



Technical Data Sheet

3M™ High Temperature Aluminum Foil Tape 433

Product Description

3M™ High Temperature Aluminum Foil Tape 433 has a silicone adhesive that can be used in many high temperature applications. Also comes in an easy-release film liner (3M™ High Temperature Aluminum Foil Tape 433L).

Product Features

- Flame resistant - meets requirements of FAR 25.853(a).
- 3M™ High Temperature Aluminum Foil Tape 433L can easily be die-cut into special sizes or shapes.
- Best results obtained when applied to a clean surface above 32°F (0°C), but tape can be applied from 0°F to 200°F (-18°C to 93°C).
- 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.

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 | | Silver |
| Adhesive Type | | Silicone (clear) |
| Approximate Weight | | 4.4 g/m/24 mm |
| Backing | | Aluminum Foil |
| Backing Thickness | ASTM D3652 | 0.05 mm |
| Total Tape Thickness | ASTM D3652 | 0.09 mm |

Typical Performance Characteristics

| Attribute Name | Test Method | Temperature | Value |
|---------------------|-------------|-------------|-----------------------|
| 180° Peel Adhesion | ASTM D3330 | 22 °C | 4.4 N/cm ¹ |
| Elongation at Break | ASTM D3759 | | 3.5 % |
| Tensile Strength | ASTM D3759 | | 35 N/cm |

¹ 12 in/min (300 mm/min)

| Attribute Name | Test Condition | Value |
|--|-----------------------|---------------------|
| Long Term Temperature Resistance | | 316 °C ¹ |
| Minimum Long Term Temperature Resistance | | -54 °C ¹ |
| Temperature Use Range | Removable Application | -54 — 190 °C |

¹ Long Term (day, weeks)

Handling/Application Information

Application Examples

- Moisture barrier around doors and windows to help prevent fogging of glass.
- 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.
- 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.

Industry Specifications

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.

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

Precautionary Information: Refer to product label and Material Safety Data Sheet for health and safety information before using the product. For information, please contact your local 3M Office. You can click or scan QR code to see contact detail or visit www.3M.com Important Information: All statements, technical information and recommendations contained in this document are based upon tests or experience that 3M believes are reliable. However, many factors beyond 3M's control can affect the use and performance of a 3M product in a particular application, including the conditions under which the product is used and the time and environmental conditions in which the product is expected to perform. Since these factors are uniquely within the user's knowledge and control, it is essential that the user evaluate the 3M product to determine whether it is fit for a particular purpose and suitable for the user's method or application. All questions of liability relating to this product are governed by the terms of the sale subject, where applicable, to the prevailing law. Values presented have been determined by standard test methods and are average values not to be used for specification purposes. Our recommendations on the use of our products are based on tests believed to be reliable but we would ask that you conduct your own tests to determine their suitability for your applications. This is because 3M cannot accept any responsibility or liability direct or consequential for loss or damage caused as a result of our recommendations.

ISO Statement

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

3M™ Centre
Cain Rd, Binfield, Bracknell RG12 8HT, United Kingdom
3m.co.uk/iatd

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