3M



Cushion-Mount[™] Plus Plate Mounting Tapes with Easy Mount Adhesive High Plateside Adhesion

E1815H, E1820H E1715H, E1720H E1515H, E1520H E1015H, E1020H, E1040H, E1060H E1315H, E1320H E1915H, E1915HS, E1920H, E1920HS E1215H, E1220H, E1115H, E1120H

Technical Data July, 2010

Product Description

3MTM Cushion-MountTM Plus Plate Mounting Tapes with Easy Mount Adhesive High Plateside Adhesion 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 with high plateside adhesion 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.

3M[™] Cushion-Mount[™] Plus Plate Mounting Tapes with Easy Mount Adhesive High Plateside Adhesion E1815H • E1820H • E1715H • E1720H • E1515H • E1520H • E1015H • E1020H • E1040H • E1060H E1315H • E1320H • E1915H • E1920H • E1920HS • E1215H • E1220H • E1115H • E1120H

		3M [™] Cushion-Mount [™] Plus Firm Combination Plate Mounting Tapes		3M™ Cushion-Mount™ Plus Medium Firm Combination Plate Mounting Tapes		3M [™] Cushion-Mount [™] Plus Medium Combination Plate Mounting Tapes	
Product		E1815H	E1820H	E1715H	E1720H	E1515H	E1520H
Adhesive		Differentia	al Acrylate	Differentia	al Acrylate	Differentia	al Acrylate
Polyethylene Carrier			Firm Blue Foam		m Teal Foam	Medium Pı	urple Foam
Type of Printing		Combination of solid and line with minimal tone reproduction		Combination of solid and line with tone reproduction and fine reverses		Combination of solid and line with tone reproduction and fine reverses	
Application Thickness	in	0.015	0.020	0.015	0.020	0.015	0.020
	(mm)	(0.381)	(0.508)	(0.381)	(0.508)	(0.381)	(0.508)
Thickness	•						
Tape	in	0.017	0.022	0.017	0.022	0.017	0.022
	(mm)	(0.432)	(0.559)	(0.432)	(0.559)	(0.432)	(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	in (mm)	±0.0004	±0.0004	±0.0004	±0.0004	±0.0004	±0.0004
Caliper Variation		(±0.010)	(±0.010)	(±0.010)	(±0.010)	(±0.010)	(±0.010)
Roll Length	yd	25	25	25	25	25	25
	(m)	(22.9)	(22.9)	(22.9)	(22.9)	(22.9)	(22.9)
Maximum Width	in	54	54	54	54	54	54
	(mm)	(1371.6)	(1371.6)	(1371.6)	(1371.6)	(1371.6)	(1371.6)
Minimum Width	in	2	2	2	2	2	2
	(mm)	(50.8)	(50.8)	(50.8)	(50.8)	(50.8)	(50.8)
Slitting Tolerance	in	±1/32	±1/32	±1/32	±1/32	±1/32	±1/32
	(mm)	(±0.794)	(±0.794)	(±0.794)	(±0.794)	(±0.794)	(±0.794)
Density	lb/ft³	32	32	30	30	29	29
	(kg/m³)	(512)	(512)	(480)	(480)	(465)	(465)
Compression Deflection	, ,	, ,		, ,	, ,		
10% Compression	lb/in²	35	35	30	30	26	26
	(kPa)	(241)	(241)	(207)	(207)	(180)	(180)
25% Compression	lb/in²	60	60	50	50	40	40
	(kPa)	(414)	(414)	(345)	(345)	(276)	(276)
Durometer ASTM-D2240 Shore A		72	72	68	68	67	67
Peel Adhesion (Modified AS	TM-D3330)						
Non-linered side -	oz/in	55	55	55	55	55	55
Stainless Steel	(N/100mm)	(60)	(60)	(60)	(60)	(60)	(60)
Non-linered side -	oz/in	65	65	65	65	65	65
Composite Sleeve	(N/100mm)	(71)	(71)	(71)	(71)	(71)	(71)
Non-linered side -	oz/in	68	68	68	68	68	68
Polyester	(N/100mm)	(75)	(75)	(75)	(75)	(75)	(75)
Non-linered side -	oz/in	70	70	70	70	70	70
Urethane - A	(N/100mm)	(77)	(77)	(77)	(77)	(77)	(77)
Non-linered side -	oz/in	60	60	55	55	55	55
Urethane - B	(N/100mm)	(66)	(66)	(60)	(60)	(60)	(60)
Peel Adhesion (Modified AS	TM-D3330)						
Linered side -	oz/in	70	70	70	70	70	70
Photopolymer	(N/100mm)	(77)	(77)	(77)	(77)	(77)	(77)
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	120	120	120	120	120	120
risat resistante	(°C)	(49)	(49)	(49)	(49)	(49)	(49)

3M[™] Cushion-Mount[™] Plus Plate Mounting Tapes with Easy Mount Adhesive High Plateside Adhesion E1815H • E1820H • E1715H • E1720H • E1515H • E1520H • E1015H • E1020H • E1040H • E1060H E1315H • E1320H • E1915H • E1920H • E1920HS • E1215H • E1220H • E1115H • E1120H

		3M™ Cushion-Mount™ Plus Standard Combination Plate Mounting Tapes		3M™ Cushion-Mount™ Plus Standard Combination Plate Mounting Tapes		3M [™] Cushion-Mount [™] Plus Medium Soft Process Plate Mounting Tapes	
Product		E1015H	E1020H	E1040H	E1060H	E1315H	E1320H
Adhesive		Differential Acrylate		Differential Acrylate		Differential Acrylate	
Polyethylene Carrier		Standard White Foam		Standard White Foam		Medium Soft 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	0.015	0.020	0.040	0.060	0.015	0.020
	(mm)	(0.381)	(0.508)	(1.016)	(1.524)	(0.381)	(0.508)
Thickness	, ,					, ,	, ,
Таре	in	0.017	0.022	0.042	0.062	0.017	0.022
	(mm)	(0.432)	(0.559)	(1.017)	(1.525)	(0.432)	(0.559)
Film Liner	in	0.0045	0.0045	0.0045	0.0045	0.0045	0.0045
	(mm)	(0.114)	(0.114)	(0.114)	(0.114)	(0.114)	(0.114)
Lot to Lot Tolerance	in	±0.0015	±0.0015	±0.0015	±0.0015	±0.0015	±0.0015
	(mm)	(±0.038)	(±0.038)	(±0.038)	(±0.038)	(±0.038)	(±0.038)
Typical Application Area Caliper Variation	in	±0.0004	±0.0004	±0.0004	±0.0004	±0.0004	±0.0004
	(mm)	(±0.010)	(±0.010)	(±0.010)	(±0.010)	(±0.010)	(±0.010)
Roll Length	yd	25	25	50 ft.	50 ft.	25	25
	(m)	(22.9)	(22.9)	(15.4)	(15.4)	(22.9)	(22.9)
Maximum Width	in	54	54	54	54	54	54
	(mm)	(1371.6)	(1371.6)	(1371.6)	(1371.6)	(1371.6)	(1371.6)
Minimum Width	in	2	2	2	2	2	2
	(mm)	(50.8)	(50.8)	(50.8)	(50.8)	(50.8)	(50.8)
Slitting Tolerance	in	±1/32	±1/32	±1/32	±1/32	±1/32	±1/32
	(mm)	(±0.794)	(±0.794)	(±0.794)	(±0.794)	(±0.794)	(±0.794)
Density	lb/ft³	28	28	28	28	27	27
	(kg/m³)	(450)	(450)	(450)	(450)	(433)	(433)
Compression Deflection							
10% Compression	lb/in²	15	15	15	15	12	12
	(kPa)	(104)	(104)	(104)	(104)	(49)	(49)
25% Compression	lb/in²	30	30	25	25	25	25
	(kPa)	(207)	(207)	(172)	(172)	(172)	(172)
Durometer ASTM-D2240 Shore A		65	65	40	38	63	63
Peel Adhesion (Modified ASTM-D3330)							
Non-linered side -	oz/in	55	55	55	65	55	55
Stainless Steel	(N/100mm)	(60)	(60)	(60)	(71)	(60)	(60)
Non-linered side -	oz/in	65	65	58	65	65	65
Composite Sleeve	(N/100mm)	(71)	(71)	(63)	(71)	(71)	(71)
Non-linered side -	oz/in	60	60	55	65	60	60
Polyester	(N/100mm)	(66)	(66)	(60)	(71)	(66)	(66)
Non-linered side -	oz/in	80	80	70	80	80	80
Urethane - A	(N/100mm)	(88)	(88)	(77)	(88)	(88)	(88)
Non-linered side -	oz/in	65	65	50	55	65	65
Urethane - B	(N/100mm)	(71)	(71)	(55)	(60)	(71)	(71)
Peel Adhesion (Modified AS	TM-D3330)						
Linered side -	oz/in	70	70	45	35	70	70
Photopolymer	(N/100mm)	(77)	(77)	(50)	(38)	(77)	(77)
Solvent Resistance							
Water		Excellent	Excellent	Excellent	Excellent	Excellent	Excellent
Alkanes		Excellent	Excellent	Excellent	Excellent	Excellent	Excellent
Alcohols		Good	Good	Good	Good	Good	Good
Acetates Heat Resistance	°F	Fair 120	Fair 120	Fair 120	Fair 120	Fair 120	Fair 120
rical Nesislance	(°C)	(49)	(49)	(49)	(49)	(49)	(49)

$\mathbf{3M}^{\scriptscriptstyle\mathsf{TM}} \ \mathbf{Cushion\text{-}Mount}^{\scriptscriptstyle\mathsf{TM}} \ \mathbf{Plus} \ \mathbf{Plate} \ \mathbf{Mounting} \ \mathbf{Tapes} \ \mathbf{with} \ \mathbf{Easy} \ \mathbf{Mount} \ \mathbf{Adhesive} \ \mathbf{High} \ \mathbf{Plateside} \ \mathbf{Adhesion}$

E1815H • E1820H • E1715H • E1720H • E1515H • E1520H • E1015H • E1020H • E1040H • E1060H

E1315H • E1320H • E1915H • E1920H • E1920HS • E1215H • E1220H • E1115H • E1120H

		3M™ Cushion-Mount™ Plus Light Medium Combination Plate Mounting Tapes		3M [™] Cushion-Mount [™] Plus Light Medium Combination Plate Mounting Tape		3M [™] Cushion-Mount [™] Plus Light Combination Plate Mounting Tapes	
Product		E1915H	E1920H	E1915HS	E1920HS	E1215H	E1220H
Adhesive		Differential Acrylate		Differentia	al Acrylate	Differential Acrylate	
Polyethylene Carrier		Light Medium Pink Foam		Light Medium Pink Foam		Light Orange	
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		Combination of solids and tone reproduction where process printing is important	
Application Thickness	in (mm)	0.015 (0.381)	0.020 (0.508)	0.015 (0.381)	0.020 (0.508)	0.015 (0.381)	0.020 (0.508)
Thickness	,	(1.1.1)	(====)	(===,	(3.3.3.)	(3.3.3.)	(2.2.2.)
Таре	in (mm)	0.017 (0.432)	0.022 (0.559)	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)	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)	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)	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/ft³ (kg/m³)	26 (416)	26 (416)	26 (416)	26 (416)	25 (400)	25 (400)
Compression Deflection							
10% Compression	lb/in² (kPa)	10 (70)	10 (70)	10 (70)	10 (70)	8 (56)	8 (56)
25% Compression	lb/in² (kPa)	20 (138)	20 (138)	20 (138)	20 (138)	17 (104)	17 (104)
Durometer ASTM-D2240 Shore A		60	60	60	60	58	58
Peel Adhesion (Modified AS	TM-D3330)						
Non-linered side - Stainless Steel	oz/in (N/100mm)	30 (33)	30 (33)	55 (60)	55 (60)	35 (38)	35 (38)
Non-linered side - Composite Sleeve	oz/in (N/100mm)	28 (31)	28 (31)	65 (71)	65 (71)	34 (38)	34 (38)
Non-linered side - Polyester	oz/in (N/100mm)	35 (39)	35 (39)	50 (55)	50 (55)	44 (49)	44 (49)
Non-linered side - Urethane - A	oz/in (N/100mm)	45 (50)	45 (50)	75 (82)	75 (82)	65 (71)	65 (71)
Non-linered side -	oz/in	35	35	70	70	44	44
Urethane - B	(N/100mm)	(39)	(39)	(77)	(77)	(49)	(49)
Peel Adhesion (Modified AS Linered side -	oz/in	70	70	70	70	70	70
Photopolymer Solvent Resistance	(N/100mm)	(77)	(77)	(77)	(77)	(77)	(77)
Water		Excellent	Excellent	Excellent	Excellent	Excellent	Excellent
Alkanes		Excellent	Excellent	Excellent	Excellent	Excellent	Excellent
Alcohols Acetates		Good Fair	Good	Good	Good Fair	Good Fair	Good Fair
Heat Resistance	°F	120	Fair 120	Fair 120	120	120	120
	(°C)	(49)	(49)	(49)	(49)	(49)	(49)

3M[™] Cushion-Mount[™] Plus Plate Mounting Tapes with Easy Mount Adhesive High Plateside Adhesion E1815H • E1820H • E1715H • E1720H • E1515H • E1520H • E1015H • E1020H • E1040H • E1060H E1315H • E1320H • E1915H • E1920H • E1920HS • E1215H • E1220H • E1115H • E1120H

	3M™ Cushion-Mount™ Plus Process			
	Plate Mounting Tapes			
Product		E1115H	E1120H	
Adhesive	Differential Acrylate			
Polyethylene Carrier	Soft Tan Foam			
Type of Printing	Tone reproduction where where process printing is important			
Application Thickness	in (mm)	0.015 (0.381)	0.020 (0.508)	
Thickness				
Tape	in	0.017	0.022	
	(mm)	(0.432)	(0.559)	
Film Liner	in (mm)	0.0045 (0.114)	0.0045 (0.114)	
Lot to Lot Tolerance	in (mm)	±0.0015 (±0.038)	±0.0015 (±0.038)	
Typical Application Area	in	±0.0004	±0.0004	
Caliper Variation	(mm)	(±0.010)	(±0.010)	
Roll Length	yd (m)	25 (22.9)	25 (22.9)	
Maximum Width	in (mm)	54 (1371.6)	54 (1371.6)	
Minimum Width	in (mm)	2 (50.8)	2 (50.8)	
Slitting Tolerance	in (mm)	±1/32 (±0.794)	±1/32 (±0.794)	
Density	lb/ft³ (kg/m³)	24 (384)	24 (384)	
Compression Deflection	, , ,	, ,	,	
10% Compression	lb/in²	5	5	
	(kPa)	(35)	(35)	
25% Compression	lb/in² (kPa)	10 (70)	10 (70)	
Durometer ASTM-D2240 Shore A	,	55	55	
Peel Adhesion (Modified AS	TM-D3330)			
Non-linered side -	oz/in	30	30	
Stainless Steel	(N/100mm)	(33)	(33)	
Non-linered side - Composite Sleeve	oz/in (N/100mm)	28 (31)	28 (31)	
Non-linered side - Polyester	oz/in (N/100mm)	35 (39)	35 (39)	
Non-linered side - Urethane - A	oz/in (N/100mm)	50 (55)	50 (55)	
Non-linered side -	oz/in	35	35	
Urethane - B Peel Adhesion (Modified AS	(N/100mm) TM-D3330)	(39)	(39)	
Linered side -	oz/in	70	70	
Photopolymer Solvent Resistance	(N/100mm)	(77)	(77)	
Water		Excellent	Excellent	
Alkanes		Excellent	Excellent	
Alcohols		Good	Good	
Acetates		Fair	Fair	
Heat Resistance	°F	120	120	
	(°C)	(49)	(49)	

3M™ Cushion-Mount™ Plus Plate Mounting Tapes with Easy Mount Adhesive High Plateside Adhesion

E1815H • E1820H • E1715H • E1720H • E1515H • E1520H • E1015H • E1020H • E1040H • E1060H

E1315H • E1320H • E1915H • E1920H • E1920HS • E1215H • E1220H • E1115H • E1120H

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 all products, except $3M^{TM}$ Cushion-MountTM Plus Plate Mounting Tapes with Easy Mount Adhesive High Plateside Adhesion E1040H and E1060H, within two years from date of manufacture. For Cushion-Mount Tapes E1040H and E1060H use within one year from date of manufacture.

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.

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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Industrial Adhesives and Tapes Division

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