

3M

Double Coated Tape with Adhesive 420

9783 • 9795 • 9795B

Technical Data

November, 2006

Product Description

3M™ Double Coated Tapes with 3M™ Adhesive 420 are high tack film tapes that feature a polyester film carrier for dimensional stability and improved handling with ease of die cutting and laminating. The high tack acrylic 3M adhesive 420 provides both high performance at a wide temperature range and excellent adhesion to many plastics.

Construction

Product Number	Faceside ¹ Adhesive Type/ Thickness	Carrier Type/ Thickness	Backside ² Adhesive Type/ Thickness	Liner Color, Type Print	Liner Caliper	Total Tape Thickness (w/o liner)
3M™ Double Coated Tape 9783	420/ 0.0015" (0.038mm)	Clear PET ³ 0.0005" (0.013mm)	420/ 0.0015" (0.038mm)	Clear, PET, no print	0.002" (0.051mm)	0.0035" (0.089mm)
3M™ Double Coated Tape 9795	420/ 0.0028" (0.071mm)	PET ³ 0.0005" (0.013mm)	420/ 0.0023" (0.058mm)	Tan, 83# Polycoated Kraft, "3M"	0.0065" (0.17mm)	0.0056" (0.14mm)
3M™ Double Coated Tape 9795B	420/ 0.0028" (0.071mm)	Black PET 0.0005" (0.013mm)	420/ 0.0023" (0.058mm)	Tan, 83# Polycoated Kraft, "3M"	0.0065" (0.17mm)	0.0056" (0.14mm)

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).

The caliper listed is based on a calculation from manufacturing controlled adhesive coat weights using a density of 1.012 g/cc.

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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	3M™ Double Coated Tape 9783	3M™ Double Coated Tapes 9795, 9795B
Adhesion to stainless steel ASTM D3330 - 90 degree		Oz/in (N/100 mm)	Oz/in (N/100 mm)
- 15 minutes RT		36 (39)	40 (43)
- 72 hour RT		46 (50)	78 (85)
- 72 hour 158°F		57 (62)	114 (124)
ASTM D3330 - 180 degree, 2 mil Al foil		Oz/in (N/100 mm)	Oz/in (N/100 mm)
- 72 hour RT		–	65 (71)
ASTM D3330 - 180 degree, 2 mil polyester, stainless steel		Oz/in (N/100 mm)	Oz/in (N/100 mm)
- 72 hour RT		52 (57)	–
Adhesion to other surfaces ASTM D3330 - 90 degree, 2 mil Al foil, 72 hour RT		Oz/in (N/100 mm)	Oz/in (N/100 mm)
ABS		43 (47)	55 (60)
Polycarbonate		50 (55)	64 (70)
Polypropylene		–	35 (38)
HDPE		–	20 (22)
Shear Strength ASTM D3654 modified - (.5 inch ² sample size)		minutes	minutes
1000 grams at 72°F (22°C)		>10,000	>10,000
500 grams at 158°F (70°C)		>10,000	>10,000
Lens Bonding -	Push out test using 500N load cell with 15mm diameter pusher.		
Relative High Temperature Operating Ranges			
Long Term (days, weeks)		250°F (121°C)	250°F (121°C)
Short Term (minutes, hours)		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)
1" to 48"	–	–
1" to 54"	360 yd. (329 m)	360 yd. (329 m)
Available Widths		
Minimum	1/2 in. (12.7 mm)	1/2 in. (12.7 mm)
Maximum	54 in. (1372 mm)	54 in. (1372 mm)
Normal Slitting Tolerance	± 1/32 in. (0.08 mm)	± 1/32 in. (0.08 mm)
Core Size (ID)	3.0 in. (76.2 mm)	3.0 in. (76.2 mm)

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Features

- A polyester carrier in the products provides dimensional stability and improved handling with ease of die cutting and lamination compared to adhesive transfer tapes.
- 3M™ Adhesive 420 provides good temperature and chemical resistance and withstands tough application environments.
- 3M™ Double Coated Tape 9783 clear polyester carrier provides dimensional stability and improved handling with ease of die cutting and lamination compared to adhesive transfer tapes.
- 3M™ Double Coated Tape 9795B is provided with a black polyester film carrier for added opacity.

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 in compliance with the rules of certain air quality management districts in California; consult applicable rules before use.

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.

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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.

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



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