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Technical Data | April 2026

3M™ Electrically Conductive Double-Sided Tape 9711S Series

Product Description

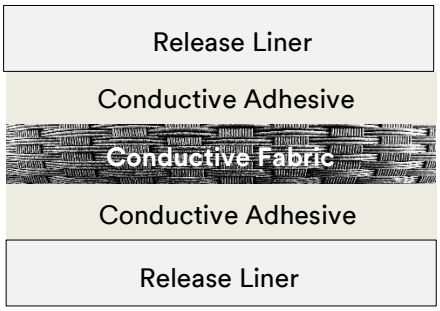
3M™ Electrically Conductive Double-Sided Tape 9711S Series are an XYZ electrically conductive pressure sensitive adhesive (PSA) tapes matrix. 3M tape 9711S series consists of a conductive matrix carrier (Nickel/copper-coated conductive fabric) and an electrically conductive PSA that is used for attachment to grounding surfaces. The product is an acrylic based adhesive solution and offers adhesion and grounding performance to many surface types. 3M tape 9711S series provides electrical grounding performance with small size contacts and PSA attachment for EMI shielding designs.

Key Features

- XYZ-conductivity through the adhesive
- Excellent conformability and quick bonding
- EMI shielding in bond line gap
- Thicker construction to conform to non-flat surfaces
- Electrical contact to small size areas
- Good handling and workability
- Multiple thickness options available

3M™ Electrically Conductive Double-Sided Tape 9711S Series

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



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.

3M™ Electrically Conductive Double-Sided Tape 9711S Series*	
Property	**Value**
Color	Face Side: Grey metallic Back Side: Grey metallic
Conductive Adhesive Type	Acrylic Conductive Adhesive
Release Liner**	Face Side: Transparent PET release liner Back Side: Transparent PET release liner

*The product is available in 1050 mm x 100 meters. Contact your local 3M representative for more information.
** 3M tapes 9711S-250 and 9711S-300 utilize a single sided paper release liner on the backside.

3M™ Electrically Conductive Double-Sided Tape 9711S Series
Typical Physical Properties and Performance Characteristics

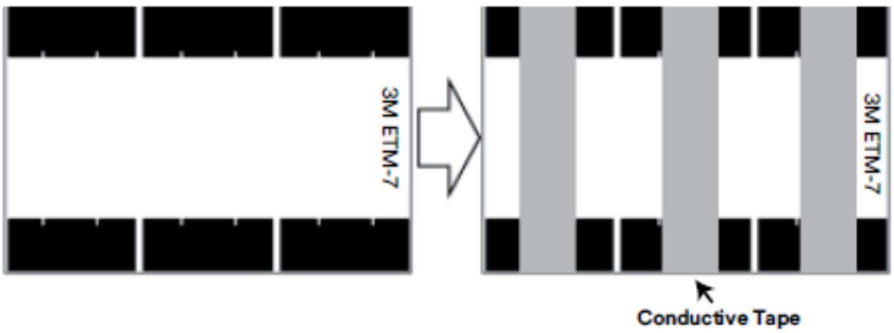
Note: The following technical information and data should be considered representative or typical only and should not be used for specification purposes. Final product specifications and testing methods will be outlined in the product's Certificate of Analysis (COA) that is shipped with the commercialized product.

3M™ Electrically Conductive Double-Sided Tape 9711S Series																	
Property	**Test Method**	**Target Value**															
Product: 9711S-xxx		-30	-50	-65	-80	-90	-100	-120	-130	-140	-150	-170	-180	-200	-210	-250	-300
Thickness	ASTM D1000[a]	30 µm	50 µm	65 µm	80 µm	90 µm	100 µm	120 µm	130 µm	140 µm	150 µm	170 µm	180 µm	200 µm	210 µm	250 µm	300 µm
Adhesion to SUS Face Side (gf/inch)	ASTM D1000[a]	1300	1500	1500	1500	1800	1800	1800	1800	1800	1800	1500	1500	1500	1500	1300	1300
Adhesion to SUS Back Side (gf/inch)	ASTM D1000[a]	1300	1500	1500	1500	1800	1800	1800	1800	1800	1800	1500	1500	1500	1500	1300	1300
Electrical Resistance through XYZ-Axis	3M ETM-7[b]	0.2 Ω on both sides															
Electrical Resistance through Z-Axis	3M ETM-12[b]	0.05 ~ 0.1 Ω															

[a] Tested in accordance with ASTM D1000 test method.
[b] 3M test method notes attached.

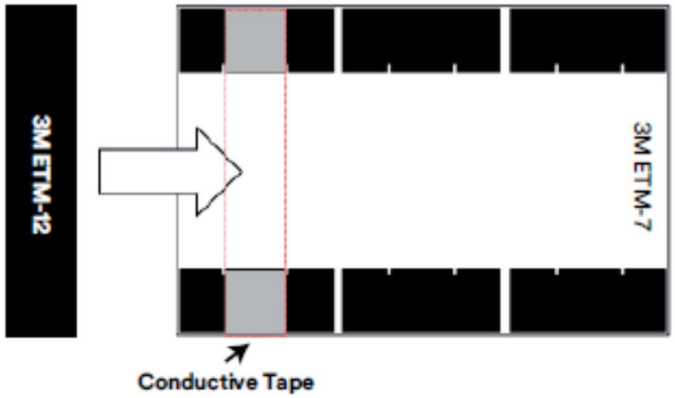
ETM-7 Test Method: XY-Axis Electrical Resistance through Adhesive

Place a strip of the single (double) side conductive tape in 10 mm x 50 mm with adhesive side down between the electrodes on 3M ETM-7 testing board. After initial hand lamination to provide for a 10 mm x 10 mm contact area between the tape and electrodes, apply a 2kg rubber roller across the tape one time. Application method simulates a typical manufacturing process that might be used to apply the tapes to a surface. After 20 minutes of dwell time, the DC resistance between the electrodes is measured with a micro-ohm meter. The resistance results are recorded after 5 ~ 30 seconds for initial resistance.



3M™ Electrically Conductive Double-Sided Tape 9711S Series ETM-12 Test Method: Z-Axis Electrical Resistance through Adhesive

Place conductive tape pieces in 10 mm x 10 mm on the center of the electrodes on 3M ETM-7 testing board. Then place 3M ETM-12 testing board with the gold-plated side down on the tapes between electrodes. After initial hand lamination to provide for a 10 mm x 10 mm contact area between the tapes and electrodes, apply 2kg rubber roller across the tape one time. Application method simulates a typical manufacturing process that might be used to apply the tapes to a surface. After 20 minutes of dwell time, the DC resistance between the electrodes is measured with a micro-ohm meter. The resistance results are recorded after 5 ~ 30 seconds for initial resistance.



Shielding Effectiveness

Many factors determine the shielding effectiveness of a conductive adhesive tape, including type and thickness of the conductive layers, adhesive strength, degree of contact, smoothness of application surface, test frequency, etc. For 3M tape 9711S series, the typical shielding effectiveness is expected to be in the range of 40 dB to 60 dB, using a standard EMI shielding test methods and through the thickness of the sample tested.

Typical Operating Temperature Range for Acrylic-Based Pressure Sensitive Adhesives (PSAs)

3M acrylic conductive pressure sensitive adhesives (CPSAs) contain conductive fillers. The grounding and/or substrate interconnection performance of the conductive fillers within the acrylic PSA in an application will vary based on many factors including substrate types, contact grounding area, surface geometry in the bond line, flexibility of substrates, bonding conditions, applied voltage/current, application environment and environmental aging conditions-exposure.

Acrylic PSA polymers used in acrylic CPSAs generally show strong environmental stability, maintaining their macroadhesion performance on many substrates over both short and long time periods. Their long-term performance (days to weeks) and short-term performance (minutes to hours) are typically evaluated using an adhesion test conducted at 85°C (185°F) for long-term conditions and 121°C (250°F) for short-term conditions.

3M CPSAs should be tested in the desired application to help ensure the product is appropriate for use based on the application's specific requirements, including substrate types, contact grounding area, surface geometry in the bond line, flexibility of substrates, bonding conditions, applied voltage/current, application environment and environmental aging conditions-exposure.

Applications

3M™ Electrically Conductive Double-Sided Tape 9711S Series is typically used for applications requiring excellent electrical conductivity from the application substrate through the adhesive to a second substrate. Common uses include grounding and EMI shielding in equipment and components.

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Application Techniques

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.

The bond strength of 3M™ Electrically Conductive Double-Sided Tape 9711S Series 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 help ensure sufficient wet-out of the 3M tape 9711S series 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 pressures, 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 help improve wetting, final bond strength and electrical conductivity. Suggested temperature range to evaluate is 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.

Storage and Shelf Life

The shelf life of 3M™ Electrically Conductive Single-Sided Tape 9711S Series is 12 months from the date of manufacture when stored in roll form, in the original packaging materials, and stored at 10°C-25°C (50°F-77°F) and <60% relative humidity.

Once the tape is removed from the original packaging materials, the tape should be converted, shipped and stored in the prescribed temperature and humidity-controlled conditions to help ensure stable tape performance. Adhesion, tack, conductivity, and reliability of the tape in an application can be reduced if the tape is not controlled to the prescribed handling and usage conditions.

In addition, in some applications the tape may be converted (die cut, laminated to other materials or release/processing liners) in such a manner that the release liner that the product tape is shipped with is removed and the different release or processing/carrier liner is applied to the adhesive side of the tape. The new release/carrier liner may transfer release agents (silicone, fluoropolymer, etc.) to the tape's adhesive surface and thus reduce the applied tack and/or adhesion strength of the tape in the end user's application to a surface versus when no release/carrier liner changes have occurred. Any proposed release/carrier liners to be used with the tape should be tested with the tape to help ensure that the tape's performance is not negatively impacted for the intended end use application and that shelf life is not negatively impacted. If a poor performing liner is selected for a liner exchange, it can have a significant negative impact on the conductive tape's adhesion/tack/electrical performance and/or significantly reduce shelf life.

Certificate of Analysis (COA)

The 3M Certificate of Analysis (COA) for this product is established when the product is manufactured and deemed commercially available from 3M. The COA contains the 3M test methods, specifications limits and test results for the product's performance attributes that the product will be supplied against. Contact your local 3M representative for this product's COA.

This technical data sheet may contain preliminary data and may not match the COA specification limits and/or test methods that may be used for COA purposes.

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

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