

# 3M

## Double Coated Tape with Adhesive 420

### 9783

Technical Data

July, 2011

#### Product Description

3M™ Double Coated Tape 9783 with 3M™ Adhesive 420 is a high tack film tape that features 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 <sup>1</sup> Adhesive Type/ Thickness	Carrier Type/ Thickness	Backside <sup>2</sup> 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 <sup>3</sup> 0.0005" (0.013mm)	420/ 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, 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
Adhesion to stainless steel	
ASTM D3330 - 90 degree	Oz/in (N/100 mm)
- 15 minutes RT	36 (39)
- 72 hour RT	46 (50)
- 72 hour 158°F	57 (62)
ASTM D3330 - 180 degree, 2 mil Al foil	Oz/in (N/100 mm)
- 72 hour RT	-
ASTM D3330 - 180 degree, 2 mil polyester, stainless steel	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)
ABS	43 (47)
Polycarbonate	50 (55)
Polypropylene	-
HDPE	-
Shear Strength	
ASTM D3654 modified - (.5 inch <sup>2</sup> sample size)	minutes
1000 grams at 72°F (22°C)	>10,000
500 grams at 158°F (70°C)	>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)
Short Term (minutes, hours)	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)
1" to 48"	-
1" to 54"	360 yd. (329 m)
Available Widths	
Minimum	1/2 in. (12.7 mm)
Maximum	54 in. (1372 mm)
Normal Slitting Tolerance	± 1/32 in. (0.08 mm)
Core Size (ID)	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.
- Clear polyester carrier provides dimensional stability and improved handling with ease of die cutting and lamination compared to adhesive transfer tapes.

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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.\*

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.

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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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**Storage**

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

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**Shelf Life**

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

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## Technical Information

The technical information, recommendations and other statements contained in this document are based upon tests or experience that 3M believes are reliable, but the accuracy or completeness of such information is not guaranteed.

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## Product Use

Many factors beyond 3M's control and uniquely within user's knowledge and control can affect the use and performance of a 3M product in a particular application. Given the variety of factors that can affect the use and performance of a 3M product, user is solely responsible for evaluating the 3M product and determining whether it is fit for a particular purpose and suitable for user's method of application.

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**ISO 9001:2008**

This Industrial Adhesives and Tapes Division product was manufactured under a 3M quality system registered to ISO 9001:2008 standards.



### Industrial Adhesives and Tapes Division Converter Markets

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Printed in U.S.A.  
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