



# 3M™ EMI Aluminum Foil Shielding Tape 1170 with Electrically Conductive Acrylic Adhesive

## Data Sheet

June 2021

### Product Description

3M™ EMI Aluminum Foil Shielding Tape 1170 is a 3-mil (0.076 mm) thick tape composed of a 2-mil (0.051 mm) flat aluminum foil backing coated on one side with a non-corrosive, electrically conductive acrylic pressure-sensitive adhesive supplied on removeable liner for easy handling.

- 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 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<br>Imperial (Metric)               | Electrical Properties                                               | Value<br>Imperial (Metric)      |
|------------------------------------------|------------------------------------------|---------------------------------------------------------------------|---------------------------------|
| Color - Visual                           | Silver                                   | Electrical Resistance <sup>4</sup> - Maximum                        | 0.010 $\Omega$ /in <sup>2</sup> |
| Adhesive                                 | Electrically Conductive Acrylic          | Shielding Effectiveness <sup>3</sup> - Average<br>300 kHz – 2.5 GHz | 69 dB                           |
| Backing                                  | Aluminum Foil - Flat                     |                                                                     |                                 |
| Flame Retardant <sup>2</sup>             | Pass                                     |                                                                     |                                 |
| Mechanical Properties                    | Value<br>Imperial (Metric)               |                                                                     |                                 |
| Backing Thickness - Nominal              | 2 mil (0.051 mm)                         |                                                                     |                                 |
| Total Thickness <sup>1</sup>             | 3.0 +/- 0.1 mils<br>(0.076 +/- 0.003 mm) |                                                                     |                                 |
| Adhesion to Steel <sup>1</sup> - Minimum | 25 oz/in (2.7 N/cm)                      |                                                                     |                                 |
| Breaking Strength <sup>1</sup> - Minimum | 14 lb/in (25 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/cm<sup>2</sup>) measured over a 1 in<sup>2</sup> 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](http://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 Aluminum Foil Shielding Tape 1170 available from 3M authorized distributors / converters

Also available from [3M.com/oem](http://3M.com/oem) or call 1.800.245.3573.

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