



3M™ EMI Copper Foil Shielding Tape 1181 with Electrically Conductive Acrylic Adhesive

Data Sheet

June 2021

Product Description

3M™ EMI Copper Foil Shielding Tape 1181 is a 2.6-mil (0.066 mm) thick tape composed of a 1.4-mil (0.036 mm) flat copper foil backing coated on one side with a non-corrosive, electrically conductive acrylic pressure-sensitive adhesive supplied on a removeable liner.

- Commonly used for EMI/RFI shielding applications in the electronics industry and for static charge draining, seaming shielded rooms, cable wrapping and surface contact to non-solderable materials
- Can be die-cut, is solderable and offers a multitude of uses in electrical design and test laboratories for prototyping, design and troubleshooting
- Adhesive requires no moisture, solvents, heat or other manner of preparation to affect application
- Flame Retardant per UL-510A Standard

Properties

Physical Properties	Value Imperial (Metric)	Electrical Properties	Value Imperial (Metric)
Color - Visual	Copper	Electrical Resistance ⁴ - Maximum	0.005 Ω/in ²
Adhesive	Electrically Conductive Acrylic	Shielding Effectiveness ³ - Average 300 kHz – 2.5 GHz	66 dB
Backing	Copper Foil - Flat		
Flame Retardant ²	Pass		
Mechanical Properties	Value Imperial (Metric)		
Backing Thickness - Nominal	1.4 mil (0.036 mm)		
Total Thickness ¹	2.6 +/- 0.2 mils (0.066 +/- 0.005mm)		
Adhesion to Steel ¹ - Minimum	25 oz/in (2.7 N/cm)		
Breaking Strength ¹ - Minimum	22 lb/in (39 N/cm)		

Notes:

1. ASTM D1000 Test Method - properties measured at room temperature 73°F (23°C) unless otherwise stated
2. UL Recognized Flame Retardant per UL510A Standard, Category OARC2, File No. E17385
3. ASTM D4935 Test Method - properties measured at room temperature 73°F (23°C) unless otherwise stated
4. Test Method: MIL-STD-202 Method 307 maintained at 5 psi (3.4 N/cm²) measured over a 1 in² surface area
a. Silver coated glass beads embedded in acrylic adhesive provide the electrical path between application substrate and foil backing

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, frequency of the EMI signal, etc.

Agency Approvals & Self Certifications

- UL Component Recognized: UL510A Standard, Category OARC2, File No. E17385
- For Regulatory information including RoHS, REACH, please visit www.3M.com/regs

Shelf Life & Storage

This product has a 5-year shelf life (from date of manufacture) when stored in humidity-controlled storage (50°F/10°C to 80°F/27°C and <75% relative humidity).

Availability

3M™ EMI Copper Foil Shielding Tape 1181 available from 3M authorized distributors / converters

Also available from 3M.com/oem or call 1.800.245.3573.

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78-8127-9953-0 Rev B