



# Technical Data Sheet

## 3M™ Lead Foil Tape 421



[Product Details](#)



[Regulatory Info/SDS](#)

### Product Description

3M™ Lead Foil Tape 421 is backed with a rubber adhesive, offering excellent conformability in a variety of application conditions.

### Product Features

- Very good conformability.
- Good thermal properties and will perform over a wide variety of temperature conditions (-60° to 225°F or -54° to 106°C). It has been used at higher temperatures for shorter duration.
- Electrically and thermally conductive.
- Can be die-cut into specific shapes.
- This material when disposed of separately is classified as RCRA hazardous waste. Please consult applicable Federal, State and local regulations for proper disposal.
- Elevated lead levels in water may result from long term submersion of this product.
- Best results are obtained when applied to a clean dry surface above 32°F (0°C). Also, by “feathering” the edges – rubbing the tape down with a smooth-edged plastic piece (or similar object) – the tape can be made to better conform to the substrate. This is especially important if the tape is to be used as a “thief” in electroplating where the edges must fully contact the metal base.

### 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		Dark Silver
Adhesive Type		Rubber (green)
Approximate Weight		28.4 g/m/24 mm (0.061 lb/yd/in)
Backing		Lead Foil
Backing Thickness	ASTM D3652	0.1 mm (4 mil)
Total Tape Thickness	ASTM D3652	0.17 mm (6.6 mil)
Water Vapor Transmission	ASTM D3833	1.55 g/m <sup>2</sup> /24 h (0.1 g/100 in <sup>2</sup> /24 h)

### Typical Performance Characteristics

Attribute Name	Test Method	Temperature	Value
180° Peel Adhesion	ASTM D3330	22 °C (72 °F)	4.9 N/cm (45 oz/in) <sup>1</sup>
Elongation at Break	ASTM D3759		14 %
Tensile Strength	ASTM D3759		26.3 N/cm (15 lb/in)
Long Term Temperature Resistance			107 °C (225 °F) <sup>2</sup>
Minimum Long Term Temperature Resistance			-51 °C (-60 °F) <sup>2</sup>

<sup>1</sup> 12 in/min (300 mm/min)

<sup>2</sup> Long Term (day, weeks)

## **Handling/Application Information**

### **Application Examples**

- Electroplating
- Radiation barrier
- Moisture barrier
- Chemical milling
- X-ray plate masking

## **Disposal and Safety Considerations**

- Wear protective gloves when handling the tape as transfer of lead to the hands is possible. To ensure removal of any lead residue after use, wash hands with a soap specifically formulated to remove lead from the surface of the skin. This will minimize additional transfer of lead to other surfaces. • Lead will slowly leach into water when submerged. Leaching will accelerate as acidity increases. • This material when disposed of separately is classified as RCRA hazardous waste. Please consult applicable Federal, State and local regulations for proper disposal.

## **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 18 months from date of manufacture.

## **Available Sizes**

<b>Attribute Name</b>	<b>Value</b>
Standard Roll Length	33 m (36 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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3M Center, St. Paul, MN 55144-1000  
3M.com/iatd

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