

3M™ Electrically Conductive Double-Sided Tape 9750

Product Description

3M™ Electrically Conductive Double Sided Tape 9750 is an isotropic electrical conductive tape. It consists of an electrically conductive nonwoven carrier coated with a unique electrically conductive acrylic pressure sensitive adhesive (PSA) that provides high adhesion and good electrical conductivity. 3M tape 9750 offers excellent handling characteristics and conductivity through the thickness (Z-axis) and in the plane of the adhesive (X, Y planes).

3M tape 9750 is used for conductive connection in applications such as ESD grounding, EMI shielding and EMI gasket grounding and adhesive attachment to various device substrates. 3M tape 9750 may be used as a grounding tape for electrical modules, or combined with many types of foil or fabric backings to make customized EMI shields or grounding tapes. 3M tape 9750 may also be used to attach conductive fabric/foam cores for EMI gaskets to various electronic cabinetry.

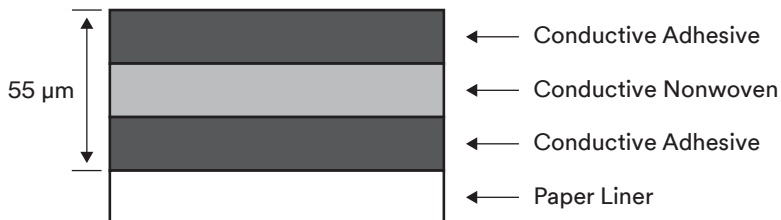
3M tape 9750 is available in standard and custom widths and lengths. Standard length is 50M. Please contact 3M to review custom width and length options.

Key Features

- Conductive nonwoven with double-sided tape providing high adhesion
- XYZ-conductivity through the adhesive
- Removable liner for easy handling and die-cutting
- Halogen free*

*Halogen Free is defined as having maximum 900 ppm bromine, maximum 900 ppm chlorine, and/or maximum 1500 ppm total bromine and chlorine, per IEC 61249-2-21.

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Product Construction / Materials Descriptions

Note: The following technical information and data should be considered representative or typical only and should not be used for specification purposes.

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Property	Value
Adhesive Type	Conductive Acrylic Pressure Sensitive Adhesive
Carrier Type	Conductive Nonwoven
Tape Thickness	55 µm nominal (typical thickness tolerance 54 µm - 66 µm)
Liner Type & Color	White PCK with “3M Electronics” logo in red

Typical Physical Properties and Performance Characteristics

Note: The following technical information and data should be considered representative or typical only and should not be used for specification purposes. Final product specifications and testing methods will be outlined in the products Certificate of Analysis (COA) that is provided once the product is approved by 3M for general commercialization and development work is completed.

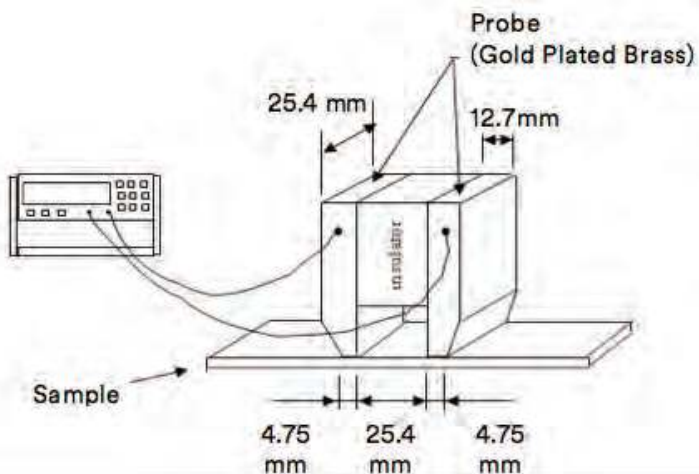
Property	Value	Test Method
180° Peel Adhesion (dwell 20min@ RT)	0.8 N/mm	ASTM D3330 ¹ (Adhesion to SUS)
Surface Resistance of Adhesive	≤ 0.09Ω/□	3M ETM-1 ²
Contact Resistance through Adhesive	≤ 0.02Ω/inch ²	3M ETM-11 ³

¹Tested in accordance with ASTM D3330 test method.

^{2,3} 3M test methods as described below.

ETM-1 Surface Electrical Resistance Test²

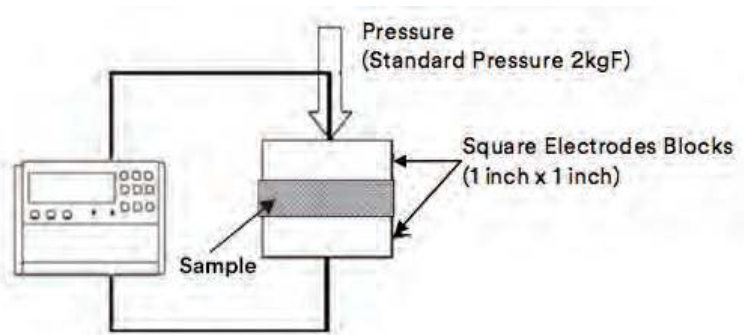
ETM-1, surface Probe, Surface resistance of a material, SR Unit: Ω/□.



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ETM-11 Contact Electrical Resistance Test³

ETM-11, maintained at 5 psi (3.4N/cm²) measured on 1 square inch surface area, CR Unit: Ω/inch².



Typical Operating Temperature Range*	
Long Term (days-weeks): 85°C (185°F)	3M Test Method
Short Term (minutes-hours): 121°C (250°F)	

*It is not suggested for excessive high or low temperature excursions where the application performance might be compromised. The user is recommended to conduct application evaluation to determine the fit-for-purpose of tape in their design.

Application Guide

The bond strength of 3M™ Electrically Conductive Double-Sided Tape 9750 depends on the amount of adhesive-to-surface contact developed during application and substrate type and surface conditions.

1. Firm application pressure helps develop better wet-out and adhesive contact and may lead to improved bond strength as well as electrical conductivity. Pressure must be applied to the bond area after assembly to ensure sufficient wet-out of the adhesive to the substrates and to engage the conductive acrylic adhesive fillers with the substrates to make electrical connection. Mechanical pressure (roller, metal bar) or finger pressure at 5-15 psi. (Optimally the application conditions are determined via a set of Design of experiments (DOE) using a range of application pressure, dwell time and temperatures (suggested initial range might include 5-15 psi, 2-5 seconds, 21°C-38°C).
2. Heat may be applied simultaneously with pressure to improve wetting, final bond strength and electrical conductivity. Suggested temperature range to evaluate is in the 38°C-60°C range.
3. To obtain optimum adhesion, the bonding surfaces must be clean, dry and well unified. Some typical surface cleaning solvents are isopropyl alcohol or heptane.
4. Adhesion builds with time, up to 24 to 72 hours may be required to reach final adhesion values.

Note: Carefully read and follow the manufacturer's precautions and directions for use when working with solvents. Tape application below 10°C (50°F) is not suggested. Once properly applied, low temperature holding power is generally satisfactory.

Storage and Shelf Life

The shelf life of 3M™ Electrically Conductive Adhesive Double Sided Tape 9750 is 12 months from the date of manufacture when stored in roll form in original packaging at 21°C (70°F) and 50% relative humidity.

Certificate of Analysis (COA)

The 3M Certificate of Analysis (COA) for this product is established when the product is commercially available from 3M. The commercially available product will have a COA specification established. The COA contains the 3M specifications and test methods for the products performance limits that the product will be supplied against. The 3M product is supplied to 3M COA test specifications and the COA test methods. Inquire with 3M for the COA for this product.

The TDS data contains preliminary data and is not the COA specification limits and/or test methods that may be used for COA purposes.

Final product specifications and testing methods will be outlined in the products Certificate of Analysis (COA) that is provided once the product is approved by 3M for general commercialization and development work is completed.

Safety Data Sheet: Please consult Safety Data Sheet before use.

Regulatory: For regulatory information about this product, contact your 3M representative.

Technical Information: The technical information, recommendations and other statements contained in this document are based upon tests or experience that 3M believes are reliable, but the accuracy or completeness of such information is not guaranteed.

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