1181 Tape

Copper Foil with Conductive Adhesive

Data Sheet

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

Like all 3M shielding tapes, 3M 1181 is available in standard and custom widths and lengths. Standard length is 18 yards.

- Widths from 1/4" to 23"
- Longer lengths up to several times normal length, dependent upon width. Check with Customer Service.

Applications

3M 1181Tape 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.

Shielding Effectiveness

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 60dB to 80dB (30 MHz to 1 GHz).

Properties	Typical Values
Backing thickness [1]	1.4 mil (0,04mm)
Total thickness (backing plus adhesive) [2]	2.6 mil (.066mm)
Breaking strength [1]	25 lb./in (44 N/10mm)
Adhesion to steel [1]	35 oz/in (3,8 N/10mm)
Electrical resistance through adhesive [2]	0.005 ohm
Flame retardancy [3]	Pass

* Footnote: 1. Test method ASTM D 1000

2. MIL-STD-202 Method 3 07 maintained at 5 psi (3,4 N/cm^2) measured over 1 in^2 surface area. Conductive particles in the adhesive provide the electrical path between the application substrate and the foil backing.
3. UL-recognized for flame retardancy per UL 510, Product Category 0ANZ2, File E17385.

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