



High Tack Double Coated Tapes with Adhesive 300

444 • 444PC • 9009 • 9019 • 9019HL

Technical Data

July, 2002

Product Description

3M™ Double Coated Tapes with Adhesive 300 feature a thin polyester film for dimensional stability and improved handling with ease of die cutting and laminating. The high tack adhesive provides relatively high initial adhesion and good shear holding power to a variety of surfaces.

Construction

Product Number	Faceside ¹ Adhesive Type/ Thickness	Carrier Type/ Thickness	Backside ² Adhesive Type/ Thickness	Liner Color, Type, Print	Liner Caliper
444	300/ 0.002" (0.051mm)	Clear PET ³ 0.0005" (0.013mm)	300/ 0.0013" (0.033mm)	White, 55#, Densified Kraft, No print	0.003" (0.076mm)
444PC	300/ 0.002" (0.051mm)	Clear PET ³ 0.0005" (0.013mm)	300/ 0.0013" (0.033mm)	Tan, 58#, Polycoated Kraft, No print	0.004" (0.10mm)
9009	300/ 0.0007" (0.018mm)	Clear PET ³ 0.0005" (0.013mm)	300/ 0.0007" (0.018mm)	White, 55#, Densified Kraft, No print	0.003" (0.076mm)
9019	300/ 0.0003" (0.0084mm)	Clear PET ³ 0.0005" (0.013mm)	300/ 0.0003" (0.0084mm)	White, 55#, Densified Kraft, No print	0.003" (0.076mm)
9019HL	300/ 0.0003" (0.0084mm)	Clear PET ³ 0.0005" (0.013mm)	300/ 0.0003" (0.0084mm)	Tan, 86#, Polycoated Kraft, Printed	0.0065" (0.165mm)

Note 1: Faceside adhesive is on the interior of the roll, exposed when unwound.

Note 2: Backside adhesive is on the exterior of the roll, exposed when liner is removed.

Note 3: PET (Polyester).

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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 444, 444PC	Tapes 9019, 9019HL	Tape 9009
Adhesion to stainless steel ASTM D3330 - 90 degree	Oz/in (N/100mm)	Oz/in (N/100mm)	Oz/in (N/100mm)
- 15 minute RT	32 (35)	22 (24)	54 (59)
- 72 hour RT	61 (66)	27 (29)	61 (66)
- 72 hour 158°F (70°C)	86 (94)	36 (39)	76 (83)
ASTM D3330 - 180 degree, 2 mil al foil			
- 72 hour RT	115 (125)	33 (36)	82 (89)
3) Adhesion to other surfaces*			
ASTM D3330 - 90 degree, 2 mil al foil, 72 hour RT			
ABS	55 (60)	24 (26)	59 (64)
Polycarbonate	64 (70)	26 (28)	61 (66)
Polyester	61 (66)		
Polypropylene	43 (47)		
Shear Strength - ASTM D3654 modified - (.5 inch ² sample size)			
1000 grams at 72°F (22°C)	813 minutes	885 minutes	1593 minutes
Relative Solvent Resistance	Medium-Low	Medium-Low	Medium-Low
UV Resistance	Medium	Medium	Medium
Relative High Temperature Operating Ranges:			
Long Term (days, weeks)	120°F (65°C)	120°F (65°C)	120°F (65°C)
Short Term (minutes, hours)	150°F (82°C)	150°F (82°C)	150°F (82°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)

Standard	36 yd (33 m)
Maximum Length	
1/4" to 1/2"	180 yd (165 m)
1/2" to 48"	360 yd (329 m)
Available Widths	
Minimum	1/4" (6.35 mm)
Maximum	48" (1219 mm)
Normal Slitting Tolerance	± 1/32" (0.8 mm)
Core Size	3.0" (76.2 mm)

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Application Techniques	<p>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.</p> <p>To obtain optimum adhesion, the bonding surfaces must be clean, dry and well unified. Some typical surface cleaning solvents are isopropyl alcohol or heptane.</p> <p>Note: Carefully read and follow the manufacturer's precautions and directions for use when working with solvents.</p> <p>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.</p>		
General Information	<p>All 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.</p>		
Features	<p>3M™ Double Coated Tape 444PC is provided on a polycoated kraft liner that provides moisture stability for large part converting.</p> <p>The medium-firm acrylic adhesive system features both high initial adhesion and good high temperature holding power.</p>		
Application Ideas	<ul style="list-style-type: none"> • Medical/non-medical diagnostic test strips • Plastic film lamination/bonding • Splicing • Foam lamination 		
Liner Configuration Guide	<table> <tr> <td data-bbox="521 1472 1133 1778"> <p>General purpose steel rule die cutting</p> <p>Steel rule cutting many nameplates on common sheet</p> <p>Kiss cutting, steel rule</p> <p>Rotary die-cutting</p> <p>Selective die-cutting (cut adhesive before laminate)</p> <p>Thermoforming</p> <p>Part inspection</p> <p>Embossed metal parts</p> <p>Metal parts (punch press)</p> </td><td data-bbox="1170 1472 1495 1778"> <p>58# PCK (Polycoated Kraft)</p> <p>86# PCK</p> <p>86# PCK</p> <p>Densified Kraft, PET</p> <p>Double-linered</p> <p>HDPE (High density Polyethylene)</p> <p>HDPE, PET</p> <p>White PP (polypropylene), HDPE</p> <p>PET</p> </td></tr> </table>	<p>General purpose steel rule die cutting</p> <p>Steel rule cutting many nameplates on common sheet</p> <p>Kiss cutting, steel rule</p> <p>Rotary die-cutting</p> <p>Selective die-cutting (cut adhesive before laminate)</p> <p>Thermoforming</p> <p>Part inspection</p> <p>Embossed metal parts</p> <p>Metal parts (punch press)</p>	<p>58# PCK (Polycoated Kraft)</p> <p>86# PCK</p> <p>86# PCK</p> <p>Densified Kraft, PET</p> <p>Double-linered</p> <p>HDPE (High density Polyethylene)</p> <p>HDPE, PET</p> <p>White PP (polypropylene), HDPE</p> <p>PET</p>
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Application Equipment

1) Wide web lamination

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).

2) To apply strips of adhesive

3M Dispenser Selection (for example)

Manual Dispensers - C25, H-10, H-128, M-712, M-742, M-744, P-52, P-56

Definite Length Dispensers - M-82, M-87, M-96, M-910, M-920

Semiautomatic Dispensers - S-625 w/attachment, T-646, T-653

For additional dispenser selection information refer to 3M's Dispenser/Tape Compatibility Guideline.

For assistance in helping you determine the best dispenser for your application, contact your local 3M sales representative, or the toll free 3M sales assistance number at 1-800-362-3550.

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.

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.

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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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.



Converter Markets
Engineered Adhesives Division

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40% pre-consumer
10% post-consumer

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