

Technical Data Sheet

3M™ Aluminum Foil Tape 425

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

Property	Values	Additional Information
Backing	Dead soft aluminum	
Adhesive Type	Acrylic	
Color	Shiny silver	
Backing Thickness (mm)	0.07 mm	View 
Test Method: ASTM D3652		
Total Tape Thickness (mil)	4.6 mil	View 
Test Method: ASTM D3652		

Total Tape Thickness (mm)	0.12 mm	View 
Test Method: ASTM D3652		
Backing Thickness	2.8 mil	View 
Test Method: ASTM D3652		
Approximate Weight	5.54 g/m/24 mm	
Approximate Weight	0.012 lb/yd/in	
Water Vapor Transmission	0.77 g/m ² /24 hr	View 
Test Method: ASTM D3833		
Water Vapor Transmission	0.05 g/100 in ² /24 hr	View 
Test Method: ASTM D3833		

Typical Performance Characteristics

Property	Values	Additional Information
Tensile Strength	49 N/cm	View 
Test Method: ASTM D3759		
180° Peel Adhesion	5.1 N/cm	View 
Test Method: ASTM D3330		
Notes: 12 in/min (300 mm/min)		
180° Peel Adhesion	47 oz/in	View 
Test Method: ASTM D3330		
Notes: 12 in/min (300 mm/min)		
Tensile Strength (lb/in)	28 lb/in	View 
Test Method: ASTM D3759		
Elongation at Break (%)	6 %	View 
Test Method: ASTM D3759		

Long Term Temp C

149 °C

View 

Test Condition: Long Term (day, weeks)

Minimum Long Term Temperature Resistance

-54 °C

View 

Test Condition: Long Term (day, weeks)

Long Term Temp F

300 °F

View 

Test Condition: Long Term (day, weeks)

Minimum Long Term Temperature Resistance

-65 °F

View 

Test Condition: Long Term (day, weeks)

Available Sizes

Property	Values	Additional Information
Standard Roll Length	55 m	
Standard Roll Length	60 yd	

Storage and Shelf Life

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

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

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)

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.

Technical Information

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Product Selection and Use

Many factors beyond 3M’s control and uniquely within user’s knowledge and control can affect the use and performance of a 3M product in a particular application. As a

result, customer is solely responsible for evaluating the product and determining whether it is appropriate and suitable for customer's application, including conducting a workplace hazard assessment and reviewing all applicable regulations and standards (e.g., OSHA, ANSI, etc.). Failure to properly evaluate, select, and use a 3M product and appropriate safety products, or to meet all applicable safety regulations, may result in injury, sickness, death, and/or harm to property.

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.

Bottom Matter

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Trademarks

3M is a trademark of 3M Company.

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.

References

Property	Values
3m.com Product Page	https://www.3m.com/3M/en_US/p/d/b40067910/
Safety Data Sheet SDS	https://www.3m.com/3M/en_US/company-us/SDS-search/results/?gsaAction=msdsSRA&msdsLocale=en_US&co=ptn&q=425

Family Group

Link Tags:

• 425

Products	Backing	Color	Backing Thickness (mm)	Total Tape Thickness (mm)	Tensile Strength	Long Term Temp C	Minimum Long	
							Term Temperature Resistance	Long Term Temp F
425	Dead soft aluminum	Shiny silver	0.07 mm	0.12 mm	49 N/cm	149 °C	-54 °C	300 °F

ISO Statement

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

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.