Adhesive Transfer Tapes with Adhesive 200

467 • 468 • 9567 • 9568

Technical Data **September, 2002**

Product Description

3M™ Adhesive Transfer Tapes with 3M™ Adhesive 200 are the industry choice for metal nameplates for the industrial or electronic applications because of excellent quality, consistency and durability. In addition, as a result of 3M's innovative, proprietary process, Adhesive 200 also offers the following performance characteristics:

- Excellent high temperature performance as well as excellent shear strength (that minimizes edge lifting and slippage of parts).
- Excellent resistance to harsh environments; this adhesive can withstand splashes of organic solvents, weak acids and bases and salt water. In addition, it performs well after exposures to humidity and hot/cold cycles.
- **Outstanding peel adhesion values are outstanding on metals and HSE plastics. Peel adhesion increases with increased adhesive thickness.**

Construction

	Adhesive Type/ Color	Adhesive Thickness[1] (mils, mm)	Liner Color, Type, Print	Liner Caliper/ Liner Release[2]
Tape 467	200	2.3 mils (0.06 mm)	62# Densified Kraft	3.8 mils 15 grams/inch
Tape 468	200	5.2 mils (0.13 mm)	62# Densified Kraft	3.8 mils 33 grams/inch
Tape 9567	200 Fibered	2.3 mils (0.06 mm)	62# Densified Kraft	3.8 mils 21 grams/inch
Tape 9568	200 Fibered	5.2 mils (0.13 mm)	62# Densified Kraft	3.8 mils 29 grams/inch

Note 1: The caliper listed is based on a calculation from manufacturing controlled adhesive coat weights using a density of 1.012 g/cc. While past data pages have listed nominal thicknesses of 2 and 5 mils, the coat weight (and theoretical caliper) has not changed.

Note 2: Typical liner release value, in grams/inch, tested at 90 ipm.

3M™ Adhesive Transfer Tapes with Adhesive 200

467 • 468 • 9567 • 9568

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.

I. Adhesion to stainless steel

ASTM D3330 modified (90 degree peel, 2 mil aluminum foil backing)

Dwell	Tape 467/9567 ounces/inch	Tape 467/9567 N/100 mm	Tape 468/9568 ounces/inch	Tape 468/9568 N/100 mm
15 minute room temperature (RT)	66	72	90	98
72 hour RT	91	100	130	142
72 hour 158°C (70°C)	150	164	207	226

II. Adhesion to Other Surfaces

ASTM D3330 modified (90 degree peel, 2 mil aluminum foil backing)

Dwell	Tape 467/9567 ounces/inch	Tape 467/9567 N/100 mm	Tape 468/9568 ounces/inch	Tape 468/9568 N/100 mm
72 hour RT ABS	57	62	70	77
72 hour RT glass	82	90	113	124

III. Relative High Temperature Operating Ranges	
Short term (minutes/hours)	350°F (177°C)
Long term (days/weeks)	250°F (121°C)
IV. Shelf Life of Tape in Roll Form	24 months from the manufacturing date when stored at 70°F (21°C) and 50% relative humidity.

V. Environmental Performance

The properties defined are based on the attachment of impervious faceplate materials (such as aluminum) to an aluminum test surface.

Bond Build-up: The bond strength of 3M™ Adhesive 200 increases as a function of time and temperature.

Humidity Resistance: High humidity has a minimal effect on adhesive performance. Bond strengths are generally higher 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 in room temperature water the bond actually shows an increase in strength.

Temperature Cycling Resistance: Bond strength generally increases after cycling four times through:
4 hours at 158°F (70°C)
4 hours at -20°F (-29°C)
16 hours at room temperature

Chemical Resistance: When properly applied, nameplate and decorative trim parts will hold securely after exposure to numerous chemicals including gasoline, MEK, oil, Freon™ TF, sodium chloride solution, mild acids and alkalis.

VI. Low Service Temperature

-40°F (-40°C)
Many applications survive below this temperature (factors affecting successful applications are: materials being bonded, dwell at RT before cold exposure and stress below the Tg [i.e., expansion/contraction stresses, impact]). Optimum conditions are: bonding HSE materials, longer time at RT before cold exposure and little or no stress below the Tg.

Note: Adhesive 200 is not recommended for low energy plastics (polypropylene, polyethylene, powder coated paints). For these surfaces please refer to 3M™ Adhesives 300, 350, 300LSE and the 300MP. The Adhesive 300LSE has been used more frequently as the bond areas in applications become smaller and smaller. It offers the smooth, high performance characteristics of the 3M™ Adhesive 200MP with higher adhesion to plastic. Adhesive 300LSE is ideal for bonding to polyethylene, polypropylene, powder coated paints and for applications where the bonded area is less than 1/4" wide.

3M™ Adhesive Transfer Tapes with Adhesive 200

467 • 468 • 9567 • 9568

Available Sizes

	Master Size	Slit Width (minimum)	Roll Length[8]	Core Size	Slit Tolerance
Tape 467	48"	1/2"	60-360 yards	3"	± 1/32"
Tape 468	48"	1/2"	60-360 yards	3"	± 1/32"
Tape 9567	48"	1/2"	1/2"-2 7/8" - 360 yards over 2 7/8"-48" - 540 yards	3"	± 1/32"
Tape 9568	48"	1/2"	1/2"-1" - 180 yards over 1"-48" - 360 yards	3"	± 1/32"

Note: Roll lengths vary by product slit width (the customer service department has more detailed information, 1-800-328-1681).

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 affect 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 psi) to allow the adhesive to 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 section VII of the Typical Physical Properties and Performance Characteristics).

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 the 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.

3M™ Adhesive Transfer Tapes with Adhesive 200

467 • 468 • 9567 • 9568

Application Ideas

- Metal nameplates for the appliance or electronic markets.
- Excellent general purpose bonding in the industrial market.
- Used for nameplates and decorative plates produced on roll to roll rotary die cutting process. 3M™ Adhesive Transfer Tapes 9567 and 9568 are stabilized adhesive for narrow rolls.

For Additional Information

To request additional product information or to arrange for sales assistance, call toll free 1-800-223-7427 or visit www.3M.com/converter. Address correspondence to: 3M Engineered Adhesives Division, 3M Center, Building 220-7E-01, St. Paul, MN 55144-1000. Our fax number is 651-733-9175. In Canada, phone: 1-800-364-3577. In Puerto Rico, phone: 1-787-750-3000. In Mexico, phone: 52-70-04-00.

Certification/ Recognition

TSCA: These products are defined as articles under the Toxic Substances Control Act and therefore, are exempt from inventory listing requirements.

MSDS: These products are not subject to the MSDS 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, the products should not present a health and safety hazard. However, use or processing of the products in a manner not in accordance with the directions for use may affect their performance and present potential health and safety hazards.

UL: Many of these products have been recognized by Underwriters Laboratories Inc. under Standard, UL 969, Marking and Labeling Systems Materials Component. For more information on the UL Certification, please visit the 3M website at http://www.3m.com/converter.

Important Notice

3M MAKES NO WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. User is responsible for determining whether the 3M product is fit for a particular purpose and suitable for user's method of application. Please remember that many factors can affect the use and performance of a 3M product in a particular application. The materials to be bonded with the product, the surface preparation of those materials, the product selected for use, the conditions in which the product is used, and the time and environmental conditions in which the product is expected to perform are among the many factors that can affect the use and performance of a 3M product. Given the variety of factors that can affect the use and performance of a 3M product, some of which are uniquely within the user's knowledge and control, it is essential that the user evaluate the 3M product to determine whether it is fit for a particular purpose and suitable for the user's method of application.

Limitation of Remedies and Liability

If the 3M product is proved to be defective, THE EXCLUSIVE REMEDY, AT 3M'S OPTION, SHALL BE TO REFUND THE PURCHASE PRICE OF OR TO REPAIR OR REPLACE THE DEFECTIVE 3M PRODUCT. 3M shall not otherwise be liable for loss or damages, whether direct, indirect, special, incidental, or consequential, regardless of the legal theory asserted, including, but not limited to, contract, negligence, warranty, or strict liability.

ISO 9002

This Engineered Adhesives Division product was manufactured under a 3M quality system registered to ISO 9002 standards.

3M

Converter Markets
Engineered Adhesives Division
3M Center, Building 551-1W-02
St. Paul, MN 55144-1000

Recycled Paper
40% pre-consumer
10% post-consumer

Printed in U.S.A.
©3M 2002 70-0707-1117-4 (9/02)