



# 1181 Tape

## Copper Foil with Conductive Adhesive

### 1. Product Description

3M™ 1181 Tape consists of a 1-ounce deadsoft copper foil backing and a unique electrically conductive pressure-sensitive acrylic adhesive.

- Deadsoft 1-ounce copper foil backing
- Conductive acrylic adhesive
- Supplied on a removable liner for easy handling and diecutting

### 2. Applications

3M 1181 Tape is typically used for applications requiring excellent electrical conductivity from the application substrate through the adhesive to the foil backing. Common uses include grounding and EMI shielding in equipment, components, shielded rooms, etc. The copper foil backing is solderable and resists oxidation and discoloration.

### 3. Typical Properties

Physical Properties	Typical Value
Backing Thickness <sup>1</sup>	0,04 mm
Total Thickness (backing plus adhesive) <sup>2</sup>	0,066 mm
Breaking strength <sup>1</sup>	44 N/10 mm
Adhesion to steel <sup>1</sup>	3,8 N/10 mm
Electrical resistance through adhesive <sup>2</sup>	0,005 ohm
Flame retardancy <sup>3</sup>	Pass

\* Footnote:

<sup>1</sup> Test method ASTM D 1000

<sup>2</sup> MIL-STD-202 Method 3 07 maintained at 5 psi (3,4 N/cm<sup>2</sup>) measured over 1 in<sup>2</sup> surface area. Conductive particles in the adhesive provide the electrical path between the application substrate and the foil backing.

<sup>3</sup> UL-recognised for flame retardancy per UL 510, Product Category OANZ2, File E17385.

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Reference: AABCC19168\_02  
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Issue date 12.03.2020  
Supersedes 2003

Template-EMD-EU-1Column Dec.2015

## 4. User Information

### 4.1 Specifications

Many factors determine the true shielding effectiveness of a shielding tape, including type and thickness of foil, adhesive type, intimacy of contact, smoothness of application surface, strength and frequency of the EMI signal, etc. However, using standard tests and fixtures, it is possible to determine a value for the attenuation. For 3M 1181 Tape, typical shielding effectiveness (far field) is in the range of 60 dB to 80 dB (30 MHz to 1 GHz).

### 4.2 Shelf Life and Storage

This product has a 5-year shelf life from date of manufacture when stored in a humidity controlled area (10 °C to 27 °C and <75 % relative humidity).

### 4.3 Availability

Like all 3M shielding tapes, 3M 1181 is available in standard and custom widths and lengths. Standard length is 16,5 m.

- Widths from 6,35 mm to 58,4 cm
- Longer lengths available up to several times normal length, dependent upon width.

Please contact your local distributor.

## 5. Additional Information

To request additional product information, see address below.

### *Important Notice*

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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 evaluates the 3M product to determine whether it is fit for a particular purpose and suitable for the user's method or application.

Values presented have been determined by standard test methods and are average values not meant to be used for specification purposes.

All questions of warranty and liability relating to 3M products are governed by the terms of the respective sale subject, where applicable, to the prevailing law.

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