chanhvinh.com



3M Science. Applied to Life.™

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)

chanhvinh.com

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

Disclaimer: 3M industrial and occupational products are intended, labeled, and packaged for sale to trained industrial and occupational customers for workplace use. Unless specifically stated otherwise on the applicable product packaging or literature, these products are not intended, labeled, or packaged for sale to or use by consumers (e.g., for home, personal, primary or secondary school, recreational/sporting, or other uses not described in the applicable product packaging or literature), and must be selected and used in compliance with applicable health and safety regulations and standards (e.g., U.S. OSHA, ANSI), as well as all product literature, user instructions, warnings, and limitations, and the user must take any action required under any recall, field action or other product use notice. Misuse of 3M industrial and occupational products may result in injury, sickness, or death. For help with product selection and use, consult your on-site safety professional, industrial hygienist, or other subject matter expert. For additional product information, visit www.3M.com.

Technical Information

The technical information, guidance, and other statements contained in this document or otherwise provided by 3M are based upon records, tests, or experience that 3M believes to be reliable, but the accuracy, completeness, and representative nature of such information is not guaranteed. Such information is intended for people with knowledge and technical skills sufficient to assess and apply their own informed judgment to the information. No license under any 3M or third party intellectual property rights is granted or implied with this information.

Warranty, Limited Remedy, and Disclaimer

Unless a different warranty is specifically stated on the applicable 3M product packaging or product literature (in which case such warranty governs), 3M warrants that each 3M product meets the applicable 3M product specification at the time 3M ships the product. 3M MAKES NO OTHER WARRANTIES OR CONDITIONS, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OR CONDITION OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR ARISING OUT OF A COURSE OF DEALING, CUSTOM, OR USAGE OF TRADE. If a 3M product does not conform to this warranty, then the sole and exclusive remedy is, at 3M’s option, replacement of the 3M product or refund of the purchase price.

Limitation of Liability

Except for the limited remedy stated above, and except to the extent prohibited by law, 3M will not be liable for any loss or damage arising from or related to the 3M product, whether direct, indirect, special, incidental, or consequential (including, but not limited to, lost profits or business opportunity), regardless of the legal or equitable theory asserted, including, but not limited to, warranty, contract, negligence, or strict liability.

chanhvinh.com

ISO Statement

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

3M™ Industrial Adhesives and Tapes Division
3M Center, St. Paul, MN 55144-1000
3M.com/iatd

3M is a trademark of 3M company.
©3M 2024 (9/24)