



Technical Data Sheet

3M™ Heavy Duty Aluminum Foil Tape 438



[Product Details](#)

Product Description

3M™ Heavy Duty Aluminum Foil Tape 438 has a transparent acrylic adhesive to use when a heavier weight foil is required.

Product Features

- Flame resistant. Meets U.L. 723, Class “L” low flammability rating (File R 7311).
- Meets requirements of FAR 25.853(a).
- Foil backing provides an excellent reflective surface for both heat and light.
- Aluminum foil backing and acrylic adhesive system combine to offer long aging both indoors and out.
- The high coefficient of expansion offered by the aluminum allows expansion and contraction with changes in temperatures, along with thermal conductivity.
- Performs in a range from -65° to over 300°F (-54° to 149°C). Higher temperatures for shorter periods of time.

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		0.0109 g/m/24 mm (0.0217 lb/yd/in)
Backing		Aluminum Foil
Backing Thickness	ASTM D3652	0.13 mm (5 mil)
Total Tape Thickness	ASTM D3652	0.18 mm (7.2 mil)
Water Vapor Transmission	ASTM D3833	0.77 g/m ² /24 h (0.05 g/100 in ² /24 h)

Typical Performance Characteristics

Attribute Name	Test Method	Temperature	Value
180° Peel Adhesion	ASTM D3330	22 °C (72 °F)	4.7 N/cm (43 oz/in) ¹
Elongation at Break	ASTM D3759		10 %
Tensile Strength	ASTM D3759		103 N/cm (59 lb/in)
Long Term Temperature Resistance			149 °C (300 °F) ²
Minimum Long Term Temperature Resistance			-54 °C (-65 °F) ²

¹ 12 in/min (300 mm/min)

² Long Term (day, weeks)

Handling/Application Information

Application Examples

- Barrier, protector and thermal conductor in appliance (electronics) industry.
- Use when customer specification calls for a 5-mil (0.13 mm) foil as a barrier for vinyl coated wires in many applications in appliance industry.
- Patch tears in skins of aircraft and truck trailers.

Industry Specifications

UL 723, Class "L" low flammability rating (File R 7311)
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.

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ISO Statement

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

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