April, 2015

3M™ Lead Foil Tape 421

Product Description

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

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

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Tape Thickness</td>
<td>0.16 mm</td>
<td>6.3 mil</td>
</tr>
<tr>
<td>Backing Thickness</td>
<td>0.1 mm</td>
<td>4 mil</td>
</tr>
<tr>
<td>Approximate Weight</td>
<td>0.034 g/m/24 mm</td>
<td>0.06 lb/yd/in</td>
</tr>
<tr>
<td>Water Vapor Transmission Rate</td>
<td>1.55 g/m²/24 hr</td>
<td>0.1 g/100 in²/24 hr</td>
</tr>
</tbody>
</table>

### Typical Performance Characteristics

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Method</th>
<th>Substrate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peel Adhesion</td>
<td>3.4 N/cm</td>
<td>45 oz/in</td>
<td>ASTM D3330</td>
</tr>
<tr>
<td>Tensile Strength</td>
<td>26.3 N/cm</td>
<td>15 lb/in</td>
<td>ASTM D3759</td>
</tr>
<tr>
<td>Elongation at Break</td>
<td>14 %</td>
<td></td>
<td>ASTM D3759</td>
</tr>
<tr>
<td>Temperature Use Range</td>
<td>-51 to 107 °C</td>
<td>-60 to 225 °F</td>
<td></td>
</tr>
</tbody>
</table>

### Available Sizes

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard Roll Length</td>
<td>33 m</td>
</tr>
</tbody>
</table>
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Handling/Application Information

Application Ideas

- Electroplating
- Radiation barrier
- Moisture barrier
- Chemical milling
- X-ray plate masking
- Maskant during paint stripping
- Add weight (balance) to equipment parts (golf clubs, tennis rackets, etc.)

Disposal and Safety Considerations

- Wear protective gloves and/or wash hands after working with tape.
- 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 60° to 80°F (16° to 27°C) and 40 to 60% R.H. in the original carton. To obtain best performance, use this product within 18 months from date of manufacture.

Trademarks

3M is a trademark of 3M Company.

References

1. 3m.com Product Page
   Url: http://www.3m.com/3M/en_US/company-us/all-3m-products/~/3M-Lead-Foil-Tape-421?
   N=5002385+3293242557&rt=rud

2. Safety Data Sheet
   Url: https://www.3m.com/3M/en_US/company-us/SDS-search/results/?
   gsaAction=mdsSRA&mdsLocale=en_US&co=ptn&q=421

ISO Statement

This Industrial Adhesives and Tapes Division product was manufactured under a 3M quality system registered to ISO 9001 standards.
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Technical Information

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