3	Dimensions	<ul style="list-style-type: none"> <li>• Width: 2"</li> <li>• Length: 25'</li> </ul>		
4	Product Requirements	• Adhesive-Coated and Heat-Shrinkable		
		• 25kV Class		
		• Dielectric Strength: 130kV/cm		
		• Indoor and Outdoor Use		
		• Non-Toxic nor Corrosive effects under fire.		
		• Continuous Operating Temperature up to 90°C.		

**NOTE: This table is only a check list for reference. The compliance shall be with the complete document. Marking a PASS in the table won't be accepted as a compliance without the technical information required to certify it.**










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Final Audit Report

2024-07-11

Created:	2024-07-11
By:	Rodolfo Flores (rodolfo.floresortiz@lumapr.com)
Status:	Signed
Transaction ID:	CBJCHBCAABAA2MEvMr85ZDz7wyhDmepc7s4zkVRTYIIT

## "4350.293 Insulation Heat-Shrinkable Tape (07-11-2024)" History

-  Document created by Rodolfo Flores (rodolfo.floresortiz@lumapr.com)  
2024-07-11 - 5:44:26 PM GMT
-  Document emailed to Rodolfo Flores (rodolfo.floresortiz@lumapr.com) for signature  
2024-07-11 - 5:44:35 PM GMT
-  Document e-signed by Rodolfo Flores (rodolfo.floresortiz@lumapr.com)  
E-signature obtained using URL retrieved through the Adobe Acrobat Sign API  
Signature Date: 2024-07-11 - 5:45:14 PM GMT - Time Source: server
-  Document emailed to Miguel Rios (miguel.rioslopez@lumapr.com) for signature  
2024-07-11 - 5:45:18 PM GMT
-  Email viewed by Miguel Rios (miguel.rioslopez@lumapr.com)  
2024-07-11 - 5:47:34 PM GMT
-  Document e-signed by Miguel Rios (miguel.rioslopez@lumapr.com)  
Signature Date: 2024-07-11 - 5:48:49 PM GMT - Time Source: server
-  Document emailed to Ricardo Castro (ricardo.castro@lumapr.com) for signature  
2024-07-11 - 5:48:51 PM GMT
-  Email viewed by Ricardo Castro (ricardo.castro@lumapr.com)  
2024-07-11 - 5:55:21 PM GMT
-  Document e-signed by Ricardo Castro (ricardo.castro@lumapr.com)  
Signature Date: 2024-07-11 - 5:55:32 PM GMT - Time Source: server

✔ Agreement completed.

2024-07-11 - 5:55:32 PM GMT