



Double Coated Tapes with Adhesive 300MP

9690 • 9690B • 9690F • 9609 • 9490LE

Technical Data

October, 2002

Product Description

These 3M™ Double Coated Tapes 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.

Construction

Product Number	Faceside ¹ Adhesive Type/ Thickness	Carrier Type/ Thickness	Backside ² Adhesive Type/ Thickness	Liner Color, Type, Print	Liner ⁴ Caliper
Tape 9690	300MP/ 0.0028" (0.071mm)	Clear PET ³ 0.0005" (0.013mm)	300MP/ 0.0023" (0.058mm)	Tan, 83#, Polycoated Kraft "Scotch™ Laminating Adhesive"	0.0064" (0.17mm)
Tape 9690B	300MP/ 0.0028" (0.071mm)	Black PET 0.0005" (0.013mm)	300MP/ 0.0023" (0.058mm)	Tan, 83#, Polycoated Kraft "Scotch™ Laminating Adhesive"	0.0064" (0.17mm)
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)
Tape 9609	300MP/ 0.0035" (0.089mm)	Clear PET 0.002" (0.51mm)	300MP/ 0.0035" (0.89mm)	Tan, 83#, Polycoated Kraft, no print	0.063" (0.16mm)
Tape 9490LE	300MP/ 0.0028" (0.071mm)	Clear PET 0.0005" (0.013mm)	300LE/ 0.0034" (0.086mm)	Tan, 58#, Polycoated Kraft, "Scotch™ 300LSE Hi Strength Adhesive"	0.0042" (0.11mm)

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

Note 2: Backside adhesive is on the exterior of the roll.

Note 3: PET (Polyester).

Note 4: 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™ Double Coated Tape 9690 and 9690B the coat weight has not changed.

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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	Tapes 9690, 9690B, 9690F	Tape 9609	Tape 9490LE (FS/BS)
Adhesion to stainless steel ASTM D3330 - 90 degree		Oz/in (N/100mm)	Oz/in (N/100mm)	Oz/in (N/100mm)
- 15 minute RT		45 (49)	74 (81)	45/62 (49/68)
- 72 hour RT		116 (126)	87 (95)	116/157 (126/171)
- 72 hour 158°F (70°C)		116 (126)	87 (95)	116/157 (126/171)
ASTM D3330 - 180 degree, 2 mil Al foil				
- 72 hour RT		125 (136)	98 (107)	125/60 (136/65)
ASTM D3330 - 90 degree, 2 mil Al foil, 72 hour RT				
ABS		53 (58)	62 (68)	40/60 (44/66)
Polyester		52 (57)	97 (106)	—
Polycarbonate		52 (57)	100 (109)	—
Shear Strength - ASTM D3654 modified - (.5 inch ² sample size)				
1000 grams at 72°F (22°C)		1500 minutes	1000 minutes	5000 minutes
500 grams at 158°F (70°C)		500 minutes	620 minutes	3000 minutes
Relative High Temperature Operating Ranges:				
Long Term (days, weeks)		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)
Shelf Life of Tape in Roll Form	24 months from date of manufacture when stored in original cartons at 70°F (21°C) and 50% relative humidity.			

Available Sizes	Roll length, width, slitting tolerance, core size.	
	Available Lengths (Subject to minimum order requirements)	
	Maximum Length	
	1/4" to 1"	144 yd (132 m)
	1" to 54"	360 yd (329 m)
	Available Widths	
	Minimum	1/4" (6.35 mm)
	Maximum	54" (1372 mm)
	Normal Slitting Tolerance	± 1/32" (0.8 mm)
	Core Size	3.0" (76.2 mm)

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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. Note: Carefully read and follow the manufacturer's precautions and directions for use when working with solvents. 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.
General Information	These tapes have a film carrier, which can add dimensional stability to foams and other substrates. The carrier also provides easier handling during slitting and die-cutting. For information on storage and usage tips regarding the 3M™ Adhesive 300MP products, please refer to technical bulletin 70-0709-3905-6. For information on laminating adhesive 300MP, please refer to the Thin Bonding Product Selection Guide.
Features	A thin polyester carrier in the products provides dimensional stability and improved handling with ease of die cutting and lamination compared to adhesive transfer tapes. Adhesive 300MP provides exceptional temperature and chemical resistance and withstands tough application environments. 3M™ Tape 9490LE features adhesive 300LSE on the backside of the tape for bonding to low surface energy substrates such as oily metal or polypropylene. 3M™ Tape 9690B has a black film carrier, which provides opacity and visibility. 3M™ Tape 9690F is provided on a film liner for ease in rotary diecutting and for applications that demand low particle generating parts. 3M™ Tape 9609 has a 2 mil PET carrier, which provides easier handling and good gap filling for rigid to rigid substrate bonding.
Application Ideas	• Cellular phone lens attachment • Foam Lamination • Nameplates • Appliques • Decorate Trim • Thermal and sound dampening applications in the electronics and appliance industry.

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Liner Configure Guide	General purpose steel rule die cutting Steel rule cutting many nameplates on common sheet Kiss cutting, steel rule Rotary die-cutting Selective die-cutting (cut adhesive before laminate) Thermoforming Part inspection Embossed metal parts Metal parts (punch press)	58# PCK (Polycoated Kraft) 83# PCK 83# PCK PET Double-lined HDPE (High density Polyethylene) HDPE, PET White PP (polypropylene), HDPE PET
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Adding Liners to 3M™ Double Coated Tapes with 300MP Adhesive	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 lined double coated 3M™ Double Coated Tape 9690F. Current process limitations prevent the supply of 3M™ Adhesive 300MP on a DK liner.
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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.
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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

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.

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.

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ISO 9002

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



Converter Markets
Engineered Adhesives Division

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©3M 2002 70-0709-3925-4 (9/02)