Technical Data Sheet

3M™ Aluminum Foil Tape 425

English-US

Last Revision Date: September, 2024

Supersedes: August, 2024

Product Details

Regulatory Info/SDS

Product Description

3M™ Aluminum Foil Tape 425 combines a 3 mil nominal dead soft aluminum foil backing with a transparent acrylic adhesive.

Product Features

• Flame resistant. Meets U.L. 746C (File E 122798) and 723, Class “L” low flammability rating (File R 7311).
• 3M aluminum foil tape 425 can be certified to meet L-T-80C.
• Meets requirements of FAR 25.853(a).
• The very low moisture vapor transmission rate makes these tapes a good sealant.
• The acrylic adhesive, combined with the durable aluminum backing, offers ideal properties for long serviceable life in and outdoors.
• Good candidate as a maskant in electroplating of aluminum because it will not contaminate the bath.
• Aluminum backing provides excellent reflection of both heat and light.
• Best results obtained when applied to a clean, dry surface above 32°F (0°C).

IMPORTANT: These tapes are not intended for medical usage. Neither 3M nor the Food and Drug Administration have evaluated or reviewed this tape for medical application. 3M does not recommend or endorse the usage of the aluminum tape for medical application. User assumes all risk and liability whatsoever in connection with usage of product in a medical application.

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		5.54 g/m/24 mm (0.012 lb/yd/in)
Backing		Dead soft aluminum
Backing Thickness	ASTM D3652	0.07 mm (2.8 mil)
Total Tape Thickness	ASTM D3652	0.12 mm (4.6 mil)
Water Vapor Transmission	ASTM D3833	0.77 g/m²/24 h (0.05 g/100 in²/24 h)

Typical Performance Characteristics

Attribute Name	Test Method	Temperature	Value
180° Peel Adhesion	ASTM D3330	23 °C (73 °F)	5.1 N/cm (47 oz/in) [1]
Elongation at Break	ASTM D3759		6 %
Tensile Strength	ASTM D3759		49 N/cm (28 lb/in)
Long Term Temperature Resistance			149 °C (300 °F) [2]
Minimum Long Term Temperature Resistance			-54 °C (-65 °F) [2]

[1] 304 mm/min (12 in/min)
[2] Long Term (day, weeks)

Handling/Application Information

Application Examples

- Aircraft paint stripping maskant.
- Moisture barrier in “white goods” appliances.
- General purpose heat reflector and heat dissipater.
- Mechanically hold wires and cooling coils in “white goods” appliances.
- Repair tears on truck trailers and aircraft.
- Splicing of thin gauge foils.
- General purpose holding, patching, sealing applications – indoors and out.

Industry Specifications

UL 746C (File E 122798)
UL 723 Class “L” low flammability rating (File R 7311)
Can be certified to meet L-T-80C
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 (60 yd)

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

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ISO Statement

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

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