

# 3M™ Embossed Tin-Plated Copper Foil Tape 1345

Data Sheet

January 2014

**Description** 3M™ Embossed Tin-Plated Copper Foil Tape 1345 consists of an embossed 1-ounce deadsoft tin-plated copper foil backing and an aggressive pressure-sensitive acrylic adhesive. The edges of the embossed pattern pressed into the foil cut through the adhesive layer to establish reliable metal-to-metal contact between the backing and the application substrate.

- Embossed deadsoft 1-ounce tin-plated copper foil backing
- Conductivity “through the adhesive”
- Supplied on a removable liner for easy handling and diecutting

**Agency Approvals & Self Certifications**

Meets flame retardant requirements of UL510, Product Category OANZ2, and 3M File No. 17385

RoHS

2011/65/EC



"RoHS 2011/65/EU" means that the product or part does not contain any of the substances in excess of the maximum concentration values ("MCVs") in EU RoHS Directive 2011/65/EU. The MCVs are by weight in homogeneous materials. This information represents 3M's knowledge and belief, which may be based in whole or in part on information provided by third party suppliers to 3M.

**Applications**

3M™ Embossed Tin-Plated Copper Foil Tape 1345 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 tin plating on the copper foil backing facilitates soldering and improves resistance to 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 1345 tape, typical shielding effectiveness (far field) is in the range of 75dB to 95dB (30 MHz to 1 GHz).

**Specifications**

3M™ Embossed Tin-Plated Copper Foil Tape 1345 shall be coated on one side with pressure-sensitive adhesive, which shall not require heat, moisture or other preparation prior to or subsequent to application. The adhesive coating shall be smooth and uniform and be free of lumps and bare spots. There shall be no separator between adjacent layers of the roll. The tape shall perform at a temperature of -40F° (-40°C) to 266°F (130°C) without substantial loss of tensile or electrical properties.

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## Typical Properties

Not for specifications. Values are typical, not to be considered minimum or maximum. Properties measured at room temperature 73°F (~23°C) unless otherwise stated.

Property (Test Method)	Typical Value US units (metric)
<b>Color</b>	Tin (foil may have a slight color variation)
<b>Adhesive</b>	Acrylic
<b>Type of Backing</b>	Tin-Plated Copper
<b>Backing Thickness</b>	1.4 mil (0.04 mm)
<b>Total Thickness (ASTM D1000)</b>	4.0 mils (0.101 mm)
<b>Electrical Resistance<sup>1</sup></b>	0.001 Ω
<b>Flame Retardancy<sup>2</sup></b>	Pass
<b>Breaking Strength (ASTM D3759)</b>	25 lbs/in (44N/10 mm)
<b>Adhesion Strength (ASTM D3330)</b>	45 oz/in (4.98N/10 mm)
<b>Temperature Range</b>	-40°C to +130°C
<b>Shielding Effectiveness (ASTM 4935)</b>	75dB to 95 dB, 30 MHz to 1 GHz

1. Mil-STD-202 Method 303 maintained at 5 psi (3.4N/cm<sup>2</sup>) measured over 1 in<sup>2</sup> surface area. The edges of the embossing pattern in the foil backing penetrate through the nonconductive adhesive to make metal-to-metal contact with the application substrate.
2. UL Recognized for flame retardancy per UL 510, Product Category OANZ2, File E17385

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

**Availability** This 1345 Tape is available in 1/4" to 23" widths, standard length is 18 yards, longer lengths are available. Check with Customer Service.  
Please contact your local distributor; available from 3M.com/electrical [Where to Buy] or call 1-866-357-2737 or call 1-800-245-3573.

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