Cushion-Mount™ Plus Tapes with Easy Mount Adhesive

E1815, E1820
E1715, E1720
E1015, E1020, E1040, E1060
E1315, E1320
E1915, E1920, E1920S
E1115, E1120

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Technical Data **April, 2006**

Product Description

3M™ Cushion-Mount™ Plus Tapes with Easy Mount Adhesive are designed for mounting flexographic print plates to cylinders or sleeves. This family of foam mounting tapes provides excellent print quality for process, combination, and solid printing.

Features

- Offers a complete range of foam densities providing excellent print quality from process to combination to solid printing.
- Consistent caliper control allows the printer to use multiple foam densities on a print job to optimize print quality.
- Use the 3M proprietary Easy Mount liner, creating micro-channels in both adhesive surfaces. The crosshatched pattern creates a continuous and permanent network of micro-channels in the adhesive, allowing air to escape from between the tape and cylinder/sleeve and between the tape and plate.
- The adhesive on the linered side (plate side) of the tape is designed for mounting of photopolymer plates, excellent holding power on-press and clean plate removal when demounting.
- The adhesive on the non-linered side (cylinder side) of the tape is designed for mounting to flexographic printing cylinders or sleeves, providing easy application at mounting and clean removability when demounting.

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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.

		3M™ Cushion-Mount™ Plus Firm Combination Printing Tapes		3M™ Cushion-Mount™ Plus Medium Firm Combination Printing Tapes	
Product		**E1815**	**E1820**	**E1715**	**E1720**
Adhesive		Differential Acrylate		Differential Acrylate	
Polyethylene Carrier		Firm Blue Foam		Medium Firm Teal Foam	
Type of Printing		Combination of solid and line with minimal tone reproduction		Combination of solid and line with tone reproduction and fine reverses	
Application Thickness	in (mm)	0.015 (0.381)	0.020 (0.508)	0.015 (0.381)	0.020 (0.508)
Thickness					
Tape	in (mm)	0.017 (0.432)	0.022 (0.559)	0.017 (0.432)	0.022 (0.559)
Film Liner	in (mm)	0.0045 (0.114)	0.0045 (0.114)	0.0045 (0.114)	0.0045 (0.114)
Lot to Lot Tolerance	in (mm)	±0.0015 (±0.038)	±0.0015 (±0.038)	±0.0015 (±0.038)	±0.0015 (±0.038)
Typical Application Area Caliper Variation	in (mm)	±0.0004 (±0.010)	±0.0004 (±0.010)	±0.0004 (±0.010)	±0.0004 (±0.010)
Roll Length	yd (m)	25 (22.9)	25 (22.9)	25 (22.9)	25 (22.9)
Maximum Width	in (mm)	54 (1371.6)	54 (1371.6)	54 (1371.6)	54 (1371.6)
Minimum Width	in (mm)	2 (50.8)	2 (50.8)	2 (50.8)	2 (50.8)
Slitting Tolerance	in (mm)	±1/32 (±0.794)	±1/32 (±0.794)	±1/32 (±0.794)	±1/32 (±0.794)
Density	lb/ft^3 (kg/m^3)	32 (512)	32 (512)	30 (480)	30 (480)
Compression Deflection					
10% Compression	lb/in^2 (kPa)	35 (241)	35 (241)	30 (207)	30 (207)
25% Compression	lb/in^2 (kPa)	60 (414)	60 (414)	50 (345)	50 (345)
Durometer ASTM-D2240 Shore A		72	72	68	68
Peel Adhesion (Modified ASTM-D3330)					
Non-lined side - Stainless Steel	oz/in (N/100mm)	55 (60)	55 (60)	55 (60)	55 (60)
Non-lined side - Composite Sleeve	oz/in (N/100mm)	65 (71)	65 (71)	65 (71)	65 (71)
Non-lined side - Polyester	oz/in (N/100mm)	68 (75)	68 (75)	68 (75)	68 (75)
Non-lined side - Urethane - A	oz/in (N/100mm)	70 (77)	70 (77)	70 (77)	70 (77)
Non-lined side - Urethane - B	oz/in (N/100mm)	60 (66)	60 (66)	55 (60)	55 (60)
Peel Adhesion (Modified ASTM-D3330)					
Linered side - Photopolymer	oz/in (N/100mm)	25 (28)	25 (28)	25 (28)	25 (28)
Solvent Resistance					
Water		Excellent	Excellent	Excellent	Excellent
Alkanes		Excellent	Excellent	Excellent	Excellent
Alcohols		Good	Good	Good	Good
Acetates		Fair	Fair	Fair	Fair
Heat Resistance	°F (°C)	120 (49)	120 (49)	120 (49)	120 (49)

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3M™ Cushion-Mount™ Plus Tapes with Easy Mount Adhesive

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Typical Physical Properties and Performance Characteristics

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		3M™ Cushion-Mount™ Plus Standard Combination Printing Tapes		3M™ Cushion-Mount™ Plus Standard Combination Printing Tapes		3M™ Cushion-Mount™ Plus Medium Soft Process Printing Tapes	
Product		**E1015**	**E1020**	**E1040**	**E1060**	**E1315**	**E1320**
Adhesive		Differential Acrylate		Differential Acrylate		Differential Acrylate	
Polyethylene Carrier		Standard White Foam		Standard White Foam		Medium Yellow Foam	
Type of Printing		Combination of solids and tone reproduction where solids and process are equally important		Combination of solids and tone reproduction where solids and process are equally important		Combination of solids and tone reproduction where process printing is important	
Application Thickness	in (mm)	0.015 (0.381)	0.020 (0.508)	0.040 (1.016)	0.060 (1.524)	0.015 (0.381)	0.020 (0.508)
Thickness							
Tape	in (mm)	0.017 (0.432)	0.022 (0.559)	0.042 (1.017)	0.062 (1.525)	0.017 (0.432)	0.022 (0.559)
Film Liner	in (mm)	0.0045 (0.114)	0.0045 (0.114)	0.0045 (0.114)	0.0045 (0.114)	0.0045 (0.114)	0.0045 (0.114)
Lot to Lot Tolerance	in (mm)	±0.0015 (±0.038)	±0.0015 (±0.038)	±0.0015 (±0.038)	±0.0015 (±0.038)	±0.0015 (±0.038)	±0.0015 (±0.038)
Typical Application Area Caliper Variation	in (mm)	±0.0004 (±0.010)	±0.0004 (±0.010)	±0.0004 (±0.010)	±0.0004 (±0.010)	±0.0004 (±0.010)	±0.0004 (±0.010)
Roll Length	yd (m)	25 (22.9)	25 (22.9)	50 ft. (15.4)	50 ft. (15.4)	25 (22.9)	25 (22.9)
Maximum Width	in (mm)	54 (1371.6)	54 (1371.6)	54 (1371.6)	54 (1371.6)	54 (1371.6)	54 (1371.6)
Minimum Width	in (mm)	2 (50.8)	2 (50.8)	2 (50.8)	2 (50.8)	2 (50.8)	2 (50.8)
Slitting Tolerance	in (mm)	±1/32 (±0.794)	±1/32 (±0.794)	±1/32 (±0.794)	±1/32 (±0.794)	±1/32 (±0.794)	±1/32 (±0.794)
Density	lb/ft^3 (kg/m^3)	28 (450)	28 (450)	28 (450)	28 (450)	27 (433)	27 (433)
Compression Deflection							
10% Compression	lb/in^2 (kPa)	15 (104)	15 (104)	15 (104)	15 (104)	12 (49)	12 (49)
25% Compression	lb/in^2 (kPa)	30 (207)	30 (207)	25 (172)	25 (172)	25 (172)	25 (172)
Durometer ASTM-D2240 Shore A		65	65	40	38	63	63
Peel Adhesion (Modified ASTM-D3330)							
Non-lined side - Stainless Steel	oz/in (N/100mm)	55 (60)	55 (60)	55 (60)	65 (71)	55 (60)	55 (60)
Non-lined side - Composite Sleeve	oz/in (N/100mm)	65 (71)	65 (71)	58 (63)	65 (71)	65 (71)	65 (71)
Non-lined side - Polyester	oz/in (N/100mm)	60 (66)	60 (66)	55 (60)	65 (71)	60 (66)	60 (66)
Non-lined side - Urethane - A	oz/in (N/100mm)	80 (88)	80 (88)	70 (77)	80 (88)	80 (88)	80 (88)
Non-lined side - Urethane - B	oz/in (N/100mm)	65 (71)	65 (71)	50 (55)	55 (60)	65 (71)	65 (71)
Peel Adhesion (Modified ASTM-D3330)							
Linered side - Photopolymer	oz/in (N/100mm)	25 (28)	25 (28)	18 (20)	12 (14)	25 (28)	25 (28)
Solvent Resistance							
Water		Excellent	Excellent	Excellent	Excellent	Excellent	Excellent
Alkanes		Excellent	Excellent	Excellent	Excellent	Excellent	Excellent
Alcohols		Good	Good	Good	Good	Good	Good
Acetates		Fair	Fair	Fair	Fair	Fair	Fair
Heat Resistance	°F (°C)	120 (49)	120 (49)	120 (49)	120 (49)	120 (49)	120 (49)

3M™ Cushion-Mount™ Plus Tapes with Easy Mount Adhesive

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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.

		3M™ Cushion-Mount™ Plus Medium Soft Process Printing Tapes		3M™ Cushion-Mount™ Plus Medium Soft Process Printing Tape	3M™ Cushion-Mount™ Plus Soft Process Printing Tapes	
Product		**E1915**	**E1920**	**E1920S**	**E1115**	**E1120**
Adhesive		Differential Acrylate		Differential Acrylate	Differential Acrylate	
Polyethylene Carrier		Medium Soft Pink Foam		Medium Soft Pink Foam	Soft Tan Foam	
Type of Printing		Combination of solids and tone reproduction where process printing is important		Combination of solids and tone reproduction where process printing is important	Tone reproduction where process printing is important	
Application Thickness	in (mm)	0.015 (0.381)	0.020 (0.508)	0.020 (0.508)	0.015 (0.381)	0.020 (0.508)
Thickness						
Tape	in (mm)	0.017 (0.432)	0.022 (0.559)	0.022 (0.559)	0.017 (0.432)	0.022 (0.559)
Film Liner	in (mm)	0.0045 (0.114)	0.0045 (0.114)	0.0045 (0.114)	0.0045 (0.114)	0.0045 (0.114)
Lot to Lot Tolerance	in (mm)	±0.0015 (±0.038)	±0.0015 (±0.038)	±0.0015 (±0.038)	±0.0015 (±0.038)	±0.0015 (±0.038)
Typical Application Area Caliper Variation	in (mm)	±0.0004 (±0.010)	±0.0004 (±0.010)	±0.0004 (±0.010)	±0.0004 (±0.010)	±0.0004 (±0.010)
Roll Length	yd (m)	25 (22.9)	25 (22.9)	25 (22.9)	25 (22.9)	25 (22.9)
Maximum Width	in (mm)	54 (1371.6)	54 (1371.6)	54 (1371.6)	54 (1371.6)	54 (1371.6)
Minimum Width	in (mm)	2 (50.8)	2 (50.8)	2 (50.8)	2 (50.8)	2 (50.8)
Slitting Tolerance	in (mm)	±1/32 (±0.794)	±1/32 (±0.794)	±1/32 (±0.794)	±1/32 (±0.794)	±1/32 (±0.794)
Density	lb/ft^3 (kg/m^3)	26 (416)	26 (416)	26 (416)	24 (384)	24 (384)
Compression Deflection						
10% Compression	lb/in^2 (kPa)	10 (70)	10 (70)	10 (70)	5 (35)	5 (35)
25% Compression	lb/in^2 (kPa)	20 (138)	20 (138)	20 (138)	10 (70)	10 (70)
Durometer ASTM-D2240 Shore A		60	60	60	55	55
Peel Adhesion (Modified ASTM-D3330)						
Non-lined side - Stainless Steel	oz/in (N/100mm)	30 (33)	30 (33)	55 (60)	30 (33)	30 (33)
Non-lined side - Composite Sleeve	oz/in (N/100mm)	28 (31)	28 (31)	65 (71)	28 (31)	28 (31)
Non-lined side - Polyester	oz/in (N/100mm)	35 (39)	35 (39)	50 (55)	35 (39)	35 (39)
Non-lined side - Urethane - A	oz/in (N/100mm)	45 (50)	45 (50)	75 (82)	50 (55)	50 (55)
Non-lined side - Urethane - B	oz/in (N/100mm)	35 (39)	35 (39)	70 (77)	35 (39)	35 (39)
Peel Adhesion (Modified ASTM-D3330)						
Linered side - Photopolymer	oz/in (N/100mm)	25 (28)	25 (28)	25 (28)	25 (28)	25 (28)
Solvent Resistance						
Water		Excellent	Excellent	Excellent	Excellent	Excellent
Alkanes		Excellent	Excellent	Excellent	Excellent	Excellent
Alcohols		Good	Good	Good	Good	Good
Acetates		Fair	Fair	Fair	Fair	Fair
Heat Resistance	°F (°C)	120 (49)	120 (49)	120 (49)	120 (49)	120 (49)

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Storage

Store under normal conditions of 60° to 80°F (16° to 27°C) and 40 to 60% relative humidity in the original carton.

Shelf Life

To obtain best performance, use this product within one year from date of manufacture.

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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ISO 9001:2000

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

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