



Technical Data Sheet

3M™ Aluminum Foil Tape 431

Product Description

3M™ Aluminum Foil Tape 431 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 is 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 Features

- Flame resistant. Meets U.L. 723, Class “L” low flammability rating (File R 7311).
- Meets requirements of FAR 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).

Technical Information Note

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

Typical Physical Properties

Attribute Name	Test Method	Value
Color		Shiny Silver
Adhesive Type		Acrylic
Approximate Weight		0.0049 g/m/24 mm
Backing		Aluminum Foil
Backing Thickness	ASTM D3652	0.05 mm
Total Tape Thickness	ASTM D3652	0.08 mm
Water Vapor Transmission	ASTM D3833	0.77 g/m ² /24 h

Typical Performance Characteristics

Attribute Name	Test Method	Temperature	Value
180° Peel Adhesion	ASTM D3330	22 °C	4.5 N/cm ¹
Elongation at Break	ASTM D3759		5 %
Tensile Strength	ASTM D3759		33.3 N/cm

¹ 12 in/min (300 mm/min)

Attribute Name	Value
Minimum Long Term Temperature Resistance	-54 °C ¹
Long Term Temperature Resistance	149 °C ¹

¹ Long Term (day, weeks)

Handling/Application Information

Application Examples

- 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.

Industry Specifications

UL 723, Class "L" low flammability rating (File R 7311)
FAR 25.853(a)

Storage and Shelf Life

Store under normal conditions of 16° to 27°C (60° to 80°F) and 40 to 60% relative humidity in the original packaging, out of direct sunlight. For best performance, use this product within 24 months from date of manufacture.

Available Sizes

Attribute Name	Value
Standard Roll Length	55 m

Automotive Disclaimer

Select Automotive Applications:

This product is an industrial product and has not been designed or tested for use in certain automotive applications, such as automotive electric powertrain battery or high voltage applications, which may require the product to be manufactured in a IATF certified facility, meet a Ppk of 1.33 for all properties, undergo an automotive production part approval process (PPAP), or fully adhere to automotive design or quality system requirements (e.g., IATF 16949 or VDA 6.3). Customer assumes all responsibility and risk if customer chooses to use this product in these applications.

Information

Precautionary Information: Refer to product label and Material Safety Data Sheet for health and safety information before using the product. For information, please contact your local 3M Office. You can click or scan QR code to see contact detail or visit www.3M.com Important Information: 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 or application. All questions of liability relating to this product are governed by the terms of the sale subject, where applicable, to the prevailing law. Values presented have been determined by standard test methods and are average values not to be used for specification purposes. Our recommendations on the use of our products are based on tests believed to be reliable but we would ask that you conduct your own tests to determine their suitability for your applications. This is because 3M cannot accept any responsibility or liability direct or consequential for loss or damage caused as a result of our recommendations.

ISO Statement

This product was manufactured under a 3M quality system registered to ISO 9001 standards.

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