

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.

3M™ Embossed Tin-Plated Copper Foil Tape 1345

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

1. Mil-STD-202 Method 303 maintained at 5 psi (3.4N/cm²) measured over 1 in² 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.

Important Notice All statements, technical information, and recommendations related to 3M's products are based on information believed to be reliable, but the accuracy or completeness is not guaranteed. Before using this product, you must evaluate it and determine if it is suitable for your intended application. You assume all risks and liability associated with such use. Any statements related to the product, which are not contained in 3M's current publications, or any contrary statements contained on your purchase order, shall have no force or effect unless expressly agreed upon, in writing, by an authorized officer of 3M.

Warranty; Limited Remedy; Limited Liability This product will be free from defects in material and manufacture at the time of purchase. 3M MAKES NO OTHER WARRANTIES INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. If this product is defective within the warranty period stated above, your exclusive remedy shall be, at 3M's option, to replace or repair the 3M product or refund the purchase price of the 3M product. Except where prohibited by law, 3M will not be liable for any indirect, special, incidental or consequential loss or damage arising from this 3M product, regardless of the legal theory asserted.

3M is a trademark of 3M Company.



Electrical Markets Division

6801 River Place Blvd.
Austin, TX 78726-9000
866 676 8381
FAX: 800 828 9329
www.3M.com/oem

Please recycle
© 3M 2014 All rights reserved
78-8124-4709-8 Rev C