English

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Technical Data Sheet

3M™ Adhesive Transfer Tape 9472

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Product Description

3M™ Adhesive Transfer Tapes with 3M™ Adhesive 300 offer excellent adhesion to a wide variety of surfaces, including low surface energy plastics and foam. This pressure sensitive medium firm acrylic adhesive family features very high initial adhesion with good holding power and is available in several thicknesses for a wide variety of surface bonding and provides a variety of liner configurations to help ensure excellent process flexibility.

Technical Information Note

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

Typical Physical Properties

Property	Values	Additional Information
Adhesive Type	Acrylic	
Liner	60# Densified Kraft, tan with green "3M" print	
Liner Thickness	0.09 mm	
Liner Color	Tan, Green Print, "3M"	
View		
Test Name: Primary		
Total Tape Thickness (mil)	5 mil	
View		
Test Method: ASTM D3652		
Total Tape Thickness (mm)		

0.13 mm

View

Test Method: ASTM D3652

Liner Print

3M

Liner Thickness

3.5 mil

Typical Performance Characteristics

Property
Values
Additional Information

90° Peel Adhesion

8.1 N/cm

View

Test Method: ASTM D3330

Dwell/Cure Time: 15.0
Dwell Time Units: min
Temp C: 23C
Temp F: 72F
Environmental Condition: 50%RH
Substrate: Stainless Steel
Backing: 2 mil Aluminum Foil

90° Peel Adhesion

74 oz/in

View

Test Method: ASTM D3330

Dwell/Cure Time: 15.0
Dwell Time Units: min
Temp C: 23C
Temp F: 72F
Environmental Condition: 50%RH
Substrate: Stainless Steel
Backing: 2 mil Aluminum Foil

Notes: 12 in/min (300 mm/min)

90° Peel Adhesion

3.7 N/cm

View

Test Method: ASTM D3330

Dwell/Cure Time: 15.0

Dwell Time Units: min
Temp C: 23C
Temp F: 72F
Environmental Condition: 50%RH
Substrate: ABS
Backing: 2 mil Aluminum Foil

Notes: 12 in/min (300 mm/min)

90° Peel Adhesion

34 oz/in

View

Test Method: ASTM D3330

Dwell/Cure Time: 15.0
Dwell Time Units: min
Temp C: 23C
Temp F: 72F
Environmental Condition: 50%RH
Substrate: ABS
Backing: 2 mil Aluminum Foil

Notes: 12 in/min (300 mm/min)

90° Peel Adhesion

6.6 N/cm

View

Test Method: ASTM D3330

Dwell/Cure Time: 15.0
Dwell Time Units: min
Temp C: 23C
Temp F: 72F
Environmental Condition: 50%RH
Substrate: Polypropylene (PP)
Backing: 2 mil Aluminum Foil

Notes: 12 in/min (300 mm/min)

90° Peel Adhesion

60 oz/in

View

Test Method: ASTM D3330

Dwell/Cure Time: 15.0
Dwell Time Units: min
Temp C: 23C
Temp F: 72F
Environmental Condition: 50%RH
Substrate: Polypropylene (PP)
Backing: 2 mil Aluminum Foil

Notes: 12 in/min (300 mm/min)

90° Peel Adhesion

9.4 N/cm

View

Test Method: ASTM D3330

Backing: 2 mil Aluminum Foil

Notes: 12 in/min (300 mm/min)

90° Peel Adhesion

86 oz/in

View

Test Method: ASTM D3330

Dwell/Cure Time: 72.0
Dwell Time Units: hr
Temp C: 23C
Temp F: 72F
Environmental Condition: 50%RH
Substrate: Stainless Steel
Backing: 2 mil Aluminum Foil

Notes: 12 in/min (300 mm/min)

90° Peel Adhesion

4.4 N/cm

View

Test Method: ASTM D3330

Dwell/Cure Time: 72.0
Dwell Time Units: hr
Temp C: 23C
Temp F: 72F
Environmental Condition: 50%RH
Substrate: ABS
Backing: 2 mil Aluminum Foil

Notes: 12 in/min (300 mm/min)

90° Peel Adhesion

40 oz/in

View

Test Method: ASTM D3330

Dwell/Cure Time: 72.0
Dwell Time Units: hr
Temp C: 23C
Temp F: 72F
Environmental Condition: 50%RH
Substrate: ABS
Backing: 2 mil Aluminum Foil

Notes: 12 in/min (300 mm/min)

90° Peel Adhesion

6.8 N/cm

View

Test Method: ASTM D3330

Dwell/Cure Time: 72.0

Dwell Time Units: hr
Temp C: 23C
Temp F: 72F
Environmental Condition: 50%RH
Substrate: Polypropylene (PP)
Backing: 2 mil Aluminum Foil

Notes: 12 in/min (300 mm/min)

90° Peel Adhesion

62 oz/in

View

Test Method: ASTM D3330

Dwell/Cure Time: 72.0
Dwell Time Units: hr
Temp C: 23C
Temp F: 72F
Environmental Condition: 50%RH
Substrate: Polypropylene (PP)
Backing: 2 mil Aluminum Foil

Notes: 12 in/min (300 mm/min)

Short Term Temperature Resistance

250 °F

Short Term Temperature Resistance

121 °C

Long Term Temperature Resistance

70 °C

Long Term Temperature Resistance

158 °F

Available Sizes

48

Electrical and Thermal Properties

Property
Values
Additional Information

Dielectric Constant 1KHz

3.21

View

Test Method: ASTM D150

Temp C: 23C
Temp F: 72F

Dissipation Factor

0.04

Dielectric Strength

340 V/mil

View

Test Method: ASTM D149

Coefficient of Thermal Expansion

20 x 10^-5 m/m/°C

View

Test Method: ASTM D696

Coefficient of Thermal Expansion

58 x 10^-5 m/m/°C

View

Test Method: ASTM D696

Typical Environmental Performance

Humidity Resistance – High humidity has a minimal effect on adhesive performance. Bond strength (is generally higher/shows no significant reduction) after exposure for 7 days at 90°F (32°C) and 90% relative humidity.
UV Resistance – When properly applied, nameplates and decorative trim parts are not adversely affected by outdoor exposure.
Water Resistance – Immersion in water has no appreciable effect on the bond strength. After 100 hours at room temperature, the high bond strength (increases/is maintained).
Temperature Cycling Resistance – High bond strength (is maintained /increases) after cycling four times through:
4 hours at 158°F (70°C)
4 hours at -20°F (-29°C)
4 hours at 73°F (22°C)
Chemical Resistance – When properly applied, nameplate and decorative trim parts will hold securely after exposure to numerous chemicals including oil, mild acids and alkalis.
Bond Build-up: The bond strength of 3M™ Adhesive 300 increases as a function of time and temperature
Temperature/Heat Resistance: Adhesive 300 is usable for short periods (minutes, hours) at temperatures up to 250°F (120°C) and for intermittent longer periods (days, weeks) up to 150°F (65°C).
Lower Temperature Service Limit: -40F (-40°C).

Storage and Shelf Life

It is suggested that products are stored at room temperature conditions of 70°F (21°C) and 50% relative humidity.
If stored properly, product retains its performance and properties for 24 months from date of manufacture.

Recognition/Certification

TSCA: This product is defined as an article under the Toxic Substances Control Act and therefore, it is exempt from inventory listing requirements
SDS: 3M has not prepared a SDS for this product which is not subjected to the SDS requirements of the Occupational Safety and Health Administration's Hazard

Communication Standard, 29 C.F.R.1910.1200(b)(6)(v). When used under reasonable conditions or in accordance with the 3M directions for use, this product should not present a health and safety hazard. However, use or processing of the product in a manner not in accordance with the directions for use may affect its performance and present potential health and safety hazards.
UL: These products have been recognized by Underwriters Laboratories, Inc. under UL 969, Marking and Labeling Systems Materials Component. For more information on the UL Certification, please visit the website at http://www.3M.com/converter, select UL Recognized Materials, then select the specific product area.
Military: Meets Mil-P 19834B Type 1.
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Bottom Matter

Property	Values
Additional Information	
Bottom Matter Logo and Address	3M Industrial Adhesives and Tapes Division 3M Center, Building 225-3S-06 St. Paul, MN 55144-1000 800-362-3550
Bottom Matter Images	[Image 4] [Image 5]

Trademarks

3M is a trademark of 3M Company

Automotive Disclaimer

Automotive Applications: This product is an industrial product and has not been designed or tested for use in certain automotive applications, including, but not limited to, automotive electric powertrain battery or high voltage applications. This product does not fully adhere to typical automotive design or quality system requirements, such as IATF 16949 or VDA 6.3. This product may not be manufactured in an IATF certified facility and may not meet a Ppk of 1.33 for all properties. The product may not undergo an automotive production part approval process (PPAP). Customer is solely responsible for evaluating the product and determining whether it is appropriate and suitable for customer's automotive application and for conducting incoming inspections before use of the product. Failure to do so may result in injury, death, and/or harm to property. No written or verbal statement, report, data or recommendation by 3M related to automotive use of the product shall have any force or effect unless in an agreement signed by the Technical Director of 3M's Automotive Division. Customer assumes all responsibility and risk if customer chooses to use this product in an automotive electric powertrain battery or high voltage application, and 3M will not be liable for any loss or damage arising from or related to the 3M product or customer's use of the product, whether direct, indirect, special, incidental, or consequential (including, but not limited to, lost profits or business opportunity or recall costs), regardless of the legal or equitable theory asserted, including, but not limited to, warranty, contract, negligence, or strict liability. In no event shall 3M be liable for any damages in excess of the purchase price paid for the product.
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Handling/Application Information

Application Examples

- Long term bonding of graphic nameplates and overlays to surfaces such as metal and low surface energy plastics in the aerospace, medical and industrial equipment, automotive, appliance and electronic markets.
- Bonding metal nameplates and rating plates in the aerospace, medical and industrial equipment, automotive, appliance and electronic markets.
- Lamination to foam for gasket application.

Application Techniques

For maximum bond strength (during installation of the final part) the surface should be thoroughly cleaned and dried. Typical cleaning solvents are heptane (for oily surfaces) or isopropyl alcohol for plastics. Use reagent grade solvents since common household materials like rubbing alcohol frequently contain oils to minimize the drying effect on skin These oils can interfere with the performance of a pressure-sensitive adhesive.

Consult solvent manufacturers MSDS for proper handling and storage instructions. Also, use disposable wipes that do not contain oils, to remove the cleaning solvents.

It is necessary to provide pressure during lamination (1.5-20 PLI recommended) and during final part installation (10-15 PLI) to allow to adhesive the come into direct contact with the substrate. Using a hard edged plastic tool, which is the full width of the laminated part, helps to provide the necessary pressure at the point of lamination. Heat can increase bond strength when bonding to metal parts (generally this same increase is observed at room temperature over longer times, weeks). For plastic parts, the bond strength is not enhanced with the addition of heat.

The ideal adhesive application temperature range is 70°F (21°C) to 100°F (38°C). Application is not recommended if the surface temperature is below 50°F (10°C) because the adhesive becomes too firm to adhere readily. Once properly applied, at the recommended application temperature, low temperature holding is generally satisfactory (please refer to the Typical Physical Properties and Performance Characteristics section).

When bonding a thin, smooth, flexible material to a smooth surface, it is generally acceptable to use 2 mils of adhesive. If a texture is visible on one or both surfaces, the 5 mil adhesive would be suggested. If both materials are rigid, it may be necessary to use a thicker adhesive to successfully bond the components. 3M™ VHB™ Acrylic Foam Tapes may be required (please refer to data page 70-0709-3863-7).

Application Equipment

To apply adhesives in a wide web format, lamination equipment is required to ensure acceptable quality. To learn more about working with pressure-sensitive adhesives please refer to technical bulletin, Lamination Techniques for Converters of Laminating Adhesives (70-0704-1430-8).

For additional dispenser information, contact your local 3M sales representative, or the toll free 3M sales assistance number at 1-800-362-3550.

References

Property	Values
3m.com Product Page	https://www.3m.com/3M/en_US/p/d/b40065870/
Safety Data Sheet SDS	https://www.3m.com/3M/en_US/company-us/SDS-search/results/?gsaAction=msdsSRA&msdsLocale=en_US&co=ptn&q=9472

Family Group

Link Tags:

927 · 950 · 950EK · 9458 · 9471 · 9472 · 9671 · 9672 · 9459W

Products	Adhesive Type	Liner	Liner Thickness	Liner Color	Total Tape Thickness (mm)	Short Term Temperature Resistance	Long Term Temperature Resistance	Color
950	Acrylic	58# Glassine paper	0.08 mm	Tan, No Print	0.13 mm	121 °C	158 °F	N/A
9471	Acrylic	60# Densified Kraft, tan with green "3M" print	0.09 mm	Tan, Green Print, "3M"	0.05 mm	121 °C	158 °F	N/A

9472	Acrylic	60# Densified Kraft, tan with green "3M" print	0.09 mm	Tan, Green Print, "3M"	0.13 mm	121 °C	158 °F	N/A
950EK	Acrylic	78# Extensible Kraft	0.14 mm	White, No Print	0.13 mm	121 °C	158 °F	N/A
927	Acrylic	60# Densified Kraft	0.09 mm	Tan, No Print	0.05 mm	121 °C	158 °F	N/A
9458	Acrylic	55# Densified Kraft	0.08 mm	White, No Print	0.025 mm	121 °C	158 °F	N/A
9671	Acrylic	83# Polycoated Kraft, tan with green "3M" print	0.16 mm	Tan, Green Print, "3M"	0.05 mm	121 °C	158 °F	N/A
9459W	#300 "Hi-Strength" Acrylic	55# Densified Kraft	0.08 mm	N/A	0.0375 mm	121 °C	158 °F	White
9672	Acrylic	83# Polycoated Kraft, tan with green "3M" print	0.16 mm	Tan, Green Print, "3M"	0.13 mm	121 °C	158 °F	N/A

ISO Statement

This Industrial Adhesives and Tapes Division product was manufactured under a 3M quality system registered to ISO 9001 standards.

Information

Technical Information: The technical information, guidance, and other statements contained in this document or otherwise provided by 3M are based upon records, tests, or experience that 3M believes to be reliable, but the accuracy, completeness, and representative nature of such information is not guaranteed. Such information is intended for people with knowledge and technical skills sufficient to assess and apply their own informed judgment to the information. No license under any 3M or third party intellectual property rights is granted or implied with this information.

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