



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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