March, 2016

# 3M™ Adhesive Transfer Tape 9472

## 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.

# 3M™ Adhesive Transfer Tape 9472

## 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 | | Attribute Modifier |
|---|---|---|---|
| Adhesive Thickness | 0.13 mm | 5 mil | |
| Liner | 60# Densified Kraft, tan with green "3M" print | | |
| Liner Color | Tan, Green Print, "3M" | | Primary |
| Liner Thickness | 0.09 mm | 3.5 mil | |

## Typical Performance Characteristics

| 90° Peel Adhesion | | Dwell/Cure Time | Dwell Time Units | Substrate | Notes |
|---|---|---|---|---|---|
| 8.1 N/cm | | 15 | min | Stainless Steel | |
| 74 oz/in | | 15 | min | Stainless Steel | 12 in/min (300 mm/min) |
| 3.7 N/cm | 34 oz/in | 15 | min | ABS | 12 in/min (300 mm/min) |
| 6.6 N/cm | 60 oz/in | 15 | min | Polypropylene (PP) | 12 in/min (300 mm/min) |
| 9.4 N/cm | 86 oz/in | 72 | hr | Stainless Steel | 12 in/min (300 mm/min) |
| 4.4 N/cm | 40 oz/in | 72 | hr | ABS | 12 in/min (300 mm/min) |
| 6.8 N/cm | 62 oz/in | 72 | hr | Polypropylene (PP) | 12 in/min (300 mm/min) |

Property: 90° Peel Adhesion
Method: ASTM D3330
Temp C: 22C
Temp F: 72F
Environmental Condition: 52%RH
Backing: 2 mil Aluminum Foil

## Available Sizes

### Master Width: 48 in

**Additional Information**

Notes: More sizes may be available. Please call 800-223-7427 or talk to your local 3M representative for more information.

## Electrical and Thermal Properties

| Property | Values | Method | Test Condition |
|---|---|---|---|
| Dielectric Constant | 3.21 | ASTM D150 | 1 KHz, Room Temperature |
| Dissipation Factor | 0.04 | | |
| Dielectric Strength | 340 V/mil | ASTM D149 | 500 vac, rms[60 hz/sec] |
| Coefficient of Thermal Expansion | 20 × 10^-5 m/m/°C | ASTM D696 | First Heat |
| Coefficient of Thermal Expansion | 58 × 10^-5 m/m/°C | ASTM D696 | Second Heat |

## Environmental Resistance

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).

## Handling/Application Information

## Application Ideas

• 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.

## Handling/Application Information (continued)

### 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.

### 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.

### Trademarks

3M is a trademark of 3M Company

### References

| Property | Values |
|---|---|
| 3m.com Product Page | https://www.3m.com/3M/en_US/company-us/all-3m-products/~/3M-Adhesive-Transfer-Tape-9472?N=5002385+3293241831&rt=rud |
| 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 |

3M™ Adhesive Transfer Tape 9472

## Family Group

| | 927 | 950 | 950EK | 9458 | 9471 | 9472 | 9671 | 9672 | 9459W |
|---|---|---|---|---|---|---|---|---|---|
| Liner Color<br>Attribute Modifier: Primary | Tan, No Print | Tan, No Print | White, No Print | White, No Print | Tan, Green Print, "3M" | Tan, Green Print, "3M" | Tan, Green Print, "3M" | Tan, Green Print, "3M" | |
| Adhesive Thickness (mm) | 0.05 | 0.13 | 0.13 | 0.025 | 0.05 | 0.13 | 0.05 | 0.13 | 0.0375 |
| Liner | 60# Densified Kraft | 60# Densified Kraft | 78# Extensible Kraft | 55# Densified Kraft | 60# Densified Kraft, tan with green "3M" print | 60# Densified Kraft, tan with green "3M" print | 83# Polycoated Kraft, tan with green "3M" print | 83# Polycoated Kraft, tan with green "3M" print | 55# Densified Kraft |
| Liner Thickness (mm) | 0.09 | 0.09 | 0.13 | 0.08 | 0.09 | 0.09 | 0.15 | 0.15 | 0.08 |

## ISO Statement

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

## Bottom Matter Images

[Image 4]
[Image 5]

## 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.
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Military: Meets Mil-P 19834B Type 1.
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3M United States
3M Center
St. Paul, MN 55144-1000
800-362-3550
www.3M.com

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