Double Coated Tapes with Adhesive 300MP

9687C • 9690 • 9690B • 9690F • 9609 • 9693

Technical Data **June, 2008**

Product Description

3M™ Double Coated Tapes with 3M™ Adhesive 300MP feature a thin polyester film for dimensional stability and improved handling with ease of die cutting and laminating. 3M adhesive 300MP offers excellent adhesion to many plastics and good shear strength and provides exceptional temperature and chemical resistance that withstands tough application environments. For information on storage and usage tips regarding the 3M adhesive 300MP products, please refer to technical bulletin, *3M™ Laminating Adhesives 300MP – Tips for storing, handling and slitting in roll form* (70-0709-3905-6).

Construction

Product Number	Faceside[1] Adhesive Type/ Thickness	Carrier Type/ Thickness	Backside[1] Adhesive Type/ Thickness	Liner Color, Type, Print	Liner Caliper	Total Tape Thickness (w/o liner)
3M™ Double Coated Tape 9687C	300MP/ 0.0023" (0.058mm)	Clear PET[2] 0.002" (0.051mm)	300MP/ 0.0077" (0.20mm)	Clear, PET, no print	0.002" (0.051mm)	0.012" (0.30mm)
3M™ Double Coated Tape 9690	300MP/ 0.0028" (0.071mm)	Clear PET 0.0005" (0.013mm)	300MP/ 0.0023" (0.058mm)	Tan, 83#, Polycoated Kraft "3M"	0.0062" (0.16mm)	0.0055" (0.14mm)
3M™ Double Coated Tape 9690B	300MP/ 0.0028" (0.071mm)	Black PET 0.0005" (0.013mm)	300MP/ 0.0023" (0.058mm)	Tan, 83#, Polycoated Kraft "3M"	0.0062" (0.16mm)	0.0055" (0.14mm)
3M™ Double Coated Tape 9690F	300MP/ 0.0028" (0.071mm)	Clear PET 0.0005" (0.013mm)	300MP/ 0.0023" (0.058mm)	Clear, PET, no print	0.002" (0.051mm)	0.0055" (0.14mm)
3M™ Double Coated Tape 9609	300MP/ 0.0035" (0.089mm)	Clear PET 0.002" (0.051mm)	300MP/ 0.0035" (0.089mm)	Tan, 83#, Polycoated Kraft, no print	0.0062" (0.16mm)	0.009" (0.23mm)
3M™ Double Coated Tape 9693	300MP/ 0.0015" (0.038mm)	Clear PET 0.0005" (0.013mm)	300MP/ 0.0015" (0.038mm)	Clear, PET, no print	0.002" (0.051mm)	0.0035" (0.089mm)

Note 1: Faceside adhesive is on the interior of the roll.

The caliper listed is based on a calculation from manufacturing controlled adhesion coat weights using a density of 1.012 g/cc. While past data pages have listed a nominal caliper of 4.8 mils for 3M tapes 9690 and 9690B the coat weight has not changed.

Backside adhesive is on the exterior of the roll.

Note 2: PET (Polyester).

3M™ Double Coated Tapes with Adhesive 300MP
9687C • 9690 • 9690B • 9690F • 9609 • 9693

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.

Product Number	3M™ Double Coated Tape 9687C	3M™ Double Coated Tapes 9690, 9690B, 9690F	3M™ Double Coated Tape 9609	3M™ Double Coated Tape 9693
Adhesion to stainless steel ASTM D3330 - 90 degree	Oz/in (N/100mm)	Oz/in (N/100mm)	Oz/in (N/100mm)	Oz/in (N/100mm)
- 15 minute RT	50 (55)	45 (49)	74 (81)	37 (40)
- 72 hour RT	53 (58)	116 (126)	87 (95)	61 (67)
- 72 hour 158°F (70°C)	104 (114)	116 (126)	87 (95)	67 (73)
ASTM D3330 - 180 degree, 2 mil Al foil				
- 72 hour RT	50 (55)	125 (136)	98 (107)	–
ASTM D3330 - 180 degree, 2 mil polyester, stainless steel				
- 72 hour RT	–	–	–	70 (77)
ASTM D3330 - 90 degree, 2 mil Al foil, 72 hour RT				
ABS	51 (56)	53 (58)	62 (68)	51 (56)
Polyester	51 (56)	52 (57)	97 (106)	61 (67)
Polycarbonate	62 (68)	52 (57)	100 (109)	–
Shear Strength - ASTM D3654 modified - (.5 inch^2 sample size)				
1000 grams at 72°F (22°C)	4770 minutes	1500 minutes	1000 minutes	10,000 minutes
500 grams at 158°F (70°C)	—	500 minutes	620 minutes	7076 minutes
Less Bonding -	Push out test using 500N load cell with 15mm diameter pusher. Test Results - Average load (N) 106.24975 for 3M tape 9693.			
Relative High Temperature Operating Ranges:				
Long Term (days, weeks)	200°F (93°C)	200°F (93°C)	200°F (93°C)	200°F (93°C)
Short Term (minutes, hours)	300°F (149°C)	300°F (149°C)	300°F (149°C)	300°F (149°C)

Available Sizes

Roll length, width, slitting tolerance, core size.				
Available Lengths (Subject to minimum order requirements)				
Maximum Length				
1/2" to 63/64"	–	180 yd. (164 m)	–	180 yd. (164 m)
3" to 48"	–	–	360 yd. (329 m)	–
1" to 54"	360 yd. (329 m)	360 yd. (329 m)	–	360 yd. (329 m)
Available Widths				
Minimum	4" (102 mm)	1/2" (12.7 mm)	3" (76.2 mm)	1/2" (12.7 mm)
Maximum	54" (1372 mm)	54" (1372 mm)	48" (1220 mm)	54" (1372 mm)
Normal Slitting Tolerance	±1/32" (0.8 mm)	±1/32" (0.8 mm)	±1/32" (0.8 mm)	±1/32" (0.8 mm)
Core Size	6.0" (152.4 mm)	3.0" (76.2 mm)	6.0" (152.4 mm)	3.0" (76.2 mm)

3M™ Double Coated Tapes with Adhesive 300MP
9687C • 9690 • 9690B • 9690F • 9609 • 9693

Features

- 3M™ Double Coated Tape 9690B has a black film carrier which provides opacity and visibility.
- 3M™ Double Coated Tape 9690F is provided on a film liner for ease in rotary diecutting and for applications that demand low particle generating parts.
- 3M™ Double Coated Tape 9609 provides easier handling and good gap filling for rigid to rigid substrate bonding.
- 3M™ Double Coated Tape 9693 clear polyester carrier provides dimensional stability and improved handling with ease of die cutting and lamination compared to adhesive transfer tapes.

Application Techniques

Bond strength is dependent upon the amount of adhesive-to-surface contact developed. Firm application pressure helps develop better adhesive contact and improves bond strength.

To obtain optimum adhesion, the bonding surfaces must be clean, dry and well unified. Some typical surface cleaning solvents are isopropyl alcohol or heptane.*****

Ideal tape application temperature range is 70°F to 100°F (21°C to 38°C). Initial tape application to surfaces at temperatures below 50°F (10°C) is not recommended because the adhesive becomes too firm to adhere readily. However, once properly applied, low temperature holding is generally satisfactory.

*****Carefully read and follow the manufacturer's precautions and directions for use when working with solvents. These cleaning recommendations may not be compliant with the rules of certain Air Quality Management Districts in California; consult applicable rules before use.

Application Ideas

- Cellular phone lens attachment
- Foam Lamination
- Nameplates
- Appliques
- Decorate Trim
- Thermal and sound dampening applications in the electronics and appliance industry.

Liner Configure Guide

General purpose steel rule die cutting	58# PCK (Polycoated Kraft)
Steel rule cutting many nameplates on common sheet	83# PCK
Kiss cutting, steel rule	83# PCK
Rotary die-cutting	PET
Selective die-cutting (cut adhesive before laminate)	Double-linered
Thermoforming	HDPE (High density Polyethylene)
Part inspection	HDPE, PET
Embossed metal parts	White PP (polypropylene), HDPE
Metal parts (punch press)	PET

Adding Liners to 3M™ Double Coated Tapes with 3M™ Adhesive 300MP

1. Rotary processing, tape only, on a densified (outside of #4994) kraft liner. In this process the tape waste will stay with the 83# PCK liner, leaving adhesive die-cuts dispensable from the #4994 (densified kraft) liner.
2. Rotary processing for finished parts. It is most efficient to use the polyester linered double coated 3M tape 9690F. Current process limitations prevent the supply of 3M™ Adhesive 300MP on a DK liner.

3M™ Double Coated Tapes with Adhesive 300MP
9687C • 9690 • 9690B • 9690F • 9609 • 9693

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

Store in original cartons at 70°F (21°C) and 50% relative humidity.

Shelf Life

If stored under proper conditions, product retains its performance and properties for two years from date of manufacture.

Certification/ Recognition

MSDS: 3M has not prepared a MSDS for these products which 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.

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

Product Use

All statements, technical information and recommendations contained in this document are based upon tests or experience that 3M believes are reliable. However, many factors beyond 3M's control can affect the use and performance of a 3M product in a particular application, including the conditions under which the product is used and the time and environmental conditions in which the product is expected to perform. Since these factors 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.

Warranty and Limited Remedy

Unless stated otherwise in 3M's product literature, packaging inserts or product packaging for individual products, 3M warrants that each 3M product meets the applicable specifications at the time 3M ships the product. Individual products may have additional or different warranties as stated on product literature, package inserts or product packages. 3M MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY IMPLIED WARRANTY ARISING OUT OF A COURSE OF DEALING, CUSTOM OR USAGE OF TRADE. User is responsible for determining whether the 3M product is fit for a particular purpose and suitable for user's application. If the 3M product is defective within the warranty period, your exclusive remedy and 3M's and seller's sole obligation will be, at 3M's option, to replace the product or refund the purchase price.

Limitation of Liability

Except where prohibited by law, 3M and seller will not be liable for any loss or damage arising from the 3M product, whether direct, indirect, special, incidental or consequential, regardless of the legal theory asserted, including warranty, contract, negligence or strict liability.

ISO 9001:2000

This Industrial Adhesives and Tapes Division product was manufactured under a 3M quality system registered to ISO 9001:2000 standards.

3M

Industrial Adhesives and Tapes Division
Converter Markets
3M Center, Building 21-1W-10, 900 Bush Avenue
St. Paul, MN 55144-1000
800-223-7427 • 651-778-4244 (fax)
www.3M.com/converter

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

3M is a trademark of 3M Company.
Printed in U.S.A.
©3M 2008 70-0709-3925-4 (6/08)