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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.

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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		Method	Test Name
Total Tape Thickness	5 mil	0.13 mm	ASTM D3652	
Liner Print	3M			
Liner Thickness	3.5 mil	0.09 mm		
Adhesive Type	Acrylic			
Liner	60# Densified Kraft, tan with green "3M" print			
Liner Color	Tan, Green Print, "3M"			Primary

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	9.4 N/cm	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)
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: 23C
Temp F: 72F
Environmental Condition: 50%RH
Backing: 2 mil Aluminum Foil

Property	Values		Test Condition
Short Term Temperature Resistance	250 °F	121 °C	Short Term (minutes, hour)
Long Term Temperature Resistance	158 °F	70 °C	Long Term (day, weeks)

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Available Sizes

Master Width: 48 in

Additional Information

Notes: More sizes may be available. Please talk to your local 3M representative for more information.

Electrical and Thermal Properties

Property	Values	Method	Temp C	Temp F	Test Condition
Dielectric Constant 1KHz	3.21	ASTM D150	23C	72F	1 KHz
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

Typical Environmental Performance

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 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.

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

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

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Family Group

	927	950	950EK	9458	9471	9472	9671	9672	9459W
Long Term Temperature Resistance (°F) Test Condition: Long Term (day, weeks)	158	158	158	158	158	158	158	158	158
Short Term Temperature Resistance (°C) Test Condition: Short Term (minutes, hour)	121.1111	121.1111	121.1111	121.1111	121.1111	121.1111	121.1111	121.1111	121.1111
Liner Color Test Name: 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"	
Long Term Temperature Resistance (°C) Test Condition: Long Term (day, weeks)	70	70	70	70	70	70	70	70	70
Total Tape Thickness (mm)	0.05	0.13	0.13	0.025	0.05	0.13	0.05	0.13	0.0375
Adhesive Type	Acrylic	Acrylic	Acrylic	Acrylic	Acrylic	Acrylic	Acrylic	Acrylic	#300 "Hi-Strength" Acrylic
Liner	60# Densified Kraft	58# Glassine paper	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	0.08	0.14	0.08	0.09	0.09	0.16	0.16	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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Information

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