3M Science. Applied to Life.™

Productivity and performance throughout printing plants, web and paper processing facilities.

3M Solutions for Web Processing

Solutions to keep the work flowing and your customers coming back.

When you need to splice webs, reduce plate damage or improve print quality, you can rely on 3M to provide you with the right solutions.

Having the right products makes all the difference. 3M can help you maximize your plant's potential by offering reliable products such as air-release tapes that provide clean and easy removal of printing plates, splicing tapes for improved productivity and efficiencies, and web handling systems that can increase or decrease the level of traction.

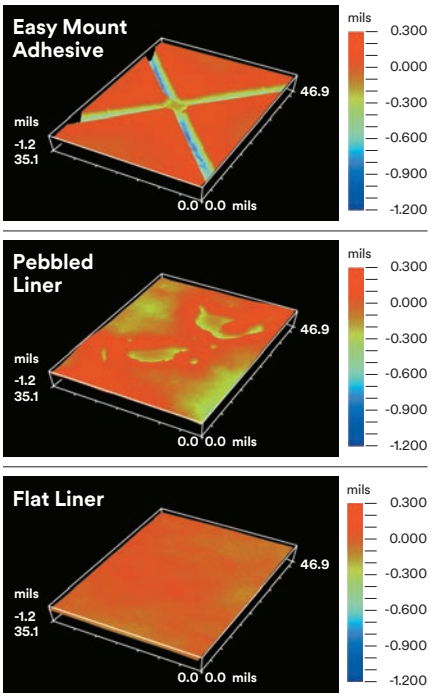
Plus, a line of products that can help keep the rest of your plant running smoothly, like lane marking tapes to show the way, case sealers that ease bottleneck and high to low temperature threadlockers.

Wide choice of adhesives, foams and thickness for the results your customers demand.

For halftone work where dot gain is a concern, a softer tape optimizes reproduction. When solids and dots share the plate, a combination tape can properly balance the result. When your customer requires solid ink and crisp lines, you'll want a firm, high density mounting tape.

From the wide 3M selection, you can find the adhesives, foams, and thickness for the print quality that customers demand and expect. You'll also find choices to meet your handling requirements for:

- Mounting ease and positioning accuracy
- Easy, clean removal from plate and cylinder



Microscopic view of adhesive surface measured with interferometer.

3M Air Release Flexographic Plate Mounting Tapes

On easy with reduced air entrapment. Unlike flat or pebbled liners, E-Series liners are crosshatched. This imprints unique micro-channels into the adhesive that allows air to flow throughout. Air bubbles disappear from between the tape and plate, and between the tape and cylinder or sleeve for virtually bubble-free mounting. Setup is faster with smoother surfaces for cleaner print quality and higher productivity.

Stays on with reduced edge-lifting. Exclusive 3M plate-side adhesive maintains tight contact. Saves the prep time, downtime and labor of sealing plate edges.

Bubble-free print quality. Prevent blemishes in screen and process printing. Help assure proper registration.

E-Series Tapes with easy mount adhesive

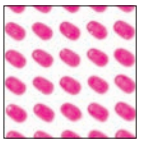
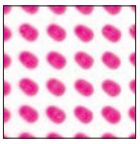
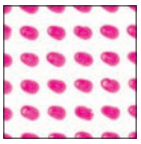
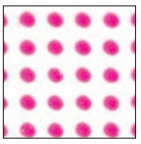
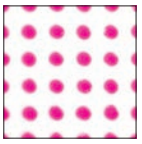
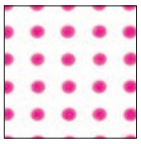
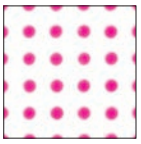
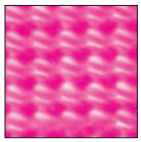
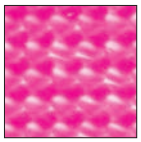
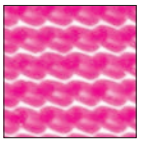
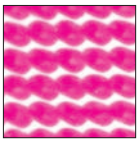
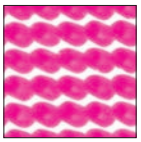
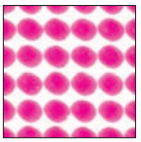
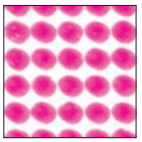
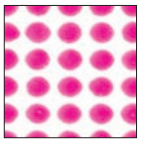
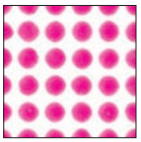
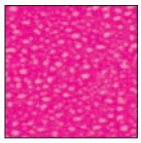
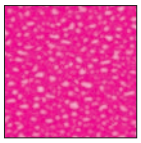
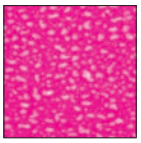
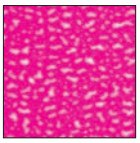
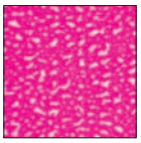
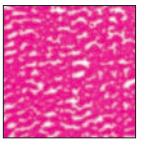
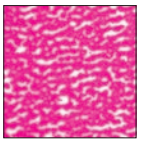
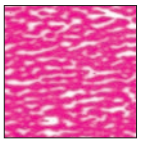
Introduced the world to the features of 3M air release tapes. Peels off so easily you can virtually eliminate plate back treatment. You're less likely to damage plates, so you save time, labor and money.

L-Series Tapes with less removal force

3M L-Series combine the air-release feature with a unique adhesive technology. They are designed to provide easy and clean removal of printing plates across a wide range of printing applications with excellent resistance to plate lifting.

EH-Series Tapes to hold the edge on small diameter cylinders

3M EH-Series utilizes the air-release feature with higher plate side adhesion to resist edge lifting on cylinder diameters as small as 2 inches.

	Solid Printing	Combination Printing							Process Printing
	400-Series Tapes: Solid	18-Series: Firm	17-Series: Medium Firm	15-Series: Medium	10-Series: Standard	13-Series: Medium Soft	19-Series: Light Medium	12-Series: Light	11-Series: Process
10% Highlight									
40% Midtone									
Reverse									
100% Solid									
	Uniform coverage of solids when halftone dot reproduction is not critical.	When plate contains mostly solids in a combination of solid and halftone images.	When plate contains slightly more solids in a combination of solid and halftone images.	For high speed printing with fine type reverses and expanded color gamut.	When solid and halftone areas are equally important.	For high speed printing of combination work when halftone areas exceed solid.	Improved tone reproduction at high speed when process and halftone images predominate.	Low density maximizes dot reproduction for high speed process and screen printing.	Low density maximizes dot reproduction for high quality process work and screen printing.
	411 **411DL** **412** **412DL** **447** **447DL**	**E1815** **E1815H** **L1815** **E1820** **E1820H** **L1820** **E1840** **E1840H** **E1860** **E1860H**	**E1715** **E1715H** **L1715** **E1720** **E1720H** **1720M** **L1720**	**E1515** **E1515H** **L1515** **E1520** **E1520H** **L1520**	**E1015** **E1015H** **1015** **L1015** **E1020** **E1020H** **1020** **1020R** **L1020** **E1040** **E1040H** **1040** **E1060** **E1060H** **1060**	**E1315** **E1315H** **L1315** **E1320** **E1320H** **L1320**	**E1915** **E1915H** **E1915S** **E1915HS** **L1915** **L1915S** **E1920** **E1920H** **E1920S** **E1920HS** **L1920** **L1920S**	**E1215** **E1215H** **L1215** **E1220** **E1220H** **L1220**	**E1115** **E1115H** **1115** **L1115** **E1120** **E1120H** **1120** **L1120**

DL – Double Liner
E – Air Release, Standard Plate Side Adhesion
EH – Air Release, High Plate Side Adhesion
L – Air Release, Less Removal Force and Plate Damage
M – Modified Plate Side Adhesion
R – For Rubber Plates
S – High Adhesion on Cylinder/Sleeve Side

Note: Additional calipers available for specialized needs.

3M™ Flexographic Plate Mounting Systems Selection Guide

	Product Number	Application Thickness Inches (mm)	Manufactured Target Thickness Inches (mm)	Description	Plates	Cylinders	Color	Features
3M™ Solid Printing Tapes	**400-Series — 3M™ Flexomount™ Solid Plate Mounting Tapes**							
	411DL, 411	0.015 (0.38)	0.015 (0.38)	Gray double coated tape with a soft rubber adhesive on each side of a vinyl carrier. Available in single and double liner.	P/R	SS/SL	Gray	Gray vinyl tapes with high adhesion. Helps reduce edge lifting. Helps minimize pin holing on solid work.
	412DL, 412	0.020 (0.51)	0.020 (0.51)		P/R	SS/SL	Gray	
	447DL, 447	0.010 (0.25)	0.010 (0.25)		P/R	SS/SL	Gray	
3M™ Combination Printing Tapes	**18-Series — 3M™ Cushion-Mount™ Plus Firm Combination Plate Mounting Tapes**							
	E1815H, E1815, L1815	0.015 (0.38)	0.017 (0.43)	Differential acrylate adhesive system on each side of a foam carrier, protected by a release liner on one side.	P	SS/SL	Blue	Better solid ink density than the standard combination printing tapes. Clean removal from plate and print cylinder.
	E1820H, E1820, L1820	0.020 (0.51)	0.022 (0.56)		P	SS/SL	Blue	
	E1840, E1840H	0.040 (1.02)	0.042 (1.07)		P	SS/SL	Blue	
	E1860, E1860H	0.060 (1.52)	0.062 (1.57)		P	SS/SL	Blue	
	17-Series — 3M™ Cushion-Mount™ Plus Medium Firm Combination Plate Mounting Tapes							
	E1715H, E1715, L1715	0.015 (0.38)	0.017 (0.43)	Differential acrylate adhesive system on each side of a foam carrier, protected by a release liner on one side.	P	SS/SL	Teal	Quality results when plate contains slightly more solids in a combination of solid and halftone images.
	E1720H, E1720, 1720M, L1720	0.020 (0.51)	0.022 (0.56)		P	SS/SL	Teal	
	15-Series — 3M™ Cushion-Mount™ Plus Medium Combination Plate Mounting Tapes							
	E1515, E1515H, L1515	0.015 (0.38)	0.017 (0.43)	Differential acrylate adhesive system on each side of a foam carrier, protected by a release liner on one side.	P	SS/SL	Purple	High quality, medium combination print. Adhesive removes cleanly from the print plate and the print cylinder.
	E1520, E1520H, L1520	0.020 (0.51)	0.022 (0.56)		P	SS/SL	Purple	
	10-Series — 3M™ Cushion-Mount™ Plus Standard Combination Plate Mounting Tapes							
	E1015H, E1015, 1015, L1015	0.015 (0.38)	0.017 (0.43)	Differential acrylate adhesive system on each side of a foam carrier, protected by a release liner on one side.	P	SS/SL	White	Most versatile 3M™ Cushion-Mount™ Plus Tapes. Effectively prints most types of flexographic printing.
	E1015-15H, E1015-15, 1015-15	0.015 (0.38)	0.015 (0.38)		P	SS/SL	White	
	E1020H, E1020, 1020, L1020	0.020 (0.51)	0.022 (0.56)		P	SS/SL	White	
	1020R	0.020 (0.51)	0.022 (0.56)		P/R	SS/SL	White	
	E1020-20H, E1020-20, 1020-20	0.020 (0.51)	0.020 (0.51)		P	SS/SL	White	
	E1040H, E1040, 1040	0.040 (1.02)	0.042 (1.07)		P	SS/SL	White	
	E1060H, E1060, 1060	0.060 (1.52)	0.062 (1.57)		P	SS/SL	White	

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L – Air Release, Less Removal Force and Plate Damage
M – Modified Plate Side Adhesion
P – Photopolymer Plates
R – For Rubber Plates
S – High Adhesion on Cylinder/Sleeve Side
SL – Sleeve
SS – Stainless Steel Cylinder

Note: The technical information and data should be considered representative or typical only and should not be used for specification purposes.

3M™ Flexographic Plate Mounting Systems Selection Guide *(cont.)*

	Product Number	Application Thickness Inches (mm)	Manufactured Target Thickness Inches (mm)	Description	Plates	Cylinders	Color	Features
3M™ Combination Printing Tapes *(cont.)*	**13-Series — 3M™ Cushion-Mount™ Plus Medium Soft Combination Plate Mounting Tapes**							
	E1315H, E1315, L1315	0.015 (0.38)	0.017 (0.43)	Differential acrylate adhesive system on each side of a foam carrier, protected by a release liner on one side.	P	SS/SL	Yellow	High quality, medium-soft combination print. Adhesive removes cleanly from the print plate and the print cylinder.
	E1320H, E1320, L1320	0.020 (0.51)	0.022 (0.56)		P	SS/SL	Yellow	
	19-Series — 3M™ Cushion-Mount™ Plus Light Medium Combination Plate Mounting Tapes							
	E1915, E1915H, L1915	0.015 (0.38)	0.017 (0.43)	Differential acrylate adhesive system on each side of a foam carrier, protected by a release liner on one side.	P	SS/SL	Pink	Soft support improves tone reduction when process and halftone images predominate.
	E1915HS, E1915S, L1915S	0.015 (0.38)	0.017 (0.43)		P	SL	Pink	
	E1920H, E1920, L1920	0.020 (0.51)	0.022 (0.56)		P	SS/SL	Pink	
	E1920S, E1920HS, L1920S	0.020 (0.51)	0.022 (0.56)		P	SL	Pink	
	12-Series — 3M™ Cushion-Mount™ Plus Light Combination Plate Mounting Tapes							
	E1215H, E1215, L1215	0.015 (0.38)	0.017 (0.43)	Differential acrylate adhesive system on each side of a foam carrier, protected by a release liner on one side.	P	SS/SL	Orange	High quality, light combination print. Adhesive removes cleanly from the print plate and the print cylinder. Air release on both adhesive surfaces.
	E1220H, E1220, L1220	0.020 (0.51)	0.022 (0.56)		P	SS/SL	Orange	
3M™ Process Printing Tapes	**11-Series — 3M™ Cushion-Mount™ Plus Process Plate Mounting Tapes**							
	E1115H, E1115, 1115, L1115	0.015 (0.38)	0.017 (0.43)	Differential acrylate adhesive system on each side of a foam carrier, protected by a release liner on one side.	P	SS/SL	Tan	Better tone reproduction than the standard combination printing tapes. Clean removal from plate and print cylinder.
	E1115-15H, E1115-15, 1115-15	0.015 (0.38)	0.015 (0.38)		P	SS/SL	Tan	
	E1120H, E1120, 1120, L1120	0.020 (0.51)	0.022 (0.56)		P	SS/SL	Tan	
	E1120-20H, E1120-20, 1120-20	0.020 (0.51)	0.020 (0.51)		P	SS/SL	Tan	

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SS – Stainless Steel Cylinder

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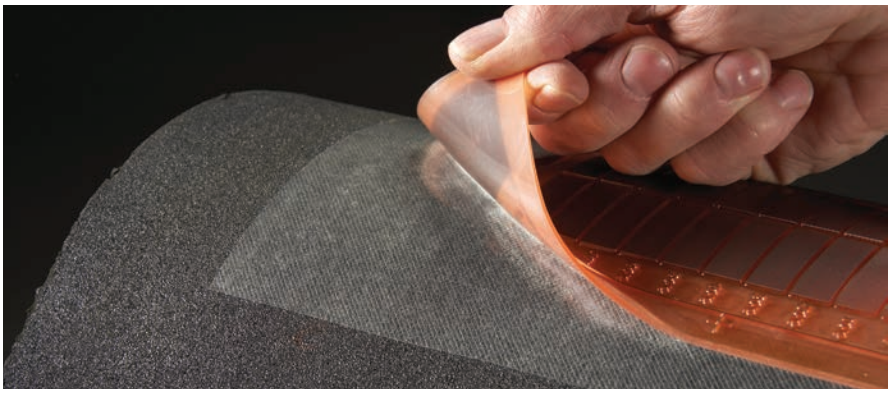
Thin Tapes

Thin Tapes for Compressible Sleeves

When cushioning is unnecessary, this tape can be mounted on compressible sleeves.



3M™ This Flexographic Plate Mounting Tape E2105 is a double coated film tape constructed of a polyester film carrier with differential adhesives specifically designed for mounting flexographic print plates to cushioned/compressible sleeves.

Product Number	Tape Thickness Mils (mm)	Description	Compressible Sleeves	Features
E2105	5.0 (0.13)	Double coated film tape with differential acrylic adhesive on a polyester film carrier.	■	Specifically designed for mounting flexographic print plates to cushioned/compressible sleeves. Both adhesives are designed to provide high holding power and to cleanly remove from both the plate and the sleeve.

All tapes listed on this chart have been used successfully on non-compressible sleeves.

Thin Tapes for Corrugated

When cushioning is unnecessary, these tapes can mount both rubber and photopolymer plates.

Designed specifically for flexographic printing on corrugated board, 3M™ Thin Flexographic Mounting Tape 2205 is a 5-mil double-coated polyester film tape with cross-hatched adhesive. The cross hatching reduces air entrapment, saving time and improving print quality.

Product Number	Tape Thickness Mils (mm)	Description	Corrugated	Rotary Letterpress	Make Ready	Features
415	4.0 (0.10)	Double coated tape with a medium-firm acrylic adhesive on each side of a polyester carrier.	■	■		Good adhesion to a wide range of surfaces. Can be used for Cameron Press applications, splice papers, films and foils.
927	2.0 (0.05)	Acrylic adhesive transfer tape.	■		■	Corrugated plate mounting applications where repositionability and removability are not required.
950	5.0 (0.13)	Acrylic adhesive transfer tape.	■			
2205	5.0 (0.13)	Double coated film tape with differential acrylic adhesive on a polyester film carrier.	■			Adhesives designed specifically for corrugated flexo mounting. Removes cleanly and easy to reposition.

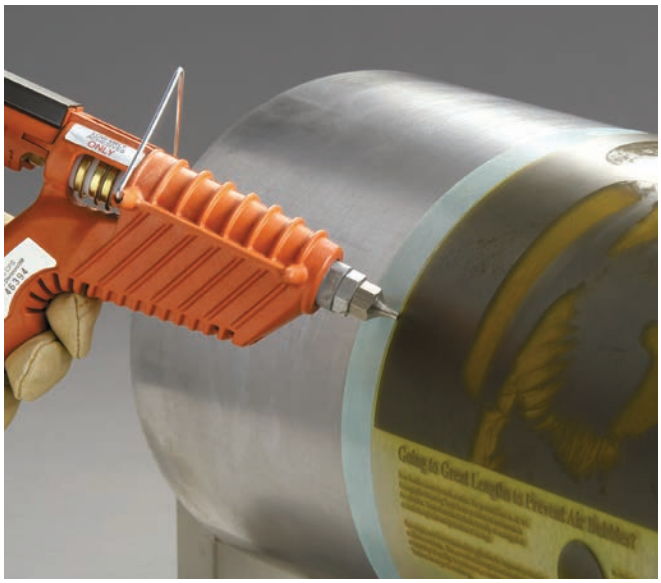
All tapes listed on this chart have been used successfully on non-compressible sleeves.

Note: The technical information and data should be considered representative or typical only and should not be used for specification purposes.

Plate Edge Sealing

3M™ Hot Melt Bonding Systems

Easily apply 3M™ Hot Melt Adhesives 3762LM, 3776LM, 3792LM or 3798LM with a 3M™ Hot Melt Applicator LT to seal plate edges against ink and solvent penetration that can cause edge lifting.



3M™ Hot Melt Applicator	Weight	Output (lb/hr)	Temperature	Adhesive Size (dia. x length)	Accessories (keyed below)
LT	10.0 oz.	2.6	265°F (129°C)	5/8" x 2" TC	1 2 3 4
LT with Quadrack™ Converter	13.8 oz.	2.6	265°F (129°C)	5/8" x 8" Q	1 4

Tip No.	Description
9913	2-hole Spreader (1/4" hole span)
9916	3-hole Spreader
9921	.090" Fluted Tip
9922	.063" Fluted Tip
9940	.125" Fluted Tip
9725	.072" Mini Extension Tip
9785	.070" Tapered Aluminum Extension

A general purpose tip (9921) is supplied with each 3M™ Hot Melt Applicator. Optional tips are available to increase productivity.

Increase loading capacity and ease of operation with Quadrack™ Converter and Palm Trigger.

Heavy-Duty Benchstand provides added convenience.

3M™ Hot Melt Adhesives

Product Number	Color	Features	Size	Delivery Time for 1" x 3" Cartridge	Heat Resistance	Peel Strength PIW 72°F (22°C)	Shear Strength PSI 72°F (22°C)	Open Time 1/8" Bead
Low Melt Technology: Applied 250–270°F (127–132°C)								
3762LM*	Lt. Amber	Economical, fast setting, general purpose	5/8" x 8" Q 5/8" x 2" TC	45 sec.	130°F (54°C)	6	480	25 sec.
3776LM	Tan	Bonds variety of materials	5/8" x 8" Q	47 sec.	140°F (60°C)	9	600	40 sec.
3792LM*	Clear	Clear, multi-purpose	5/8" x 8" Q 5/8" x 2" TC	57 sec.	140°F (60°C)	13	350	40 sec.
3798LM*	Clear	Removable "gummy glue" adhesive	5/8" x 2" TC	N/A	120°F (49°C)	N/A	N/A	30 sec.

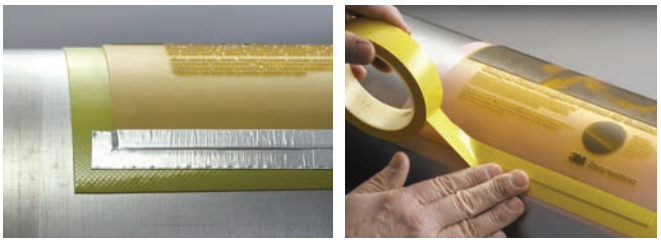
*Also available in bulk.

Note: The technical information and data should be considered representative or typical only and should not be used for specification purposes.

Plate Edge Sealing *(cont.)*

Multiple options with 3M™ Single Coated Tapes

3M™ Aluminum Foil Tape 425, 3M™ Vinyl Tape 471 or 3M™ Polyester Film Tape 850 are pressure sensitive adhesive tapes that bond on contact to seal plate edges against ink and solvent penetration that can cause edge lifting.



To seal plate edges against ink and solvent penetration that can weaken mounting tape strength, 3M™ Aluminum Foil Tape 425 (left) and 3M™ Vinyl Tape 471 (right) apply easily, bonding on contact and conforming over the plate edge.

Product Number	Color	Tape Structure (Backing/Adhesive)	Backing Thickness Mils (mm)	Total Thickness Mils (mm)	Adhesion to Steel oz./in. (N/100mm)	Tensile Strength lbs./in. (N/100mm)	Elongation at Break (%)	Temperature Range	Features
Premium Performance Aluminum Foil Tape									
425*	Silver	Aluminum/Acrylic	2.8 (0.07)	4.6 (0.12)	47 (51)	30 (525)	8	-65 to 300°F (-54 to 149°C)	Most versatile aluminum tape.
Premium Performance Vinyl Tape									
471	Various	Vinyl/Rubber	4.1 (0.10)	5.2 (0.13)	23 (25)	16 (280)	130	40 to 170°F (4 to 77°C)	Conformable and clean removal. Black, Blue, Brown, Green, Orange, Purple, Red, Transparent, White, Yellow.
General Industrial Tapes									
850	Transparent	Polyester/Acrylic	0.9 (0.02)	1.9 (0.05)	30 (33)	28 (491)	120	-60 to 300°F (-50 to 150°C)	Splicing, holding, sealing, highly transparent.
850	White, Red, Black	Polyester/Acrylic	0.9 (0.02)	1.9 (0.05)	30 (33)	28 (491)	120	-60 to 300°F (-50 to 150°C)	Splicing, holding, decorating, color-coding, sealing.
850	Silver	Metallic Polyester/Acrylic	0.9 (0.02)	1.9 (0.05)	42 (46)	28 (491)	120	-60 to 300°F (-50 to 150°C)	Splicing, holding, decorating, color-coding, sealing.

*Can be qualified to L-T-80B, MIL-T-23397B II; Meets U.L., Class L File R 7311; F.A.R.25.853 (a); Meets U.L.746C File E122798.

Other Mounting Essentials

3M™ Cylinder Mount Build-Up Tape 1640
For use with any 3M flexographic tape to add 0.040" thickness. Facilitates use of thinner tapes.

Scotch® Magic™ Tape 810
Secures proofing paper to a proofer/mounter with good adhesion but simple removal from the proofing cylinder.

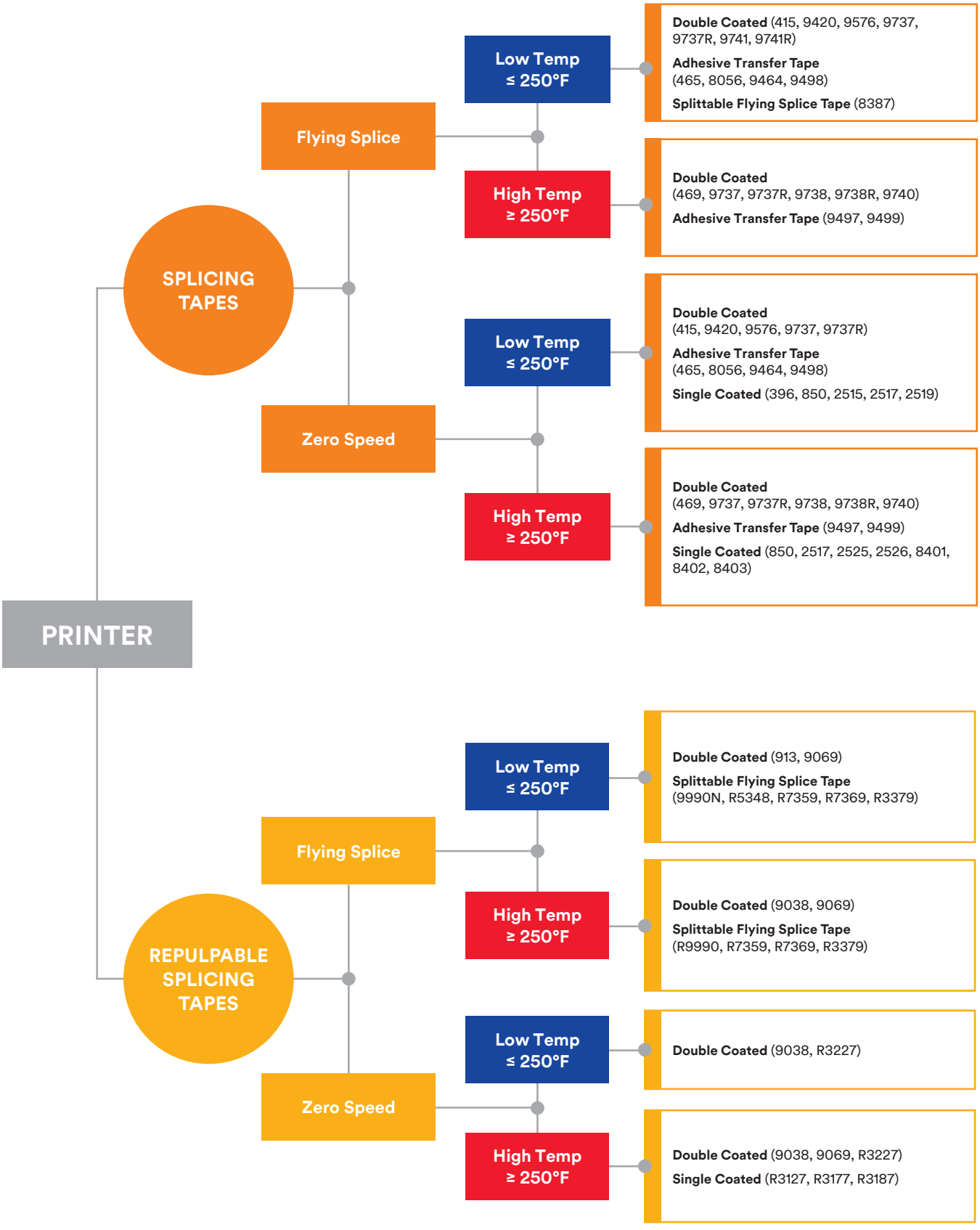
3M™ Primer 94
Helps hold the leading and trailing edges of the plate to prevent edge lifting.

3M™ Adhesion Promoter AP-86A
Helps increase the bond between photopolymer plates and flexographic plate mounting tapes to prevent edge lifting.

3M™ Hand Roller 903
For virtually air-free mounting, helps speed up the plate mounting process.

Note: The technical information and data should be considered representative or typical only and should not be used for specification purposes.

3M™ Splicing Tapes Selection Guide



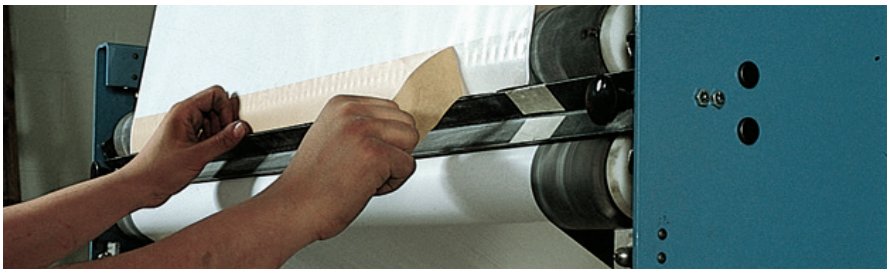
Temperature ratings are dependent on oven time, web tension, web speed and substrate thickness. See data page for exact temperature rating.

3M™ Splicing Tapes

Adhesive transfer and double coated tapes for reliable overlap splices

3M™ Adhesive Transfer Tapes
For an overlap splice, simply press the adhesive side of the tape to one of the surfaces to be spliced. Peel off the liner and you have a neat strip of adhesive for immediate bonding. Select from a range of adhesive properties.

3M™ Double Coated Tapes
Adhesive is on both sides of a carrier that increases dimensional stability of the adhesive for easy handling and application in making overlap splices.



High tack 3M™ Adhesive Transfer Tape 465 grabs fast for flying and zero speed splices, resists up to 250°F for 20 seconds.

With high tack and good shear strength, 3M™ Double Coated Tape 9420 splices plastic film quickly and securely. Red carrier identifies the splice for later removal.

3M™ Splicing Tapes

(All tapes in this chart can be considered for zero speed or flying splices)

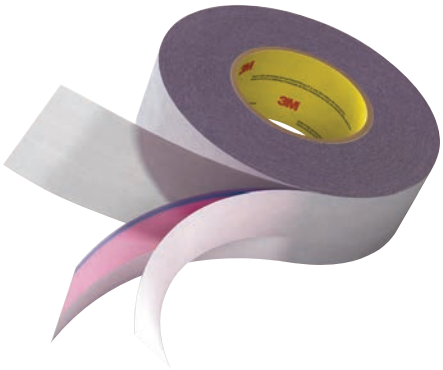
Product Number	Product Description	Tape Thickness mils (mm) without liner	Carrier		Color	Adhesion oz/in (N/25 mm)	Heat Resistance* (Short-term) °F (°C)	Go-To Application	
			Thickness mils (mm)	Type				Zero Speed	Flying Splice
Based on ASTM Test Method		D-3652	D-3652			D-3330			
Adhesive Transfer Tape									
465	High tack, excellent adhesion to most paper stocks, flexible to -60°F	2.0 (0.05)	—	None	Clear	25 (6.8)	250 (121)		
9498/9464	Low temperature splicing	2.0 (0.05)	—	None	Clear/ Red	20 (6.0)	250 (121)	■	
9499/9497	High temperature splicing	2.0 (0.05)	—	None	Clear/ Red	45 (12.5)	350 (177)	■	
Double Coated Tapes									
415/9420	High tack adhesion to paper and many other surfaces	4.0 (0.10)	0.5 (0.01)	Polyester	Clear/ Red	25 (6.8)	180 (82)		
469	High temperature, high tack	5.5 (0.14)	1.0 (0.02)	Tissue	Red	60 (16.7)	350 (177)		■
9086	Easy tearing, easy handling, thick high tack adhesive, very conformable	7.5 (0.19)	1.5 (0.03)	Non-Woven Tissue	Clear	146 (40.0)	250 (121)		
9088	High temperature resistance, high tack and shear strength	8.3 (0.20)	0.5 (0.01)	Polyester	Clear	137 (37.5)	300 (150)		
9576	Medium tack for general splicing and roll closing	4.0 (0.10)	1.0 (0.02)	Polypropylene	Red/ Black	30 (13.5)	165 (75)		
9737/9737R	Thin PET carrier, aggressive and versatile tape for many surfaces	3.5 (0.09)	0.5 (0.01)	Polyester	Clear/ Red	60 (16.7)	300 (150)	■	■
9738/9738R	Non-woven tissue carrier, aggressive and versatile tape for many surfaces	4.3 (0.11)	1.3 (0.03)	Non-Woven Tissue	Clear/ Red	60 (16.7)	300 (150)	■	■
9740	High performance over a wide range of temperatures,high peel, tack, and shear properties, performance grade splicing for corrugators	3.5 (0.09)	0.5 (0.01)	Polyester	Clear	70 (21.2)	425 (218)		■
9741/9741R	Thick tape adheres to a wide variety of substrates,super aggressive for low surface energy substrates	6.5 (0.17)	0.5 (0.01)	Polyester	Clear/ Red	120 (34.0)	200 (93)		

*As tested in laboratory. Results may vary depending on machine and web tensions, nature of paper surface, application pressure, etc. which are outside of 3M's control.

Note: The technical information and data should be considered representative or typical only and should not be used for specification purposes.

3M™ Splicing Tapes *(cont.)*

3M™ Splittable Flying Splice Tape 8387



Maximize speed. Keep your presses running at higher speeds so you can get the best from your press with consistent results.

Optimize surface adhesion. Splice even the most challenging substrates, such as: polyethylene, biaxially oriented polypropylene, cast polypropylene, polyester and aluminum foil.

Minimize contamination. Save cleanup time and money by reducing tab debris and fiber contamination on your central impression (CI) drum and rollers, as well as eliminating the hazards of using glue.

Product Number	Adhesive	Backing	Liner	Color	Tape Thickness Mils (mm)	Liner Thickness Mils (mm)	Post — Split Tape Thickness Mils (mm)
8387	Differential Adhesive	Film	Easy-release coated paper	Splicing Side: Pink Tabbing Side: Black	7.0 (0.19) without liner	3.0 (0.09)	Splicing: 4.0 (0.10) Tabbing: 3.0 (0.09)

3M™ Polyester Tapes

These high strength single-coated tapes provide thin caliper with some of the highest tensile strengths available for overlap and butt splices.

For marking splice location, 3M™ Polyester Tape 850 is available in red, black, white and silver. Transparent is also available to blend with the web stock. Pressure sensitive acrylic adhesive grabs on contact and holds butt splices securely. High tensile strength backing resists web handling stresses.

Product Number	Color	Adhesive Type	Backing Material	Backing Thickness mils (mm)	Total Thickness mils (mm)	Adhesion to Steel oz/in (N/100 mm)	Tensile Strength lb/in (N/100 mm)	Elongation at Break %	Temperature Range °F (°C)	Comments
Based on ASTM Test Method:				**D-3652**	**D-3652**	**D-3330**	**D-3759**	**D-3759**		
General Industrial Tapes										
850	Various	Acrylic	Polyester	0.9 (0.02)	1.9 (0.05)	30 (33)	28 (491)	120	-60 to 300 (-50 to 150)	Splicing, holding, sealing. Transparent, Red, Black, White.
High Temperature Masking and Liner Splicing Tapes										
8401	Translucent Cream	Silicone/ Rubber Blend	Polyester	1.0 (0.03)	1.9 (0.05)	22 (24)	34 (595)	100	-60 to 300 (-50 to 150)	Splicing many release coated paper.
8402	Translucent Green	Silicone	Polyester	0.9 (0.02)	1.9 (0.05)	24 (26)	25 (438)	100	-60 to 425 (-50 to 218)	Adheres well to silicone.
8403/ 8403L	Translucent Green	Silicone	Polyester	1.4 (0.04)	2.4 (0.06)	27 (29)	46 (806)	150	-60 to 425 (-50 to 218)	Adheres well to silicone. 8403L is linered version.
8991/ 8991L	Blue	Silicone	Polyester	1.0 (0.03)	2.4 (0.06)	31 (34)	29 (508)	100	-60 to 400 (-50 to 204)	Economical, thin tape. Adheres well to silicone. 8991L is linered version.
8992/ 8992L	Green	Silicone	Polyester	2.0 (0.05)	3.2 (0.08)	44 (48)	57 (998)	148	-60 to 400 (-50 to 204)	Economical tape. Adheres well to silicone. 8992L is linered version.
Reflective Tapes										
850	Silver	Acrylic	Polyester	0.9 (0.02)	1.9 (0.05)	42 (46)	28 (491)	120	-60 to 300 (-50 to 150)	Splicing, holding, sealing, decorating, metal detecting.

Note: The technical information and data should be considered representative or typical only and should not be used for specification purposes.

3M™ Splicing Tapes *(cont.)*

Scotch® Flatback Crepe Tapes

With high strength paper backings, these single-coated tapes provide high machine direction tensile strength yet can be conveniently torn off the roll by hand for application ease.

With a core capability of coating technology, 3M flatback tapes offer a range of backings and adhesive strengths to hold up to your job.

- High strength backings with strong cross direction tensile properties used for tabbing and splicing
- Highly visible backing to help you identify and remove splices

Versatile 3M™ Performance Flatback Tape 2525 provides high visibility for holding many materials, edge banding and splicing.

Scotch® Flatback Tape 2525 is great for applications requiring a unique color.

Scotch® Flatback Tape 2517 is great for low or high temperature splicing.

Product Number	Color	Adhesive Type	Backing Material	Total Thickness mils (mm)	Adhesion to Steel oz/in (N/100 mm)	Tensile Strength lb/in (N/100 mm)	Elongation at Break %	Maximum Operating Temperature °F (°C)**	Time at Maximum Temperature (mins.)	Can be Certified to Specification	Comments
Based on ASTM Test Method:				D-3652	D-3330	D-3759	D-3759				
250	Tan	Rubber	Flatback Paper	6.0 (0.15)	87 (95)	59 (1033)	4	125 (52)	30	ASTM D 6123; D 6123M-97	Used in paint adhesion testing.
253	Tan	Silicone	Treated Flatstock Paper	4.6 (0.12)	49 (54)	60 (1052)	3	150 (66)	—	—	Silicone butt splicing tape.
256	White, Red, Green	Rubber	Flatback Paper	4.8 (0.12)	35 (38)	32 (560)	3	200 (93)	60	ASTM D 6123; D 6123M-97	Printable, accepts marking inks.
346	Tan	Rubber	Flat Paper Stock	16.7 (0.42)	22 (24)	28 (490)	4	100 (38)	—	—	Heavy-duty abrasion, moisture, UV protection.
2515*	Tan	Rubber	Kraft Paper	6.4 (0.16)	54 (59)	40 (700)	9	150 (65)	30	—	General purpose splicing, holding and bundling applications.
2517	Medium Brown	Rubber	Kraft Paper	6.5 (0.16)	78 (85)	35 (543)	2	300 (149)	30	ASTM D 6123; D 6123M-97	Excellent splicing, holding and bundling applications.
2519	Brown	Rubber	Kraft Paper	7.3 (0.19)	45 (49)	45 (790)	9	200 (93)	30	—	Excellent for splicing liner boards, bundling, holding, reinforcing, wrapping and protecting.
2525	Orange	Rubber	Flatback Paper	9.5 (0.24)	69 (75)	49 (858)	2	300 (149)	60	—	Premium splicing, bright color.
2526	White	Rubber	Flatback Paper	9.8 (0.24)	69 (75)	50 (858)	4	300 (149)	30	—	Excellent adhesion and strength for textile applications.

*3M brand.

**2519 Maximum Operating Temperature determined for holding a paper splice at 200°F (93°C) under a force of 2 pounds/linear inch (PLI).

Note: The technical information and data should be considered representative or typical only and should not be used for specification purposes.

3M™ Repulpable Splicing Tapes

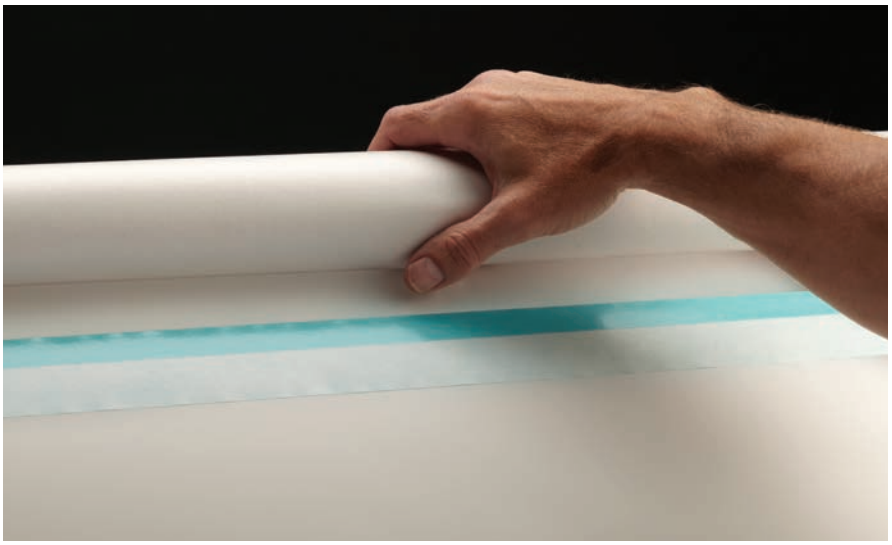
3M™ Repulpable Splicing Tapes for the Printing Industry

From core starting to roll closing/tabbing and all the splices in between, this line of repulpable tapes offers choices for the dependability you need to keep production at full speed.

Splittable Flying Splice Tapes
For flying splice a variety of papers.

Repulpable Single Coated Tapes
For roll closing and tabbing.

Repulpable Double Coated Tapes
For core starting and flying/zero speed splices.



3M™ Splicing Tape 9990N is a splittable flying splice tape with a metalized layer for automatic splice detection. It performs well on a wide range of papers.

Product Number	Color	Comments	Tape Thickness mils (mm) without liner	Tape Structure		Liner		Heat Resistance* °F (°C)	FDA Compliant†
				Backing/ Carrier	Adhesive	Type	Thickness mils (mm)		
Splittable Flying Splice (SFS)									
R5348	Blue	Use with light- to medium-weight papers running through medium-temperature ovens	5.0 (0.11)	Paper	Repulpable	Paper	2.9 (0.07)	350 (180)	—
R7359	Blue	Use with light- to heavy-weight papers running at high speeds and high temperatures	6.6 (0.17)	Paper	Repulpable	Paper	2.9 (0.07)	400 (200)	—
R7369	Blue	Use with light- to heavy-weight paper on wide web rolls to help compensate for roll profile variations running at high speeds and high temperatures	7.4 (0.19)	Paper	Repulpable	Paper	2.9 (0.07)	400 (200)	—
9990N	Blue	Splittable flying splice (SFS) system with metalized layer for auto-sensing splice detection applications	5.5 (0.14)	Aluminized Paper**	Repulpable	Paper	2.2 (.05)	350 (180)	—
Repulpable Single Coated									
R3127	Blue/ White/ Kraft	General purpose, excellent holding power	4.5 (0.11)	Paper	Repulpable	—	None	400 (200)	Yes
R3187		General purpose, strong repulpable backing	7.5 (0.19)	Paper	Repulpable	—	None	400 (200)	Yes
R3177	Blue/ White/ Red	Heavy duty, extensible repulpable backing	7.0 (0.16)	Paper	Repulpable	—	None	400 (200)	Yes
Repulpable Double Coated									
913	Blue	Paster tape for splices at newspaper printers	3.5 (0.09)	Tissue Carrier	Repulpable	Paper	3.2 (0.08)	400 (200)	—
9038	Blue/ White	General purpose plus flying splice tape for commercial printers and corrugators	3.5 (0.09)	Tissue Carrier	Repulpable	Paper	3.2 (0.08)	350 (180)	Yes
9069	Blue	Excellent for newsprint or directory stock	3.5 (0.09)	Tissue Carrier	Repulpable	Paper	3.2 (0.08)	400 (200)	—
R3227	Blue/ White	For zero speed splicing	3.5 (0.09)	Tissue Carrier	Repulpable	Paper	3.2 (0.08)	400 (200)	Yes

*As tested in laboratory. Results may vary depending on machine and web tensions, nature of paper surface, application pressure, etc. which are outside of 3M's control.

**Non-repulpable, screenable aluminized sensor strip.

†All components of the adhesive and backing meet the requirements of indirect food additive regulations as described under 21 CFR 176.170 (Components of paper and paperboard in contact with aqueous and fatty food) and 21 CFR 176.180 (Components of paper and paperboard in contact with dry foods).

Note: The technical information and data should be considered representative or typical only and should not be used for specification purposes.

3M™ PTFE and UHMW-PE Tapes

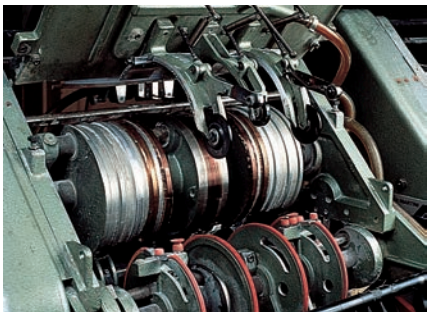
3M™ Slick Surface Tapes — Performance Comparison

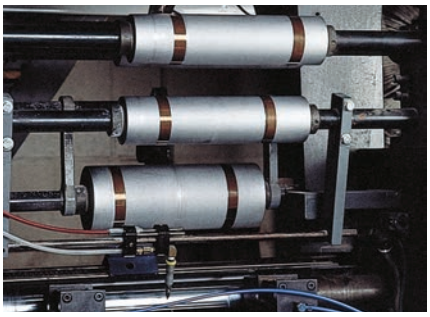
Attribute	Good	Better	Best
Heat Resistance	UHMW-PE Tape	PTFE Film Tape	PTFE Glass Cloth Tape
Wear Life	PTFE Film Tape	PTFE Glass Cloth Tape	UHMW-PE Tape
Conformability	PTFE Glass Cloth Tape	UHMW-PE Tape	PTFE Film Tape
Low Friction Coefficient	UHMW-PE Tape	PTFE Glass Cloth Tape	PTFE Film Tape
Anti-stick/Solvent Resistance	PTFE Glass Cloth Tape	UHMW-PE Tape	PTFE Film Tape

3M™ Graphics Arts Tapes

Slick surface roller wrap tapes for smoother web movement

PTFE Tapes perform at up to 500°F (260°C) and resist chemicals. For temperatures up to 225°F (107°C) and abrasion resistance, consider UHMW-PE (Ultra High Molecular Weight Polyethylene).





Conformable 3M™ PTFE Tape helps the movement of web materials in many types of roller wrapping applications.

3M™ PTFE Tapes

Product Number	Color	Adhesive Type	Backing Material	Backing Thickness mils (mm)	Total Thickness mils (mm)	Adhesion to Steel oz/in (N/100 mm)	Tensile Strength lb/in (N/100 mm)	Elongation at Break %	Temperature Range °F (°C)	Comments
Based on ASTM Test Method:				D-3652	D-3652	D-3330	D-3759	D-3759		
Skived Film										
5480	Gray	Silicone	PTFE	2.0 (0.05)	3.7 (0.09)	20 (22)	26 (461)	140	-65 to 500 (-54 to 260)	Roller wrapping tape.
5481	Gray	Silicone	PTFE	5.0 (0.13)	6.8 (0.17)	32 (35)	59 (1039)	290	-65 to 500 (-54 to 260)	Heavy-duty roller wrapping tape.
Extruded Film										
5490	Gray	Silicone	PTFE	2.0 (0.05)	3.7 (0.09)	27 (30)	17 (304)	170	-65 to 500 (-54 to 260)	Lay-flat backing.
5491	Gray	Silicone	PTFE	5.0 (0.13)	6.7 (0.17)	35 (38)	42 (727)	260	-65 to 500 (-54 to 260)	Lay-flat backing.

Note: The technical information and data should be considered representative or typical only and should not be used for specification purposes.

3M™ Graphics Arts Tapes *(cont.)*

3M™ UHMW-PE Tapes

Product Number	Color	Adhesive Type	Backing Material	Backing Thickness mils (mm)	Liner Type	Total Thickness mils (mm)	Adhesion to Steel oz/in (N/100 mm)	Tensile Strength lb/in (N/100 mm)	Elongation at Break %	Temperature Range °F (°C)	Comments
Based on ASTM Test Method:				D-3652		D-3652	D-3330	D-3759	D-3759		
5421	Translucent	Rubber	UHMW-PE	5.0 (0.13)	60# Densified Kraft Paper	6.7 (0.17)	34 (37)	46 (796)	470	-30 to 225 (-34 to 107)	General purpose tape to protect plastic and metal chutes, guide rails and containers from wear.
5423	Translucent	Rubber	UHMW-PE	10.0 (0.25)	60# Densified Kraft Paper	12 (0.30)	36 (39)	86 (1500)	530	-30 to 225 (-34 to 107)	Excellent abrasion resistance to protect plastic and metal chutes, guide rails and containers from wear.
5425	Translucent	Acrylic	UHMW-PE	3.0 (0.08)	55# Densified Kraft Paper	5.1 (0.13)	48 (53)	25 (444)	390	-30 to 225 (-34 to 107)	Solvent resistant adhesive with low coefficient of friction and abrasion resistance.

Traction wrap to enhance friction for web handling

Traction wrap to enhance friction for web handling 3M™ Traction Tape 5401 bonds on contact to rollers providing non-stick traction for enhanced friction that improves web handling.

3M™ Traction Tape 5401 enhances friction on web rollers to help maintain constant traction and tension for the web material from start-up through wind-up.

3M™ Application Specific Tapes

Product Number	Color	Adhesive Type	Backing Material	Backing Thickness mils (mm)	Liner Type	Total Thickness mils (mm)	Adhesion to Steel oz./in. (N/100 mm)	Tensile Strength lb./in. (N/100 mm)	Elongation at Break %	Temperature Range °F (°C)	Comments
ASTM Test Method				D-3652		D-3652	D-3330	D-3759	D-3759		
Graphic Arts Tapes											
235	Black	Rubber	Crepe Paper	5.0 (0.12)	—	7.0 (0.17)	23 (25)	22 (386)	9	Up to 200 (Up to 93)	Photographic masking.
616	Ruby Red	Rubber	UPVC	1.6 (0.04)	—	2.4 (0.06)	36 (39)	29 (509)	50	Up to 120 (Up to 49)	Lithographers tape.
3051	White	Acrylic	Flatback Paper	3.4 (0.09)	—	3.8 (0.10)	4 (4)	39 (680)	2	Up to 150 (Up to 65)	Very low tack.
Traction Tapes											
5401	Tan	Silicone	Fiberglass Reinforced Silicone	8.0 (0.20)	—	9.3 (0.24)	12 (13)	220 (3853)	7	Up to 300 (Up to 148)	High coefficient of friction for traction.
5461	White	Rubber	Silicone Rubber	7.8 (0.19)	Silicone-Paper	9.1 (0.23)	30 (33)	85 (1500)	165	Up to 200 (Up to 93)	High friction roller tape.

Note: The technical information and data should be considered representative or typical only and should not be used for specification purposes.