



# Aluminum Foil Tape

## 431 • 439L (Linered)

### Technical Data

#### Product Description

3M™ Aluminum Foil Tape 431 and 439L is a 2-mil nominal dead soft aluminum foil with transparent acrylic adhesive for many permanent sealing, holding, splicing or masking applications requiring the protection offered by a foil backing.

**IMPORTANT:** 3M™ Aluminum Foil Tape 431 and 439L are not intended for medical usage. Neither 3M nor the Food and Drug Administration have evaluated or reviewed this tape for medical application. User assumes all risk and liability whatsoever in connection with usage of product in a medical application.

#### Product Construction

| Backing       | Adhesive | Color        | Liner (3M tape 439L)                  | Standard Roll Length |
|---------------|----------|--------------|---------------------------------------|----------------------|
| Aluminum foil | Acrylic  | Shiny silver | Tan kraft paper with silicone release | 60 yds. (55 m)       |

#### Typical Physical Properties

**Note: The following technical information and data should be considered representative or typical only and should not be used for specification purposes.**

| ASTM Test Method               |              |                                                                               |        |
|--------------------------------|--------------|-------------------------------------------------------------------------------|--------|
| Adhesion to Steel:             |              | 41 oz./in. width (45 N/100 mm)                                                | D-3330 |
| Tensile Strength at Break:     | 3M tape 431  | 19 lbs./in. width (338 N/100 mm)                                              | D-3759 |
|                                | 3M tape 439L | 18 lbs./in. width (315 N/100 mm)                                              | D-3759 |
| Elongation at Break:           | 3M tape 431  | 5%                                                                            | D-3759 |
|                                | 3M tape 439L | 3%                                                                            |        |
| Backing Thickness:             |              | 1.9 mils (0.05 mm)                                                            | D-3652 |
| Total Tape Thickness:          |              | 3.1 mils (0.08 mm)                                                            | D-3652 |
| Liner Thickness:               | 3M tape 439L | 5.6 mils (0.14 mm)                                                            | D-3652 |
| Water Vapor Transmission Rate: |              | 0.1 gms H <sub>2</sub> O/100 sq. in./24 hrs. (1.55 g/m <sup>2</sup> /24 hrs.) | D-3833 |
| Temperature Use Range:         |              | -65° to 300°F (-54° to 149°C)                                                 |        |
| Weight:                        |              | 0.0096 lbs./yd./in. width (.0049 kg/m/24 mm)                                  |        |

#### Features

- Flame resistant. Meets U.L. 723, Class “L” low flammability rating (File R 7311).
- Meets requirements of F.A.R. 25.853(a).
- Foil backing provides an excellent reflective surface for both heat and light.
- Good aging performance both indoors and outdoors.
- Low moisture vapor transmission rate offers excellent sealing and patching performance.
- Best results attained when applied to clean dry surface above 32°F (0°C).

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## Application Ideas

- Seal and patch tears in truck trailers, as well as other outdoor equipment.
- Reflect heat away from sensitive areas.
- Thermal heat conduction.
- General purpose holding, patching, sealing applications – indoors or out.
- Splicing of thin gauge foils.
- Good maskant in electroplating of aluminum because it will not contaminate the bath.
- Decorative.

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## Storage

Store under normal conditions of 60° to 80°F (16° to 27°C) and 40 to 60% R.H. in the original carton.

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## Shelf Life

To obtain best performance, use this product within 24 months from date of manufacture.

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## Product Use

All statements, technical information and recommendations contained in this document are based upon tests or experience that 3M believes are reliable. However, many factors beyond 3M's control can affect the use and performance of a 3M product in a particular application, including the conditions under which the product is used and the time and environmental conditions in which the product is expected to perform. Since these factors are uniquely within the user's knowledge and control, it is essential that the user evaluate the 3M product to determine whether it is fit for a particular purpose and suitable for the user's method of application.

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## Warranty and Limited Remedy

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**ISO 9001:2000**

This Industrial Adhesives and Tapes Division product was manufactured under a 3M quality system registered to ISO 9001:2000 standards.



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