



Aluminum Foil Tape

425 • 427

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Technical Data

June, 2015

Product Description 3M™ Aluminum Foil Tapes 425 and 427 combine a 3 mil nominal dead soft aluminum foil backing with a transparent acrylic adhesive. 3M aluminum foil tape 427 offers an easy-release liner.

Product Construction	Backing	Adhesive	Color	Liner	Standard Roll Length
	Dead soft aluminum	Acrylic	Shiny silver	Easy-release paper (3M aluminum foil tape 427)	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:	D-3330
3M aluminum foil tape 425	47 oz./in. width (51 N/100 mm)
3M aluminum foil tape 427	50 oz./in. width (55 N/100 mm)
Tensile Strength:	28 lbs./in. width (490 N/100 mm)
Backing Thickness:	2.8 mils (0.07 mm)
Total Tape Thickness:	4.6 mils (0.12 mm)
Liner Thickness:	D-3652
3M aluminum foil tape 427	3.1 mils (0.08 mm)
Elongation at Break:	6%
Temperature Use Range:	-65° to 300°F (-54° to 149°C)
Water Vapor Transmission Rate:	D-3833
0.05 g H ₂ O/100 sq. in./24 hrs.	
(0.77 g/m ² /24 hrs.)	
Approximate Weight:	0.013 lbs./yd./in. width (4.77 gms/m/24 mm)

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 SAE-AMS-T-23397 and L-T-80C.
- Meets requirements of F.A.R. 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.

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Application Ideas

- 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.

Storage

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

Shelf Life

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

Technical Information

The technical information, recommendations and other statements contained in this document are based upon tests or experience that 3M believes are reliable, but the accuracy or completeness of such information is not guaranteed.

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ISO 9001:2000

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Adhesive Transfer Tape

9447

Technical Data

March, 2009

Description

3M™ Adhesive Transfer Tape 9447 is specifically designed for use with 3M™ Label Component Systems for protected graphics printing of polyester films. Also can be used in constructing custom tamper-indicating labels.

Product Construction

Adhesive:	1.0 mil (25 microns) #320 "Hi-Tenacity" Acrylic
Liner:	3.2 mil (80 microns) 55# Densified Kraft

Features

- 3M™ Adhesive 320 is used for general purpose applications and offers excellent flagging resistance and adhesion to a variety of substrates.
- The liner provides an ideal surface for rotary die-cutting.
- Adhesive has a temperature range of -40°F (-40°C) to 150°F (65°C) for days or weeks and to 250°F (121°C) for minutes or hours.

Applications

- Used to make tamper-indicating labels with Label Component System films and solutions. These labels may be used as seals for over-the-counter drugs, banking envelopes, non-transferable automobile inspection labels and a variety of other applications.
- A component in the construction of labels with protected, or sub-surface printed graphics, used in harsh environments such as automotive under hood or outdoor environments.

3M™ Adhesive Transfer Tape

9447

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 D-3330 (modified)
(90 degree peel, 12"/min. 305 mm/min.)
2 mil polyester to stainless steel:

	20 Minute Dwell Oz./In.
	28

2 mil polyester to various surfaces:

	72 Hour Dwell at Room Temp. Oz./In.
Stainless Steel (Metal)	34
Polycarbonate (High Surface Energy Plastics)	35
Polypropylene (Low Surface Energy Plastics)	9

Environmental Performance

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

The properties defined are based on the attachment of impervious faceplate materials (such as polyester) to an aluminum test surface. Values are listed in ounces per inch based on a 90 degree peel at 12 inches/minute (305 mm/min.).

Unleaded Gas at 1 Hr. (Room Temp.)	20
MEK at 1 Hr. Room Temp.	24
Freon TF at 1 Hr. Room Temp.	28
Weak Acid (pH 4) at 4 Hrs. Room Temp.	30
Weak Base (pH 10) at 4 Hrs. Room Temp.	25
Oil (10W30) at 72 Hrs. 120°F (49°C)	37
Water at 100 Hrs. Room Temp.	36
7 Days at 90°F (32°C) and 90% Relative Humidity	56
Temperature Cycling: 4 Hrs. at 158°F (70°C) 4 Hrs. at -20°F (-29°C) 16 Hrs. at Room Temp. Repeat three times	40

3M™ Adhesive Transfer Tape

9447

Processing For processing instructions, refer to the “Label Component System Process Guide.”

Storage Store at room temperature conditions of 72°F (22°C) and 50% relative humidity.

Shelf Life Product retains its performance and properties for two years from date of manufacture.

**Recognition/
Certification** **MSDS:** 3M has not prepared an MSDS for these products which are not subjected to the MSDS requirements of the Occupational Safety and Health Administration’s Hazard Communication Standard, 29 C.F.R. 1910.1200(b)(6)(v). When used under reasonable conditions or in accordance with the 3M directions for use, these products should not present a health and safety hazard. However, use or processing of the products in a manner not in accordance with the directions for use may affect their performance and present potential health and safety hazards.

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