



# High Temperature Aluminum Foil Tape

## 433

Technical Data

August, 1994

**Product Description** A dead soft aluminum foil backing with a silicone adhesive that can be used in many high temperature applications.

Construction	Backing	Adhesive	Color	Standard Roll Length
	Aluminum Foil (alloy 1100-0)	Silicone (Clear)	Shiny Silver	60 yds. (55 m)

**Typical Physical Properties and Performance Characteristics** **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:	37 oz./in width (40 N/100 mm)	D-3330
Tensile Strength:	23 lbs./in. width (403 N/100 mm)	D-3759
Elongation at Break:	4%	D-3759
Backing Thickness:	2.2 mils (.056 mm)	D-3652
Total Tape Thickness:	3.4 mils (.086 mm)	D-3652
Water Vapor Transmission Rate:	.1 gms (H <sub>2</sub> O/100 sq. in./24 hrs. (1.55 g/m <sup>2</sup> /24 hrs.)	D-3833
Temperature Use Range:		
Permanent Appl.	-65°F to 600°F (-54°C to 316°C)	
Removable Appl.	-65°F to 375°F (-54°C to 190°C)	
Weight:	.0096 lbs./yd./in. width (.0049 kg/m/24 mm)	

- General Information**
- Best results obtained when applied to a clean surface above 32°F (0°C), but tape can be applied from 0°F (-18°C) to 200°F (92°C).
  - Store in a clean dry place at 60-80°F (15-27°C) and 40-50% relative humidity no longer than 18 months from date of manufacture.
  - Ideal as a heat reflective wrap along or over insulations, applied to tubes, engine support structures, missile ground handling equipment, or as a protector from other heat source areas such as hot areas in steel mills.
  - Good holding, splicing, patching or general protecting tape on many applications involving high temperatures.
  - Performance range from -65°F to over 600°F (-54°C to over 316°C). Adhesive will gradually thermoset at high temperatures. As it thermosets, the adhesive mass becomes firm and gradually loses its pressure sensitivity but will continue to hold the tape in place.
  - Flame resistant – will not support combustion. Meets F.A.R. 25.853(a).

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## Application Ideas

- Moisture barrier around doors and windows to help prevent fogging of glass
- Seal for automotive air bag inflators
- To hold insulation on hot air ducts in industry
- Cover resistance wire heating elements to distribute the heat
- Splice jumbo rolls of aluminum foil or holding the last lap of narrow width rolls in preparation to annealing the rolls (**NOTE:** The use of 3M Tape Primer helps improve the bond on oily surfaces)
- As a heat reflective wrap used in conjunction with insulation, tube, cables, or where otherwise required for high heat protection
- Maskant of metal during plastic coating

## Features

- Aluminum foil backing
- Silicone adhesive

## Advantages

- Excellent protection
- Heat reflective
- Non-flammable
- Wide temperature range

## Benefits

- Helps protect parts from water, dust or chemical damage
- Helps protect from heat damage
- Will not aid combustion
- Will seal or protect even under extreme temperature conditions

## For Additional Information

To request additional product information or to arrange for sales assistance, call toll free 1-800-227-5085. Address correspondence to: 3M Industrial Tape and Specialties Division, 3M Center, Building 220-8E-04, St. Paul, MN 55144-1000. Our fax number is 612-733-9175. In Canada, phone: 1-519-451-2500. In Puerto Rico, phone: 1-809-750-3000. In Mexico, phone: 5-728-0400.

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ISO 9002

This Industrial Tape and Specialties Division product was manufactured under a 3M quality system registered to ISO 9002 standards.

**3M**

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Printed in U.S.A.  
©3M 1994 70-0703-2480-4