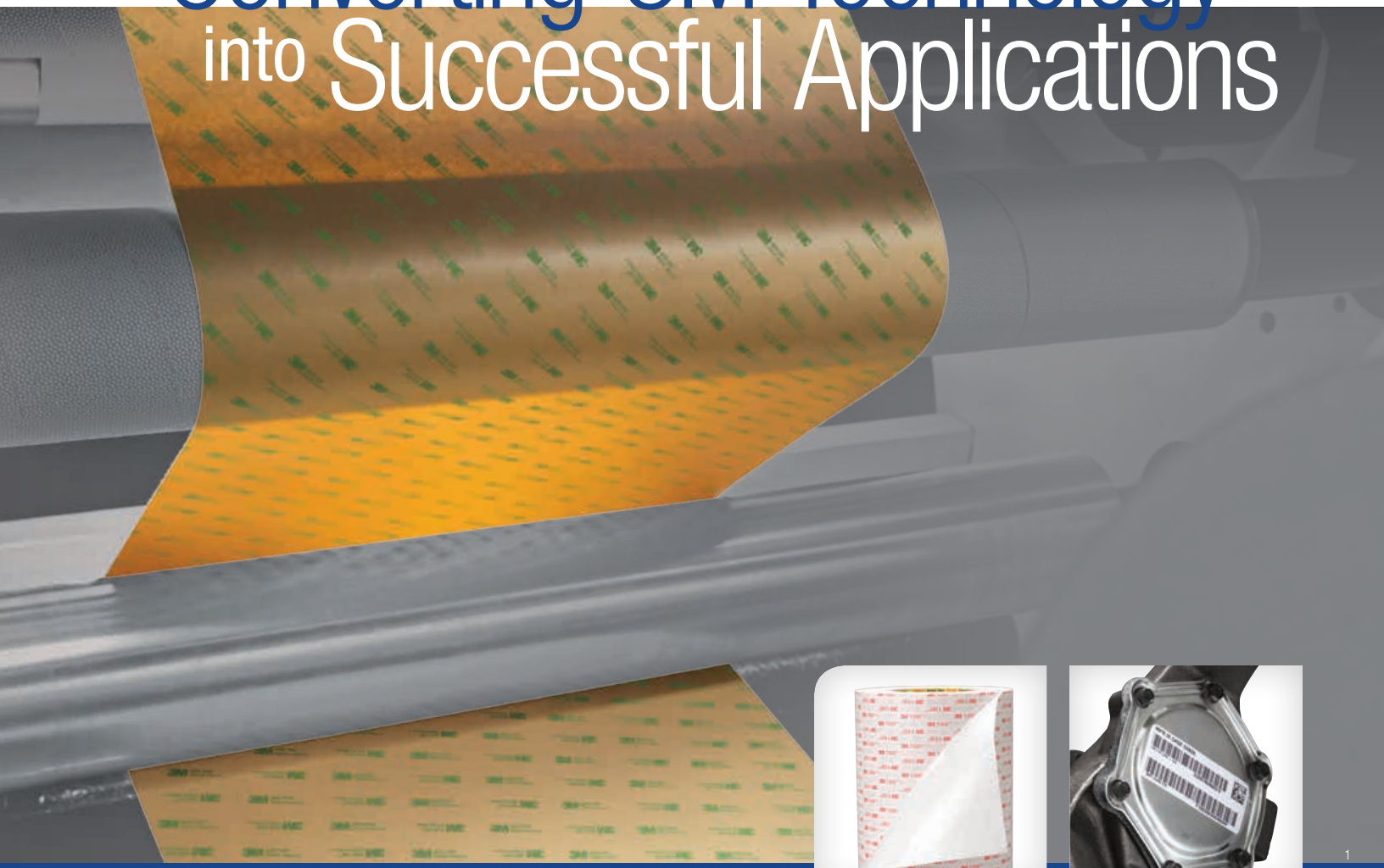
3M Converter Markets

Converting 3M Technology into Successful Applications



Selection Guide

April, 2015

More Than 50 Years of Experience

in Developing Innovative Pressure Sensitive Adhesives, Labeling Materials and Specialty Products

3M has helped countless customers around the globe increase their production efficiency and improve product performance, appearance and identification.

If you're in the converting industry, look to 3M Converter Markets as your trusted source for a versatile, comprehensive line of practical products and solutions — from tapes, labeling materials and graphic solutions to release liners and films, reclosable fasteners, flexographic mounting systems and more.

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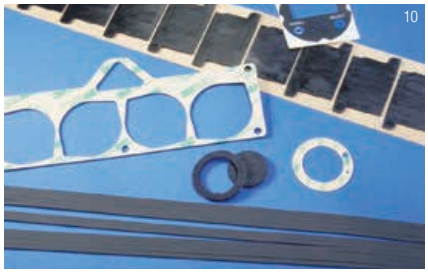
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Custom Program

Rapid | Responsive | Reliable

3M™ Custom Adhesive Transfer and Double-Coated Tapes

In today's fast-paced converting marketplace, you've got to react quickly and effectively to keep pace with your customer's changing needs and special requirements.

Through our Custom Program, 3M can help you rapidly respond with reliable custom solutions for jobs ranging from gasketing and durable graphic attachment to laminating in high temperature electronics applications.

You can more readily meet your customer specifications and expectations with custom combinations of 3M components you know and trust. And 3M adhesives, liners, and carriers are stocked in depth and backed with the experience to get what you need right and fast. How fast?

- Pricing and feasibility in 1 day
- Customized sample rolls up to 10" wide shipped within 7 days*
- Order shipped in 21 days

Minimum orders start at only 1.5 million square inches or five master rolls by 180 yards.

If you don't see what you want, just consult with your 3M representative and the technical team will start on the right solution right away.

*14 days for wider rolls

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Fundamentals of Adhesion

Selecting the proper adhesives for a nameplate, label or membrane switch application requires consideration of environmental, surface, appearance and other performance requirements. Our purpose here is to cover some of the principles of adhesion.

Surface contact is fundamental to adhesive performance. To maximize adhesive contact on a surface:

- It must be dry and free of contaminates.
- Firm pressure must be applied to increase the flow and contact of the adhesive with the substrate.
- Time and temperature will increase the surface contact and adhesion values.
- Oil contaminated materials may be addressed with the 3M™ Adhesive 300LSE or 350 families.

Adhesion is the molecular force of attraction between unlike materials. The strength of attraction is determined by the surface energy of the material. The higher the surface energy, the greater the molecular attraction. The lower the surface energy, the weaker the attractive forces.

Greater molecular attraction results in increased contact between an adhesive and substrate. In other words, for a high surface energy material, the adhesive can flow (or "wet-out") to assure a stronger bond.

Consider an automobile that has not been waxed for a long time. When water contacts the surface, it spreads in large puddles. The unwaxed car surface exhibits high surface energy — the molecular attraction allows the water to flow.

In comparison, water beads up into small spheres on a freshly waxed car. It is an example of low surface energy — the liquid (or adhesive) does not flow out.

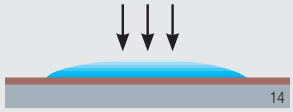
Surface energy is measured by dynes per centimeter. The dyne level is the actual reading of the critical surface tension.

Modified acrylic and synthetic adhesives with better flow (or "wet-out") characteristics have been developed to adhere to low surface energy substrates. The Surface Energy Chart below compares the relative surface energy of commonly used substrates.

3M™ High Performance Acrylic Adhesive 200MP will not readily adhere to substrates categorized as having "low surface energy." However, 3M acrylic adhesives have been designed to adhere to low surface energy plastics, and should be considered for those applications.

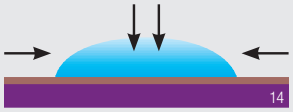
Surface Energy Chart

Metal Surfaces (High Surface Energy)



mJ/m²	Surfaces
1103	Copper
840	Aluminum
753	Zinc
526	Tin
458	Lead
700–1100	Stainless Steel
250–500	Glass Porcelain

High Surface Energy Plastics (HSE)



mJ/m²	Surfaces
50	Polyimide Industrial Film
47	Phenolic
46	Nylon
45	Alkyd Enamel
43	Polyester
43	Epoxy Paint

mJ/m²	Surfaces
43	Polyurethane Paint
42	ABS
42	Polycarbonate
39	PVC Rigid
38	Modified PPE Resin
38	Acrylic

Low Surface Energy Plastics (LSE)

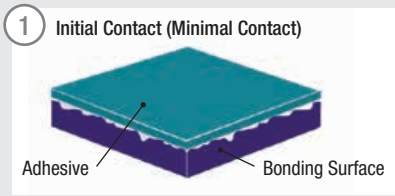
mJ/m²	Surfaces
37	PVA
36	Polystyrene
36	Acetal
33	EVA
31	Polyethylene
29	Polypropylene
28	Polyvinyl Fluoride Film
18	PTFE
Broad Range	Powder Coated Paints

Note: These values are provided as a guide. Formulation modifications can substantially alter surface energies.

Adhesive Surface Contact

Applying firm pressure to the bond increases adhesive flow and contact for more secure bonding.
Time and temperature will typically further increase contact and adhesion values.

1 **Initial Contact (Minimal Contact)**



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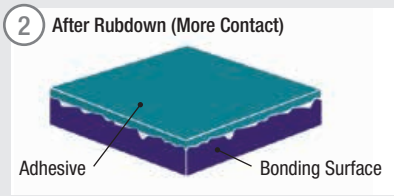
2 **After Rubdown (More Contact)**



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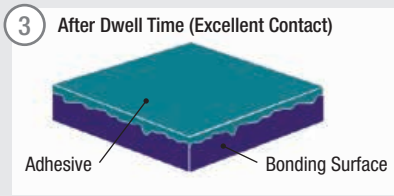
3 **After Dwell Time (Excellent Contact)**



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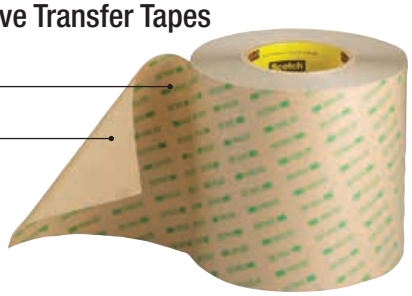
Product Constructions

3M™ Adhesive Transfer Tapes



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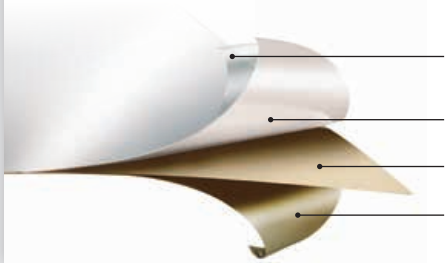
3M™ Performance Label Materials



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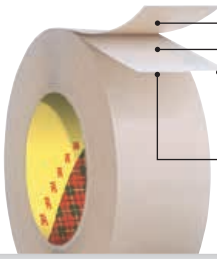
3M™ Double Coated Tapes



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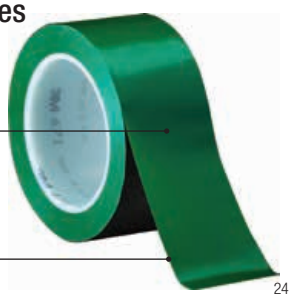
3M™ Single Coated Tapes



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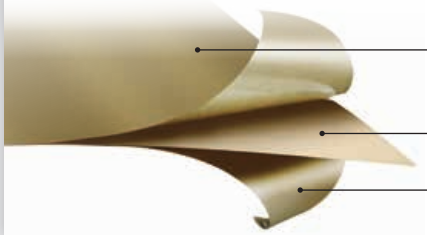
3M™ Double-linered Adhesive Transfer Tapes — Sheets



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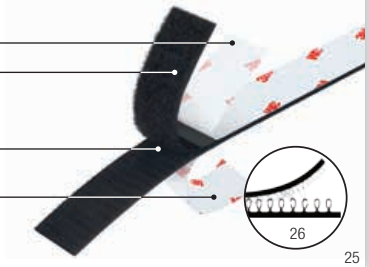
3M™ Reclosable Fasteners — Hook and Loop



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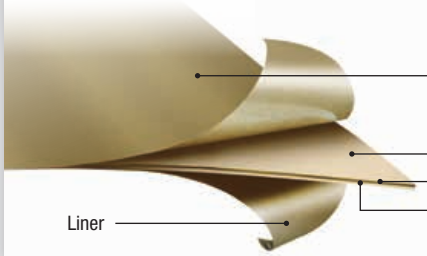
3M™ Double Coated Spacers — Sheets



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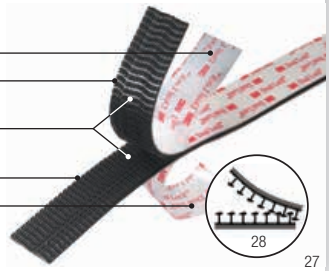
3M™ Dual Lock™ Reclosable Fasteners



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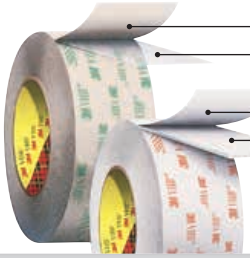
3M™ VHB™ and Double Coated Foam Tapes



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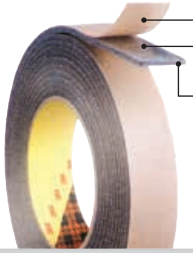
3M™ Single Coated Foam Tapes



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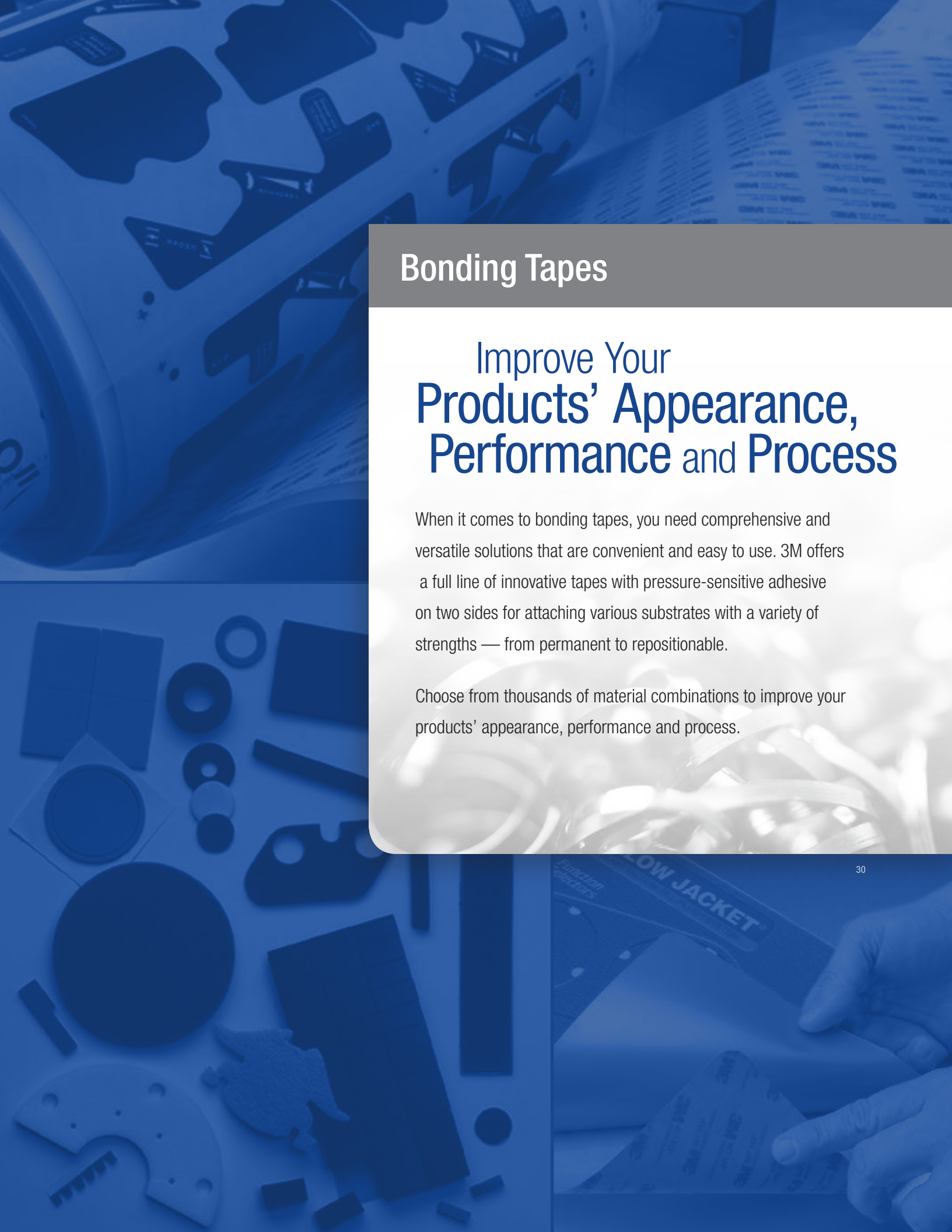


Bonding Tapes

Improve Your Products' Appearance, Performance and Process

When it comes to bonding tapes, you need comprehensive and versatile solutions that are convenient and easy to use. 3M offers a full line of innovative tapes with pressure-sensitive adhesive on two sides for attaching various substrates with a variety of strengths — from permanent to repositionable.

Choose from thousands of material combinations to improve your products' appearance, performance and process.

Considerations When Selecting the Right 3M™ Bonding Tapes for Your Product and Process

What materials are you bonding? How will the assembly be used?

- Type of substrate or hard-to-bond materials
- Bonding dissimilar materials
- Configuration of your part (design/shape)
- Appearance and aesthetic considerations
- Need for disassembly for maintenance or service

How the product will be processed?

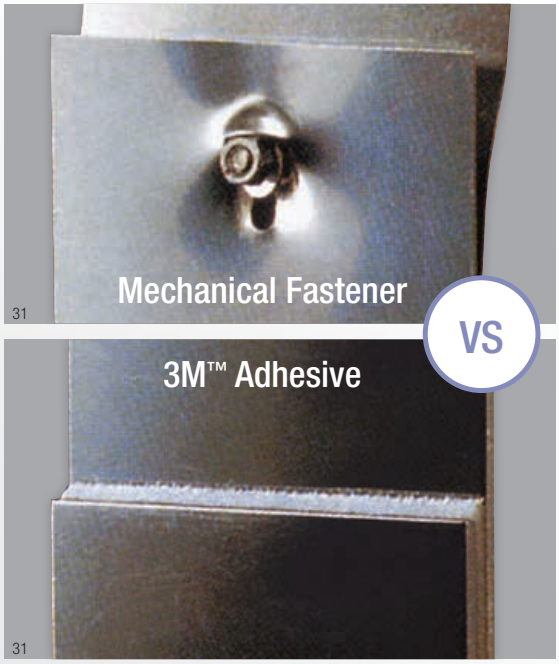
- Need high-speed bonding
- Need to be able to reposition
- Will be subjected to vibration
- Requires heat and/or pressure for bonding
- Desire to cut costs/increase production/simplify operation

How do you need the adhesive to perform?

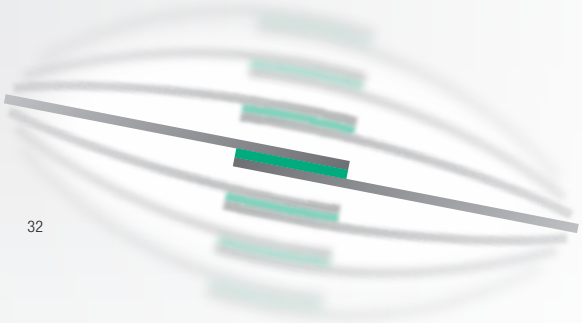
- Match strength to stresses/combination of stresses: Tensile, Shear, Cleavage and Peel
- Flexibility
- Maintain surface integrity
- Permanent bond
- Resist heat and/or moisture
- Bond and seal
- Reduce risk of bimetallic corrosion and/or rust

Will the assembly be exposed to harsh environmental conditions?

- Very low or very high temperatures
- High humidity
- Chemicals
- Water
- Dirt/dust

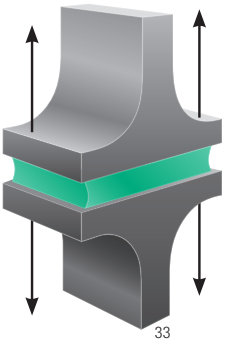


Aesthetics and Surface Integrity
With uniform stress distribution of adhesives and tapes, lighter, thinner materials can be used without concerns about distortion, splitting, or crazing at the mechanically fastened site. Elimination of holes in metal also reduces the chances for rust and corrosion.



Bonds Subjected to Vibration
The viscoelasticity of many 3M adhesives and tapes improves resistance to vibration fatigue by imparting flexibility to a joint or bonded area.

Different design challenges require different solutions. Illustration of potential stress on bonded joints.



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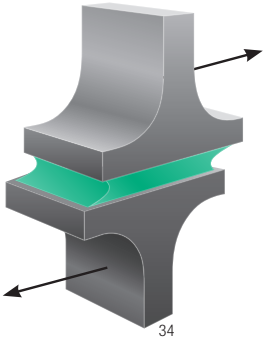
Tensile is pull exerted equally over the entire joint. Pull direction is straight and away from the adhesive bond.



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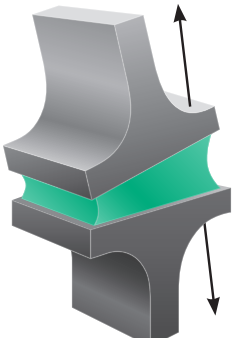
Shear is pull directed across the adhesive, forcing the substrates to slide over each other.



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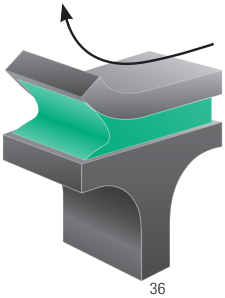
Cleavage is pull concentrated at one edge of the joint, exerting a prying force on the bond. The other edge of the joint is theoretically under zero stress.



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Peel is concentrated along a thin line at the edge of the bond where one substrate is flexible. The line is the exact point where an adhesive would separate if the flexible surface were peeled away from its mating surface. Once peeling has begun, the stress line stays out in front of the advancing bond separation.

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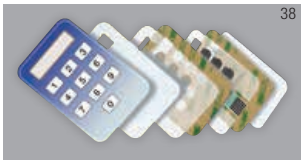

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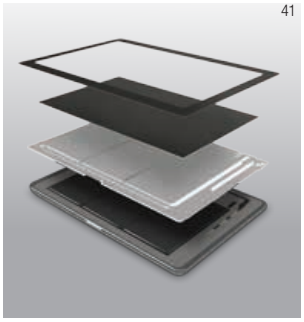

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Adhesive Families

Adhesive families have been color coded to make cross referencing between charts easier.

100

100 High Temperature Acrylic

- Up to 450°F short-term heat resistance and excellent solvent resistance.
- High peel strength compared to other acrylic formulations.
- Exceptional shear strength even at elevated temperatures.
- Exhibits low outgassing characteristics.

100MP

100MP High Performance Acrylic

- Up to 500°F short-term heat resistance and outstanding solvent resistance.
- Higher peel strength than most other acrylic formulations.
- Exceptional shear strength even at elevated temperatures.

100HT

100HT Ultra High Temperature Acrylic

- Up to 550°F short-term heat resistance and outstanding solvent resistance.
- Higher peel strength than most other acrylic formulations.
- Exceptional shear strength even at elevated temperatures.

200MP

200MP High Performance Acrylic

- Up to 400°F short-term heat resistance and excellent solvent resistance.
- Outstanding adhesion to metal and high surface energy plastics.
- Excellent shear strength to resist slippage and edge lifting.
- Short term repositionability for placement accuracy.

220

220 Industrial Acrylic

- Up to 350°F short-term heat resistance and good chemical resistance.
- Good shear strength and chemical resistance for general purpose industrial applications.
- Good adhesion to most metal and high surface energy plastics.

290

290 Low Outgassing Acrylic

- Up to 450°F short-term heat resistance.
- Exceeds most OEM specifications for outgassing and long-term performance.
- High peel strength compared to other acrylic formulations.
- Exceptional shear strength even at elevated temperatures.

300

300 High Strength Acrylic

- Up to 250°F short-term heat resistance.
- High initial adhesion especially to low surface energy plastics.
- Quick flowing to speed lamination of textured plastics, foams, fabrics and coated papers.

300FR

300FR Flame Retardant

- Meets various flame retardancy standards such as UL94 V-0/2, F.A.R. 25.853, and FMVSS 302.
- Similar adhesive properties to adhesive 300 family.
- Good adhesion to a wide variety of surfaces including LSE plastics, foams and fabrics.

300LSE

300LSE Low Surface Energy Acrylic

- Up to 300°F short-term heat resistance.
- Outstanding adhesion to low surface energy plastics, powder coated paints and lightly oiled metals.
- Good chemical and humidity resistance.

300MP

300MP High Tack Acrylic

- Up to 250°F short-term heat resistance for automotive interior applications.
- Designed especially to bond most plastics and foams.
- Economical attachment of graphics.

300SF

300SF Solventless

- Excellent initial adhesion.
- Ideal for use on coated papers and other smooth surface materials.
- Manufactured using a solventless adhesive coating process.

320

320 High Tenacity Acrylic

- Designed for use with 3M™ Label Component Systems for protected graphics printing of polyester films.
- Can also be used in constructing custom tamper-indicating labels.
- Offers excellent flagging resistance and adhesion to a variety of substrates.

340

340 High Tack Acrylic

- Up to 180°F short-term heat resistance.
- Excellent bonding to foam and other substrates.
- High tack adhesive.
- Medium shear strength.

350

350 High Performance Acrylic

- Up to 450°F short-term heat resistance.
- Excellent solvent resistance and adhesion to LSE materials.

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

375

375 High Performance Double Coated
- Up to 450°F short-term heat resistance.
- Good adhesion to both high and low surface energy substrates.
- Excellent initial tack.

400

400 Acrylic Adhesive
- Up to 250°F short-term heat resistance.
- Good low temperature performance and peel strength on many surfaces.
- Excellent adhesion to uncoated papers.
- Clarity and UV resistance for window label applications.

420

420 Acrylic Adhesive
- Up to 300°F short-term heat resistance.
- High tack adhesive.

430

430 Acrylic Adhesive
- Up to 350°F short-term heat resistance.
- Lead for high temperature splicing.

563

563 Low Outgassing Permanent Bond Acrylic (High Shear)
- Provides permanent bond strength to a wide variety of surfaces.
- Because the adhesive level neither builds nor degrades over time, it will remove cleanly from most HSE materials.

573

573 Permanent Low Outgassing Acrylic
- High shear strength even at 350°F temperature.
- High peel strength.
- Low outgassing, exceeds most OEM specifications for outgassing performance.

700 Series

700 Series Synthetic Rubber
- Up to 200°F short-term heat resistance.
- Good adhesion to low surface energy substrates.
- For indoor and room temperature applications.

800 Series

800 Series Natural Rubber
- Up to 200°F short-term heat resistance.
- Offers good adhesion to a variety of surfaces.
- For indoor and room temperature applications.

900/ 900R

900/900R Miscellaneous Rubber Adhesive Group
- Excellent initial adhesion and high bond to a variety of foams.
- Utility rubber-based adhesive ideal for the foam fabricating industry.

1000 Series

1000 Series Repositionable Acrylic
- Good holding to many surfaces.
- Clean removal.

2000MP

2000MP Optically Clear Acrylic
- Visual accuracy — light transmission > 99%, free of birefringence, refractive index of 1.47.
- High cohesive and peel strengths.
- High temperature, humidity and UV light resistance.
- Long-term durability without yellowing, delaminating or degrading.

Electric

Electronically Conductive
- Good initial tack.
- Non-corrosive adhesive.
- Built-in conductive fibers.
- Helps reinforce tape.
- Low electrical resistance with good conductivity.

Thermal

Thermally Conductive
- High performance acrylic adhesive with highly conductive ceramic particles.
- For an extremely reliable thermal interface.
- Highly conformable.

Screen Print

Screen Printable Adhesive
- For selective placement of pressure sensitive adhesive using screen print technology.
- Either UV curable or water-based are available.

Silicone

Silicone Adhesive
- High temperature resistance up to 500°F
- Reliable solvent resistance
- Good damping performance
- Good adhesion to silicone rubbers and silicone foams

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

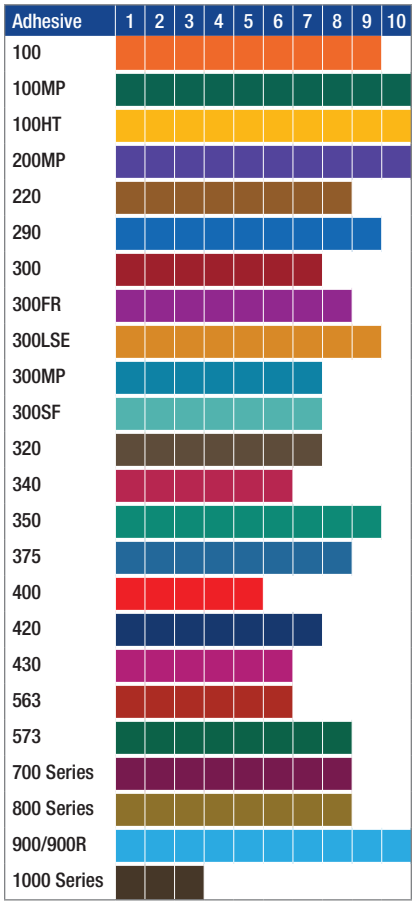
3M™ Bonding Tapes Selection Guide Based on Surface Energy

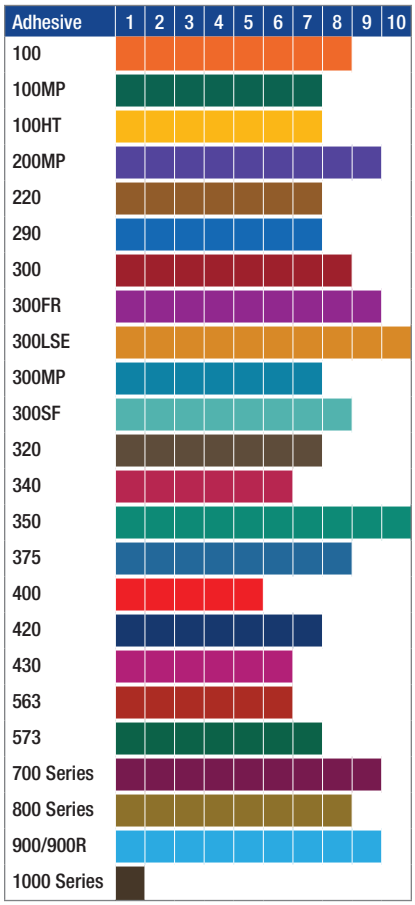
These charts are based on relative adhesion within each given surface energy category.

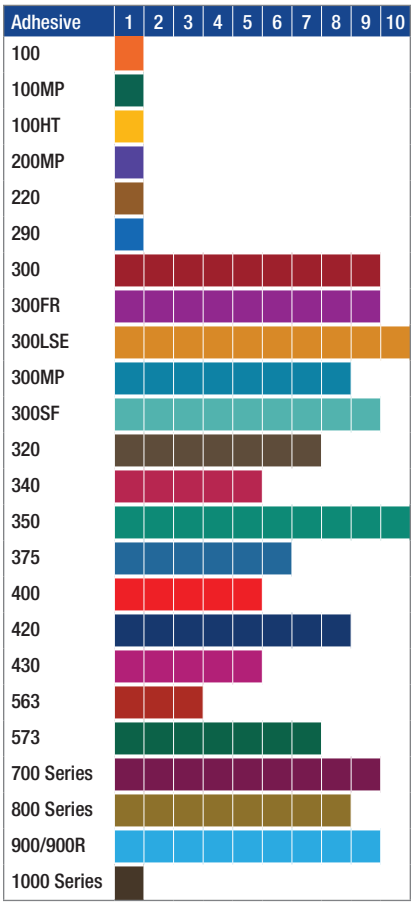
Metals	Surface Energy (Dynes/cm)
Copper	1103
Aluminum	840
Zinc	753
Tin	526
Lead	543

High Surface Energy (HSE) Plastics	Surface Energy (Dynes/cm)
Polyimide	50
Phenolic	47
Nylon®	46
Alkyd Enamel	45
Polyester	43
Epoxy Paint	43
Polyurethane	43
ABS	42
Polycarbonate	42
PVC	39
Modified PPE Resin	38
Acrylic	38

Low Surface Energy (LSE) Plastics	Surface Energy (Dynes/cm)
PVA	37
Polystyrene	36
Acetal	36
EVA	33
Polyethylene	31
Polypropylene	29
PVF	28
PTFE	18
Powder Coatings	Broad Range







Values: 1 – Lowest Performance; 10 – Highest Performance

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

3M™ Bonding Tapes Selection Guide Based on Surface Combinations

This matrix gives you a few of our most commonly used tapes for various surface combinations. Products shown represent only a small part of the total line.

+		Steel Aluminum Glass* Ceramics*			ABS*, Acrylic*, Enamel* and Epoxy Paints*, Polyimide*, Modified PPE*, Nylon®*, Polycarbonate*, Polyester*, Rigid Vinyl*			Polystyrene* Polypropylene* Polyethylene* Powder Paints*			Plasticized Vinyl			Paper and Paperboard			Foam, Textiles			Rubber* (primer is required for long term durability)		
		Thin	Thick	Foam	Thin	Thick	Foam	Thin	Thick	Foam	Thin	Thick	Foam	Thin	Thick	Foam	Thin	Thick	Foam	Thin	Thick	Foam
Rubber* (primer is required for long term durability)	Transfer	467MP 9471LE	468MP 9472LE	3M™ VHB™ Tape 4941, 5952, RP45	467MP 9471LE	468MP 9472LE	3M™ VHB™ Tape 4941, 5952, RP45	467MP 9471LE	468MP 9472LE	3M™ VHB™ Tape 4941, 5952, RP45	F9467U	F9465PC	3M™ VHB™ Tape 4941	467MP 9471LE	468MP 9472LE	—	467MP 9471LE	468MP 9472LE	—	467MP 9471LE	468MP 9472LE	3M™ VHB™ Tape 4941, 5952, RP45
	Double Coated	92015 9832 93010LE	93015LE 93020LE 99786		92015 9832 93010LE	93015LE 93020LE		92015 9832 93010LE	99786 93015LE 93020LE		—	—		92015 9832 93010LE	99786 93015LE 93020LE		92015 9832	99786		92015 9832 93010LE	99786 93015LE 93020LE	
Foam, Textiles	Transfer	9772WL 9471LE	9775WL 9472LE	—	9772WL 9471LE	9775WL 9472LE 99786	—	9772WL 9471LE	9775WL 9472LE	—	F9467U	F9465PC	—	9772WL 9471LE	9775WL 9472LE	—	9772WL 9471LE	9775WL 9472LE	—			
	Double Coated	9832 93010LE	93015LE 93020LE 99786		9832 93010LE	93015LE 93020LE 99786		9832 93010LE	93015LE 93020LE 99786		—	—		9832 93010LE	93015LE 93020LE 99786		9832 93010LE	93015LE 93020LE 99786				
Paper and Paperboard	Transfer	467MP 9772WL 9471LE	468MP 9775WL 9472LE	—	467MP 9772WL 9471LE	468MP 9775WL 9472LE	—	9772WL 9471LE	9775WL 9472LE	—	F9467U	F9465PC	—	XT2105 950 465	XT2112 950	—						
	Double Coated	9832 92015 93010LE	93015LE 93020LE 99786		9832 92015 93010LE	93015LE 93020LE 99786		9832 93010LE	93015LE 93020LE 99786		☎	☎		XG5110 XG6110 415	XT6110 444							
Plasticized Vinyl	Transfer	F9467U	F9465PC	3M™ VHB™ Tape 4941	F9467U	F9465PC	3M™ VHB™ Tape 4941	F9467U	F9465PC	3M™ VHB™ Tape 4941	F9467U	F9465PC	3M™ VHB™ Tape 4941									
	Double Coated	☎	☎		☎	☎		☎	☎		☎	☎										
Polystyrene* Polypropylene* Polyethylene*, Powder Paints*	Transfer	9772WL 9471LE	9775WL 9472LE	3M™ VHB™ Tape 4941, 5952, RP45	9772WL 9471LE	9775WL 9472LE	3M™ VHB™ Tape 4941, 5952, RP45	9772WL 9471LE	9775WL 9472LE	3M™ VHB™ Tape 4941, 5952, RP45												
	Double Coated	9832 93010LE	93015LE 93020LE 99786		9832 93010LE	93015LE 93020LE 99786		9832 93010LE	93015LE 93020LE 99786													
ABS*, Acrylic*, Enamel* and Epoxy Paints*, Polyimide*, Modified PPE*, Nylon®*, Polycarbonate*, Polyester*, Rigid Vinyl*	Transfer	467MP 9471LE	468MP 9472LE	3M™ VHB™ Tape 4941, 5952, RP45	467MP 9471LE	468MP 9472LE	3M™ VHB™ Tape 4941, 5952, RP45															
	Double Coated	92015 9832 93010LE	93015LE 93020LE 99786		92015 9832 93010LE	93015LE 93020LE 99786																
Steel, Aluminum, Glass*, Ceramics*	Transfer	467MP 9471LE F9460PC	468MP 9472LE F9473PC	3M™ VHB™ Tape 4941, 5952, RP45																		
	Double Coated	92015 9832 93010LE	93015LE 93020LE 99786																			

Note: The technical information and data provided here should be considered representative or typical only and should not be used for specification purposes. User should evaluate the 3M product to determine whether it is fit for a particular purpose and suitable for user's method of application.

*Primer may be required for long term durability or highest strength, especially with applications using 3M™ VHB™ Tape that often have high strength requirements. Refer to 3M™ Primers Selection Guide on page 12.

3M™ Primers Selection Guide

For some applications, it is important to use a primer to provide the highest level of performance possible — or in the case of difficult substrates like EPDM. Examples include: using 3M™ VHB™ Tape for glazing in exterior façade, assembling metal cargo vans with 3M™ VHB™ Tape, and bonding durably to EPDM. The information below is a general guideline on primers by substrate. Evaluation of these primers should be completed on the exact substrate being used in the application to ensure that the final bond meets all of the requirements of the application.

+	Plastics: LSE (Polyethylene)	Plastics: HSE, MSE, LSE (ABS, Acrylic, Polycarbonate, Nylon, TPO, Polypropylene)	Rubber (EPDM, Santoprene®)	Glass	Paints (Powder Coat, Painted Metal, Composite Panel)	Metals (Aluminum, Steel, Stainless, Galvanized)
Metals	**Primer Options:** AP-111 or P94 metal side; Flame treat then P94 polyethylene side	**Primer Options:** AP-111 or P94 metal side; P94 plastic side	**Primer Options:** AP-111, P94 metal side; P94 rubber side	**Primer Options:** AP-111 or P94 metal side; AP-115 glass side	**Primer Options:** AP-111 or P94 metal side; AP-111 or P94 paint side	**Primer Options:** AP-111 or P94
Paints	**Primer Options:** AP-111 or P94 paint side; Flame treat then P94 polyethylene side	**Primer Options:** AP-111 or P94 paint side; P94 plastic side	**Primer Options:** AP-111 or P94 paint side; P94 rubber side	**Primer Options:** AP-111 or P94 paint side; AP-115 glass side	**Primer Options:** AP-111 or P94	
Glass	**Primer Options:** AP-115 glass side; Flame treat then P94 polyethylene side	**Primer Options:** AP-115 glass side; P94 plastic side	**Primer Options:** AP-115 glass side; P94 rubber side	**Primer Options:** AP-115		
Rubber	**Primer Options:** P94 rubber side; Flame treat then P94 polyethylene side	**Primer Options:** P94 rubber side; P94 plastic side	**Primer Options:** P94			
Plastics: HSE, MSE, LSE	**Primer Options:** P94 plastic side; Flame treat then P94 polyethylene side	**Primer Options:** P94				
Plastics: LSE	**Primer Options:** Flame treat then P94 polyethylene					

Adhesive Properties

Adhesive Family	Adhesive Properties: Peel: Initial	Peel: Ultimate	Shear: Room Temp.	Shear: 150°F	Adhesion to: Metal	HSE Plastic	LSE Plastic	Environmental Performance Resistance to: Chemical	Ultra Violet	Plasti-cizers	Humidity	Temperature (°F): Minimum Application	Service Low†	Service High†	Products
Acrylic Adhesives															
100	3	9	10	10	9	8	1	9	10	5	10	50	-40	450	941, 965, 966, 4004, 4008, 4026, 4032, 4052, 4056, 4658F, 4921, 9379, 9380, 9462FT, 9461P, 9462P
100MP	4	10	10	10	10	7	1	10	10	5	10	50	-40	500	F9460PC, F9473PC, F9469PC, 9437
100HT	4	10	10	10	10	7	1	10	10	5	10	50	-40	550	9082, 9085, 9085UV
200MP	4	10	10	10	10	9	1	9	10	5	10	50	-40	400	467MC, 467MCF, 467MP, 467MPF, 468MC, 468MCF, 468MP, 468MPF, 7945MP, 7952MP, 7953MP, 7953SL, 7955MP, 7956MP, 7956MWS, 7956WDL, 7957MP, 7959MP, 7961MP, 7962MP, 7965MP, 7966MWS, 7966WDL, 7992MP, 7992MPW, 7993MP, 7995MP, 7997MP, 9045MP, 9056MP, 9059MP, 9061MP, 9172MP, 9185MP, 9667MP, 9668MP, 9668MPL, 92015
220	4	8	10	9	8	7	1	8	10	4	8	50	-40	350	9502, 9505, 9552, 9555
300	6	7	4	1	7	9	9	6	7	3	8	50	-40	250	444, 444PC, 927, 950, 950EK, 992U, 9009, 9019, 9039, 9458, 9459W, 9466B, 9471,9471PC, 9472, 9653, 9671, 9672, 9673
300FR	6	7	4	1	8	9	9	6	7	3	8	50	-40	250	9372W, 9372DKW, 9375W
300LSE	7	9	8	8	9	9	10	8	7	4	9	50	-40	300	8132LE, 8153LE, 9453FL, 9453LE, 9471FL, 9471LE, 9472LE, 9472FL, 9653LE, 9671LE, 9672LE, 93005LE, 93010LE, 93015LE, 93020LE
300MP	6	7	8	8	7	7	8	7	7	3	9	50	-40	250	6035PC, 6035PL, 6038PC, 6038PL, 7951, 9772WL, 9773WL, 9774WL, 9775WL, 9784, 9687C, 9832, 9832HL, 99687, 99786, 99786NP
300SF	5	7	3	1	6	9	9	5	6	3	8	50	-40	200	XT2105, XT2112, XT2105 ATG, XT2112 ATG
320	7	7	4	1	7	7	7	6	6	3	8	50	-40	250	9447
340	6	7	6	5	6	6	5	8	7	4	9	50	-40	180	9456, 9824, 9828, 9828PC
350	7	9	8	8	9	10	10	8	7	4	9	50	-40	450	3028EK, 9442, 9445, 9482PC, 9485EK, 9485PC, 9500B, 9500PC, 9675, 9731
360	10	10	8	6	10	10	10	8	7	4	8	50	-40	300	9626, 9627, 9629PC, 9628FL, 9628B, 9629B, 9629FL
375	6	8	8	8	8	8	6	7	7	5	8	50	-10	300†*	9086, 9087, 9088, 9088FL
400	4	5	5	4	5	5	5	5	10	4	8	50	-60	250	415, 463, 465, 465XL, 665, 666, 920XL, 9420, 9457, 9464, 9665
420	5	6	10	10	7	7	8	6	10	2	9	32	-40	300	94210, 94215, 94220, F9752PC, F9755PC
430	3	4	10	10	6	6	5	5	10	4	10	50	-40	350	4492, 4496, 9497, 9499

†Reflects lowest service temperature that bond holds and highest temperature for short periods (minutes, hours).
*Service temperature dependent on carrier. See technical data page for further information.

Values: 1 = Lowest Performance; 10 = Highest Performance

Rankings are a general guide. Adhesives should be tested with actual components to ensure acceptable performance.

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

Adhesive Properties (cont.)

Adhesive Family	Adhesive Properties: Peel: Initial	Adhesive Properties: Peel: Ultimate	Adhesive Properties: Shear: Room Temp.	Adhesive Properties: Shear: 150°F	Adhesion to: Metal	Adhesion to: HSE Plastic	Adhesion to: LSE Plastic	Environmental Performance Resistance to: Chemical	Environmental Performance Resistance to: Ultra Violet	Environmental Performance Resistance to: Plasti-cizers	Environmental Performance Resistance to: Humidity	Temperature (°F): Minimum Application	Temperature (°F): Service Low†	Temperature (°F): Service High†	Products
Rubber Adhesives															
700 Series	7	9	10	2	8	9	9	2	4	1	9	50	-40	200	4085, 4462, 4466, 4492, 4496, 9443NP, 9579, 9589
800 Series	9	10	6	2	8	8	8	1	1	1	1	50	-40	180	401M, 410M
900	Individual product performance differs — see page 19 (91022) and page 25 (900 Series, 9731, 96042).														9737, 9737R, 9738, 9738R, 9740, 9741, 9816L, 9816M, 9816H, 9817L, 9817M, 9817H
900R	10	10	5	4	10	9	9	4	4	3	1	50	-40	200	9851
Other Adhesives															
1000 Series	2	3	3	3	3	1	1	2	7	3	4	50	-20	250	665, 666, 9425, 9449S

†Reflects lowest service temperature that bond holds and highest temperature for short periods (minutes, hours).

Values: 1 = Lowest Performance; 10 = Highest Performance

Rankings are a general guide. Adhesives should be tested with actual components to ensure acceptable performance.

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

Liner Reference Chart

3M offers paper and film release liners in a number of different constructions and weights to meet various process requirements.

1. **Paper** liners include **polycoated kraft (PCK)** for moisture stability to resist wrinkling and curling; and **densified kraft (DK)** to reduce the edge burr on metal plates and for rotary processing. **Extended DK liners (XL)** are also available on selected tapes. With the liner wider than the adhesive, you can more easily grip the liner edge for removal.
2. **Film** liners add strength in high speed processing and dispensing, and are available for clean room processing. They also offer high clarity for graphic inspection.

Basis Weight	Caliper Mils	Liner Type	Description	High Tensile Strength	Humidity Resistance	Rotary Processing	Kiss Cutting	Steel Rule
Paper Liners								
43#	2.5	Densified Kraft (DK)	Silicone treated on one side for use as a second liner to protect adhesive during selective die-cutting. Printable.			■		
55#	3.2	Densified Kraft (DK)	Caliper-controlled hard liner for consistent base in rotary printing and die-cutting of labels.			■	■	■
60#	3.5	Densified Kraft (DK)	Hard dense liner reduces edge burr in hand tool processing of metal plates.			■	■	■
62#	3.7	Densified Kraft (DK)	Heavier version of 60#.			■	■	■
78#	6.0	Extensible Polycoated Kraft (EK)	Extra tough liner for tear resistance. Conformable for EMI/RFI shielding applications.	■	■		■	■
58#	4.2	Polycoated Kraft (PCK)	Moisture stable. Flat-bed die-cutting.		■			■
83#	6.2	Polycoated Kraft (PCK)	Excellent moisture stability for lay-flat processing. Thicker caliper for kiss-cutting and steel rule die-cutting.		■		■	■
94#	7.0	Polycoated Kraft (PCK)	Excellent liner for lay-flat processing.		■		■	■
Film Liners								
—	2.0	Clear Polyester (PET)	High strength reduces breakage during die-cutting and dispensing.	■	■	■	■	■
—	3.0							
—	4.0							
—	3.0	Clear High Density Polyethylene (HDPE)	Silicone treated for easy release. Clarity for see-through applications.	■	■	■		■

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

3M™ Adhesive Transfer Tapes

Adhesive Family[1]	Product	Description/Application Ideas	Adhesive Caliper (mils)	Liner[2] Type	Liner[2] Caliper (mils)	Master Size	Specs	Adhesion Metal	Adhesion HSE Plastic	Adhesion LSE Plastic	Adhesion Foam	Chem. Resist.	Temp. Range Low (°F)	Temp. Range High (°F)
100 High Temperature Acrylic	**941**	Graphic attachment for low odor appliance applications.	2	58# PCK	4.2	48" x 180 yd	UL	9	8	1	2	9	-40	450
	965	Fuel line labels. Excellent chemical resistance. Aerospace.	2	55# DK	3.2	48" x 180 yd	—							
	966	Meets NASA low volatility specs. Flex circuit attachment. High temp.	2	62# DK	3.5	48" x 180 yd	UL M^H							
	9461P	Thinner version of laminating adhesive 9462P.	1	55# DK	3.2	48" x 360 yd	—							
	9462P	Laminating adhesive 966 on a caliper-controlled liner for rotary die-cutting.	2	55# DK	3.2	48" x 360 yd	UL							
100MP* High Performance Acrylic	**F9460PC**	High performance industrial joining and metal fabrication.	2	58# PCK	4.2	60" x 180 yd	M^H	10	7	1	2	10	-40	500
	F9469PC	High performance industrial joining and metal fabrication.	5	58# PCK	4.2	60" x 180 yd	M^H							
	F9473PC	High performance industrial joining and metal fabrication.	10	58# PCK	4.2	60" x 180 yd	M^H							
100HT Ultra High Temperature Acrylic	**9082**	Excellent heat resistance in high temp environments. For applications that require both higher processing and operating temperatures.	2	White DK Liner	3.2	48" x 180 yd	—	10	7	1	2	10	-40	550
	9085	Thicker version of 9082.	5	White DK Liner	3.2	48" x 180 yd	—							
	9085UV	Same as 9085 but with UV light detectable adhesive.	5	58# PCK	4.2	48" x 360 yd	—							
200MP High Performance Acrylic	**467MC**	Same as 467MP with a paper MicroChannel liner to aid in bubble- and wrinkle-free graphic attachment.	2	58# PCK	4.2	54" x 180 yd	—	10	9	1	3	9	-40	400
	467MCF	Same as 467MP with a polyester MicroChannel liner to aid in bubble- and wrinkle-free graphic attachment.	2	PET	4.2	54" x 180 yd	—							
	467MP	Graphic attachment and general industrial joining. Industry standard. 60 in. width master also available.	2	58# PCK	4.2	48" x 180 yd	UL M^H							
	467MPF	Polyester liner for rotary processing of graphic and die cut parts.	2	PET	2.0	54" x 180 yd	UL							
	468MC	Same as 468MP with a paper MicroChannel liner to aid in bubble- and wrinkle-free graphic attachment.	5	58# PCK	4.0	54" x 180 yd	—							
	468MCF	Same as 468MP with a polyester MicroChannel liner to aid in bubble- and wrinkle-free graphic attachment.	5	PET	4.0	54" x 180 yd								
	468MP	Industry standard for graphic attachment and die cut parts. 60 in. width master also available.	5	58# PCK	4.2	48" x 180 yd	UL M^H							
	468MPF	Thicker version of 467MPF.	5	PET	2.0	54" x 180 yd	UL							
	9667MP	Same as 467MP on heavy, lay-flat liner for kiss-cutting. 48 in. width master also available.	2	83# PCK	6.2	54" x 180 yd	UL							
	9668MP	Same as 468MP on heavy, lay-flat liner. 48 in. width master also available.	5	83# PCK	6.2	54" x 180 yd	UL M^H							
	9668MPL	Better lay-flat properties.	5	94# PCK	7.0	60" x 180 yd	—							

1 – More information on pages 8–9. 2 – More information on page 15. *Products in this platform are 3M™ VHB™ Tapes offering our highest strength. M^H meets Mil-P-19834B Type I.

Values: 1 = Lowest Performance; 10 = Highest Performance

Rankings are a general guide. Adhesives should be tested with actual components to ensure acceptable performance.

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

3M™ Adhesive Transfer Tapes (cont.)

Adhesive Family[1]	Product	Description/Application Ideas	Adhesive Caliper (mils)	Liner[2] Type	Liner[2] Caliper (mils)	Master Size	Specs	Adhesion Metal	Adhesion HSE Plastic	Adhesion LSE Plastic	Adhesion Foam	Chem. Resist.	Temp. Range Low (°F)	Temp. Range High (°F)
220 Industrial Acrylic	**9502**	Economical attachment of graphics and industrial joining. 60 in. width master also available.	2	58# PCK	4.2	48" x 180 yd	UL	8	7	1	2	8	-40	350
	9505	Thicker version of 9502 for textured surfaces. 60 in. width master also available.	5	58# PCK	4.2	48" x 180 yd	UL							
290 Low Outgassing Acrylic	**501FL**	Ultra-clean adhesive for low outgassing applications.	1	PET	2.0	54" x 180 yd	—	9	7	1	2	9	-40	450
	502FL	Ultra-clean adhesive for low outgassing applications.	2	PET	2.0	54" x 180 yd	—							
300 High Strength Acrylic	**927**	Attach gaskets and a variety of industrial foam materials.	2	60# DK	3.5	48" x 180 yd	—	7	9	9	9	6	-40	250
	950	Thicker version of 927.	5	60# DK	3.5	48" x 180 yd	UL							
	950EK	Thicker version of 927 with extensible Kraft liner.	5	78# EK	6.0	48" x 180 yd	—							
	992U	For performance-engineered labels. UV indicator in adhesive.	2	55# DK	3.2	48" x 180 yd	UL							
	9458	Thin, high tack adhesive for rotary processing HSE and LSE parts.	1	55# DK	3.2	54" x 360 yd	UL							
	9459W	White version of laminating adhesive.	1.5	55# DK	3.2	48" x 360 yd	UL							
	9471	For smooth LSE plastics.	2	60# DK	3.5	48" x 180 yd	UL M^H							
	9471PC	Same as 9471 on moisture-stable liner.	2	61# DK	4.2	48" x 180 yd	—							
	9472	5.0 mil version of 9471; for textured surfaces.	5	60# DK	3.5	48" x 180 yd	UL M^H							
	9653	A 3.5 mil version of 9471 on a heavy, lay-flat liner for kiss-cutting.	3.5	83# PCK	6.2	48" x 180 yd	UL							
	9671	Heavier linered version of 9471 for easy handling, lay-flat properties.	2	83# PCK	6.2	48" x 180 yd	UL M^H							
	9672	Heavier linered version of 9472 for easy handling, lay-flat properties.	5	83# PCK	6.2	48" x 180 yd	UL							
	9673	Same as 9671 with unprinted liner.	2	83# PCK	6.2	48" x 180 yd	UL M^H							
300FR Flame Retardant	**9372W**	Flame retardant transfer tape with moisture stable liner.	2	83# PCK	6.2	60" x 180 yd	UL	8	9	9	9	6	-40	250
	9372DKW	Flame retardant transfer tape with rotary die-cuttable liner.	2	55# DK	3.2	60" x 180 yd	UL							
	9375W	Flame retardant transfer tape with moisture stable liner.	5	83# PCK	6.2	60" x 180 yd	UL							

1 – More information on pages 8–9.
2 – More information on page 15.
M^H meets Mil-P-19834B Type I.

Values: 1 = Lowest Performance; 10 = Highest Performance

Rankings are a general guide. Adhesives should be tested with actual components to ensure acceptable performance.

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

3M™ Adhesive Transfer Tapes (cont.)

Adhesive Family[1]	Product	Description/Application Ideas	Adhesive Caliper (mils)	Liner[2] Type	Liner[2] Caliper (mils)	Master Size	Specs	Adhesion Metal	Adhesion HSE Plastic	Adhesion LSE Plastic	Adhesion Foam	Chem. Resist.	Temp. Range Low (°F)	Temp. Range High (°F)
300LSE Low Surface Energy Acrylic	**9453FL**	Film linered version of 9453LE for rotary processing.	3.5	PET	2.0	54" x 180 yd	UL	9	9	10	1	8	-40	300
	9453LE	A 3.5 mil version of 9471LE for application to rough surfaces. 48 in. master width available.	3.5	58# PCK	4.2	54" x 180 yd	UL							
	9471FL	Film linered version of 9471LE for rotary processing.	2	PET	2.0	54" x 180 yd	UL							
	9471LE	Bonds graphics to powder coatings, LSE plastics and oily materials.	2	58# PCK	4.2	54" x 180 yd	UL							
	9472FL	A 5 mil version of 9471LE with film liner for textured surfaces.	5	PET	2.0	54" x 180 yd	UL							
	9472LE	Thicker adhesive for textured LSE plastics and powder coatings.	5	58# PCK	4.2	54" x 180 yd	UL							
	9653LE	Heavy linered 9453LE for easy handling and lay-flat properties.	3.5	83# PCK	6.2	54" x 180 yd	UL							
	9671LE	Heavy linered 9471LE for easy handling and lay-flat properties.	2	83# PCK	6.2	54" x 180 yd	UL							
	9672LE	Heavy linered 9472LE for easy handling and lay-flat properties.	5	83# PCK	6.2	54" x 180 yd	UL							
300MP High Tack Acrylic	**6035PC**	Resists fogging for automotive interior fabric joining applications.	5	58# PCK	4.2	60" x 180 yd	—	7	7	8	8	7	-40	250
	6035PL	Heavy linered version of 6035PC for easy handling, lay-flat properties.	5	83# PCK	6.2	60" x 180 yd	—							
	6038PC	Low fogging. Automotive fabric and carpet attachment.	8	58# PCK	4.2	60" x 180 yd	—							
	6038PL	Low fogging. For rough embossed surfaces with heavy liner for steel rule die-cutting.	8	83# PCK	6.2	60" x 180 yd	—							
	9772WL	Provides excellent bond to various fabricated foams, fabrics and substrates.	2	96# PCK	7.0	60" x 180 yd	—							
	9773WL		3											
	9774WL		4											
	9775WL		5											
320 High Tenacity Acrylic	**9447**	Designed for use with 3M™ Label Component Systems.	1	55# DK	3.2	54" x 360 yd	—	5	5	1	1	5	-60	250
350 High Performance Acrylic	**9442**	Excellent temperature and solvent resistance. High bond to low surface energy substrates.	2	55# DK	3.2	48" x 180 yd	UL	9	10	10	9	8	-40	450
	9445	Thicker version of 9442.	5	55# DK	3.2	48" x 180 yd	UL							
	9482PC	High tack and shear strength. Excellent adhesion to plastics and foams.	2	58# PCK	4.2	48" x 180 yd	UL							
	9485EK	Thicker version of 9482PC with an extensible Kraft liner.	5	78# EK	6.0	48" x 180 yd	—							
	9485PC	A 5 mil version of 9482PC.	5	58# PCK	4.2	48" x 180 yd	UL							
	9675	Heavy linered version of 9485PC for easy handling, lay-flat properties.	5	83# PCK	6.2	48" x 180 yd	—							

1 – More information on pages 8–9.
2 – More information on page 15.

Values: 1 = Lowest Performance; 10 = Highest Performance

Rankings are a general guide. Adhesives should be tested with actual components to ensure acceptable performance.

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3M™ Adhesive Transfer Tapes (cont.)

Adhesive Family[1]	Product	Description/Application Ideas	Adhesive Caliper (mils)	Liner[2]		Master Size	Specs	Adhesion				Chem. Resist.	Temp. Range	
				Type	Caliper (mils)			Metal	HSE Plastic	LSE Plastic	Foam		Low (°F)	High (°F)
400 Acrylic Adhesive	463	High tack and excellent adhesion to most paper stocks. For automatic dispensing.	2	60# DK	3.5	48" x 180 yd	—	5	5	5	4	5	-60	250
	465	Same as 463, but with easy liner release for manual or hand application.	2	60# DK	3.5	48" x 180 yd	—							
	465XL	Extended liner for easy removal and dispensing.	2	60# DK	3.5	1" x 600 yd	—							
	9457	Adhesive with long term stability, excellent outdoor performance and UV resistance. Adhesive 400 is best if necessary to apply at cooler temperatures.	1	55# DK	3.2	54" x 360 yd	UL							
	9665	Thicker version of 9457.	2	58# PCK	4.2	48" x 180 yd	—							
420 Acrylic Adhesive	F9752PC	High tack. Can be applied in temperatures as low as 32°F.	2	58# PCK	4.2	54" x 360 yd	—	7	7	8	4	6	-60	300
	F9755PC	Thicker version of F9752PC for textured surfaces.	5	58# PCK	4.2	54" x 360 yd	—							
430 Acrylic Adhesive	9497	Pink tinted high temperature splicing tape.	2	60# DK	3.5	48" x 360 yd	—	6	6	5	4	5	-40	350
	9499	Transparent version of 9497.	2	60# DK	3.5	48" x 360 yd	—							
Specialty Acrylic	9379	Jet fuel and hydraulic fluid resistant adhesive transfer tape.	2	PET	2	48" x 200 yd	M^H	9	8	1	2	9	-40	350
	9380	Thicker version on 9379.	5	PET	2	48" x 200 yd	M^H							
	F9465PC	Vinyl plasticizer resistant adhesive.	5	58# PCK	4.2	54" x 360 yd	—	10	10	7	5	5	-40	200
	F9467U	Vinyl plasticizer resistant adhesive.	3.5	58# PCK	4.2	54" x 180 yd	—							
Misc.	97053	Micro scrim reinforced adhesive transfer tape has excellent quick stick for permanent bond applications on plastics, metals, non-wovens, felts and foams. 60" wide master also available.	2.5	50# DK	3.0	54" x 250 yd	—	6	6	5	5	5	-40	175
Silicone	91022	Silicone attachment. Single lingered for easier processing.	2	White PET	2	48" x 180 yd	—	9	8	7	6	10	-60	500

1 – More information on pages 8–9.
2 – More information on page 15.
M^H meets Mil-P-19834B Type I.

Values: 1 = Lowest Performance; 10 = Highest Performance

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3M™ Double Linered Adhesive Transfer Tapes

Adhesive Family[1]	Product	Description/Application Ideas	Adhesive Caliper (mils)	Liner[2] Type	Liner[2] Caliper (mils)	Master Size	Specs	Adhesion Metal	Adhesion HSE Plastic	Adhesion LSE Plastic	Adhesion Foam	Chem. Resist.	Temp. Range Low (°F)	Temp. Range High (°F)
100MP* High Performance Acrylic	9437	Excellent rotary die-cutting.	2	58# PCK	4.2	48" x 180 yd	—	10	7	1	2	10	-40	500
				58# PET	1.4									
200MP High Performance Acrylic	7952MP	Double linered laminating adhesive 467MP.	2	58# PCK	4.2	48" x 360 yd	UL	10	9	1	3	9	-40	400
				58# PCK	4.2	24" x 36"								
	7955MP	Double linered laminating adhesive 468MP. For selective die-cutting.	5	58# PCK	4.2	48" x 360 yd	UL							
				58# PCK	4.2	24" x 36"								
	7962MP	Laminating adhesive 7952MP on a lay-flat liner for kiss-cutting and and selective die-cutting.	2	83# PCK	6.2	48" x 360 yd	UL							
				58# PCK	4.2	24" x 36"								
	7965MP	Laminating adhesive 7955MP on a lay-flat liner for kiss-cutting and selective die-cutting.	5	83# PCK	6.2	48" x 360 yd	UL							
				58# PCK	4.2	24" x 36"								
	9172MP	Laminating adhesive 467MP with transparent liner for graphic inspection. Strong liner for one piece removal.	2	58# PCK	4.2	48" x 180 yd	UL							
				58# HDPE	3.0									
	9185MP	5 mil version of laminating adhesive 9172MP.	5	58# PCK	4.2	48" x 180 yd	UL							
				58# HDPE	3.0									
220 Industrial Acrylic	9552	Economical attachment of graphics and industrial joining. Double linered version of 9502.	2.3	58# PCK	4.2	48" x 360 yd	UL	8	7	1	2	8	-40	350
	9555	Thicker version of 9552 for textured surfaces. Double linered version of 9505.	4.9	58# PCK	4.2	48" x 360 yd	UL							
300 High Strength Acrylic	9428	Double linered version laminating adhesive 9458. Printable liner for application instructions.	1	55# DK	3.2	54" x 360 yd	—	7	9	9	9	6	-40	250
				43# DK	2.5									
300/400 Acrylic	9466B	Piggy-back adhesive for producing label sets. For photographic bar-code labels.	2	White PP	3.5	48" x 180 yd	—	7	9	9	9	6	-40	250
			1	60# DK	3.7			5	5	5	5	5	-60	250
300LSE Low Surface Energy Acrylic	8132LE	Double linered laminating adhesive 9471LE. For selective die-cutting. Application to smooth surfaces.	2	58# PCK	4.2	48" x 360 yd	UL	9	10	10	1	7	-40	300
				83# PCK	6.2	24" x 36"								
	8153LE	Double linered laminating adhesive 9453LE. For selective die-cutting. Application to rough surfaces.	3.5	58# PCK	4.2	48" x 360 yd	UL							
				83# PCK	6.2	24" x 36"								

1 – More information on pages 8–9.
2 – More information on page 15.
*Products in this platform are 3M™ VHB™ Tapes offering our highest strength.

Values: 1 = Lowest Performance; 10 = Highest Performance
Rankings are a general guide. Adhesives should be tested with actual components to ensure acceptable performance.

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3M™ Double Linered Adhesive Transfer Tapes (cont.)

Adhesive Family[1]	Product	Description/ Application Ideas	Adhesive Caliper (mils)	Liner[2] Type	Liner[2] Caliper (mils)	Master Size	Specs	Adhesion Metal	Adhesion HSE Plastic	Adhesion LSE Plastic	Adhesion Foam	Chem. Resist.	Temp. Range Low (°F)	Temp. Range High (°F)
300MP High Tack Acrylic	**7951**	Double linered laminating adhesive 9770. For selective die-cutting. Excellent adhesion to LSE plastics.	2	58# PCK	4.2	48" x 360 yd	UL	7	7	8	8	7	-40	250
				58# PCK	4.2	24" x 36" sheets								
	9784	For see-through graphic inspection. A film linered version of laminating adhesive 9774.	4	58# PCK	4.2	48" x 180 yd	—							
				58# HDPE	3.0									
2000MP Optically Clear Acrylic	**8211**	General purpose, high adhesion optically clear adhesive.	1	PET/ PET	2.0/2.0	60" x 180 yd	—	9	9	—	—	9	-40	350
	8212		2	PET/ PET	2.0/2.0	60" x 180 yd								
	8213*		3	PET/ PET	2.0/2.0	60" x 180 yd								
	8214*		4	PET/ PET	2.0/2.0	60" x 180 yd								
	8215*		5	PET/ PET	2.0/2.0	60" x 180 yd								
	8141KCL*	Very soft, optically clear adhesive.	1	PET/ PET	3.0/3.0	60" x 180 yd	—	—	4	—	—	6	-40	185
	8142KCL*	Very soft, optically clear adhesive.	2	PET/ PET	3.0/3.0	60" x 180 yd		—	5	—	—			
	8171PCL*	UV blocking, optically clear adhesive.	1	PET/ PET	2.0/2.0	60" x 180 yd		—	4	—	—			
	8172PCL*	UV blocking, optically clear adhesive.	2	PET/ PET	2.0/2.0	60" x 180 yd		—	5	—	—			
	8173KCL*	Double sided, optically clear adhesive.	3	PET/ PET	2.0/2.0	60" x 180 yd		—	5	—	—			
	9483	Optically clear adhesive.	5	PET/PP	3.0/3.0	48" x 180 yd	—	9	9	—	—	9	-40	350

1 – More information on pages 8–9.
2 – More information on page 15.
*Made to order. Longer lead time required.
Note: All optically clear adhesives can be manufactured in a single coated or double coated tape format upon special request.

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Disclaimer: Adhesives should be tested with actual components to ensure acceptable performance.

3M™ Double Coated Tapes

Adhesive Family[1]	Product	Description/ Application Ideas	Tape Cal. (mils)	Carrier Type	Liner[2] Type	Liner[2] Caliper (mils)	Master Size	Specs	Adhesion Metal	Adhesion HSE Plastic	Adhesion LSE Plastic	Adhesion Foam	Chem. Resist.	Temp. Range Low (°F)	Temp. Range High (°F)
200MP High Performance Acrylic	92015	Double coat with thin polyester film carrier for dimensional stability and improved handling.	5.9	PET	58#	4.2	54" x 180 yd	—	10	9	1	2	9	-40	400
200MP/ 300LSE Differential Adhesive	9496LE	Differential double coated tape featuring High Performance Acrylic Adhesive 200MP and Low Surface Energy Acrylic Adhesive 300LSE.	6.7	PET	58# PCK	4.2	24" x 36" sheets	—	10	9	1	2	9	-40	400
									9	9	10	1	8	-40	300
300LSE Low Surface Energy Acrylic	93005LE	Very thin double coated polyester tape with good anti-lifting properties.	2.0	PET	58# PCK/ 83# PCK	4.2/ 6.2	48" X 60 yd	—	9	9	10	1	8	-40	300
	93010LE	Extremely smooth adhesive for excellent graphic appearances. Good chemical and humidity resistance.	3.9	PET	58# PCK	4.2	54" X 180 yd	—							
	93015LE	Extremely smooth adhesive for excellent graphic appearances. Good chemical and humidity resistance.	5.9	PET	58# PCK	4.2	54" X 180 yd	—							
	93020LE	Extremely smooth adhesive for excellent graphic appearances. Good chemical and humidity resistance.	7.9	PET	58# PCK	4.2	54" X 180 yd	—							
300 High Strength Acrylic	444	Foam lamination. Gasket attachment.	3.9	PET	55# DK	3.2	48" x 108 yd	—	7	9	9	9	6	-40	250
	444PC	Foam lamination. Gasket attachment.	3.9	PET	58# PCK	4.2	48" x 108 yd	—							
	XT6110	Attaching porous fabrics, flock, foams and heavy cardstocks.	3.9	PET	55# DK	3.2	48" x 36 yd	—							
	9009	Thin double coat for applications where thickness is critical.	2.1	PET	55# DK	3.2	54" x 180 yd	—							
	9019	Ultra-thin double coat for applications where thickness is critical.	1.1	PET	55# DK	3.2	54" x 180 yd	—							
	9039	Thin double coat where application thickness is critical.	3.5	PET	55# DK	3.2	54" x 180 yd	—							
300MP High Tack Acrylic	9687C	Thick double coat for bonding to foam. Provided on 6 in. core only.	12.0	Clear PET	Clear PET	2.0	54" x 180 yd	—	7	7	8	9	7	-40	250
	99786	Thin non-woven carrier for dimensional stability and improved handling. Temperature resistance up to 300°F.	5.5	Non-Woven	58# PCK Printed	4.2	48" x 180 yd	—							
	99786NP	Same as 9786 except an unprinted liner.	5.5	Non-Woven	58# PCK Unprinted	4.2	54" x 180 yd	—							
	9832	General purpose tape with improved temperature resistance.	4.8	PET	58# PCK	4.2	54" x 250 yd	—							
	9832HL	Same as 9832 except with a heavier liner.	4.8	PET	58# PCK	6.2	54" x 250 yd	—							

1 – More information on pages 8–9.
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3M™ Double Coated Tapes (cont.)

Adhesive Family[1]	Product	Description/ Application Ideas	Tape Cal. (mils)	Carrier Type	Liner[2] Type	Liner[2] Caliper (mils)	Master Size	Specs	Adhesion Metal	Adhesion HSE Plastic	Adhesion LSE Plastic	Adhesion Foam	Chem. Resist.	Temp. Range Low (°F)	Temp. Range High (°F)
340 High Tack Acrylic	**9456**	High tack acrylic adhesive with good adhesion to many plastics.	5.0	Tissue	55# DK	3.2	54" x 180 yd	—	6	6	5	4	8	-40	180
	9824	Foam lamination. Gasket attachment.	3.1	PET	55# DK	3.2	54" x 250 yd	—							
	9828		4.0	PET	55# DK	3.2	54" x 250 yd	—							
	9828PC	High tack acrylic adhesive with good adhesion to many foams.	4.0	PET	74# PCK	5.6	54" x 250 yd	—							
350 High Performance Acrylic	**9500PC**	High performance with good chemical resistance.	5.6	PET	61.5 PCK	4.5	48" x 108 yd	—	9	10	10	9	8	-40	450
	3028EK	Same as 9500PC with an extensible kraft liner which facilitates narrow slitting.	5.6	PET	Extensible Kraft	5.5	48" x 108 yd	—							
375 High Performance Double Coated	**9086**	Easy tearing, easy handling.	7.5	Tissue	Glassine Black Logo	3.0	54" x 750 yd	—	High	High	Med	Low	Good	-10	250
	9087	Thick adhesive to bond rough surfaces.	10.2	PVC	Glassine Green Logo	3.0	54" x 750 yd	—							185
	9088	High temperature resistance with paper liner.	8.3	PET	Glassine Red Logo	3.0	54" x 750 yd	—							300
	9088FL	High temperature resistance with film liner.	8.3	PET	Red PP, No Print	3.1	54" x 750 yd	—							300
400 Acrylic Adhesive	**415**	Splice papers, films and foils.	4.0	PET	60# DK	4.0	48" x 108 yd	—	5	5	5	5	5	-60	250
	9420		4.0	Red PET	60# DK	4.0	48" x 108 yd	—							
	9576		4.0	Clear PP	60# DK	4.0	27" x 360 yd	—							
	9576Y	Splice papers, films and foils.	4.0	Yellow PP	60# DK	4.0	27" x 360 yd	—							
	9578	For core starting, miscellaneous joining and bonding. Hand tearable for easy use.	4.0	Transluc. PP	60# DK	4.0	27" x 360 yd	—							
420 Acrylic Adhesive	**94210**	High tack adhesive offering good shock resistance.	3.9	PET	58# PCK	4.2	54" x 180 yd	—	7	7	8	4	6	-60	300
	94215	Thicker version of 94210.	5.9	PET	58# PCK	4.2	54" x 180 yd	—							
	94220	Thicker version of 94215.	7.9	PET	58# PCK	4.2	54" x 180 yd	—							

1 – More information on pages 8–9.
2 – More information on page 15.

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3M™ Double Coated Tapes (cont.)

Adhesive Family[1]	Product	Description/ Application Ideas	Tape Cal. (mils)	Carrier Type	Liner[2] Type	Liner[2] Caliper (mils)	Master Size	Specs	Adhesion Metal	Adhesion HSE Plastic	Adhesion LSE Plastic	Adhesion Foam	Chem. Resist.	Temp. Range Low (°F)	Temp. Range High (°F)
Silicone/ Acrylic Differential	9731	Differential adhesive. Ideal for attaching silicone materials to HSE or LSE materials.	5.5	PET	Clear PET/54# Tan PCK	3.0/5.4	48" x 180 yd	—	10	10	9	8	8	-40	300
Silicone	96042	Silicone attachment. Single linered for easier processing.	5	PET	White PET	2	48" x 180 yd	—	9	8	7	6	10	-40	350
700/745/ 760 Synthetic Rubber	9443NP	High tack rubber adhesive with good adhesion to most plastics.	6.0	HDPE	60# DK	3.7	27" x 120 yd	—	8	9	9	2	2	-40	200
	9579	Core starting on metal cores.	9.0	HDPE	62# DK	3.7	27" x 144 yd	—							
	9589	Carpet attachment.	9.0	HDPE	60# DK	3.7	26" x 144 yd	—							
830/850/ 860 Natural Rubber	401M	Used for mounting rubber or photopolymer printing plates.	9.0	Paper	54# DK	3.0	22" x 108 yd	—	8	8	8	5	1	-40	180
	410M	Core starting/end tabbing of papers, films and foils.	6.0	Paper	54# DK	3.0	23.5" x 108 yd	—	8	8	8	5	1	-40	200
900 Miscellaneous	9737	Clear, thin PET carrier. Aggressive and versatile splicing tape.	3.5	PET	55# DK White	3.5	54" x 180 yd	—	5	5	2	5	7	-10	300
	9737R	Red, thin PET carrier. Aggressive and versatile splicing tape.	3.5	PET	55# DK White	3.5	54" x 180 yd	—							
	9738	Clear, non-woven tissue carrier. Aggressive and versatile splicing tape.	4.3	Non-Woven Tissue	55# DK White	4.3	54" x 180 yd	—							
	9738R	Red, non-woven tissue carrier. Aggressive and versatile splicing tape.	4.3	Non-Woven Tissue	55# DK White	4.3	54" x 180 yd	—							
	9740	Clear, high peel, tack and shear strength. Performance grade splicing tape for corrugators.	3.5	PET	55# DK	3.5	54" x 180 yd	—	6	6	2	3	6	10	425
	9741	Clear, thick, super aggressive tape. Adheres to a wide variety of substrates for splicing applications.	6.5	PET	55# Glassine	6.5	54" x 180 yd	—	7	7	3	7	5	-40	200
	9816L	General purpose, high tack, rubber-based adhesive.	3.5	PET	60# Kraft	3.5	54" x 200 yd	—	8	8	7	7	3	-40	150
	9816M				74# Kraft	3.5	54" x 200 yd	—							
	9816H				14 pt. board	3.5	54" x 200 yd	—							
	9817L	Exposed side is acrylic, liner side is rubber-based. Excellent quick stick and adhesion to high and low energy surfaces.	3.3	PET	60# Kraft	3.5	54" x 200 yd	—	8	7	6	7	3	-40	175
	9817M				74# Kraft	3.5	54" x 200 yd	—	8	8	7	6	3		
	9817H				14 pt. board	3.5	54" x 200 yd	—							
Specialty Acrylic	9599	Acrylic adhesive for high adhesion to a variety of materials including metals and HSE plastics; low-VOC properties suitable for interior automotive applications.	5.0	Non-Woven Tissue	DK White	4.5	40" x 55 yd	—	9	8	7	4	7	-40	275

1 – More information on pages 8–9.
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3M™ Differential Double Coated Tapes

Adhesive Family[1]	Product	Description/ Application Ideas	Tape Cal. (mils)	Carrier Type	Liner[2] Type	Liner[2] Caliper (mils)	Master Size	Specs	Adhesion Metal	Adhesion HSE Plastic	Adhesion LSE Plastic	Adhesion Foam	Chem. Resist.	Temp. Range Low (°F)	Temp. Range High (°F)
300/400 Acrylic	9466B	Piggy-back adhesive laminating system designed to attach bar-code labels to blood bags and pharmaceutical containers.	2	—	White PP	3.5	48" x 180 yd	—	7	9	9	9	6	-40	250
			1	—	60# DK	3.7		—	5	5	5	5	5		
350/ Silicone Differential Adhesive	9731	Differential adhesive-silicone adhesive on back side. Silicone keypad attachment, printer toner cartridge refurbishing.	5.5	PET	PET/PCK	2.9/ 5.0	38" x 108 yd	—	9	10	10	9	8	-40	250
200MP/ 300LSE Differential Adhesive	9496LE	Adhesive 200MP provides excellent bond strength to a variety of high surface energy substrates. 300LSE bonds to powder coated metals, oily metals and LSE plastic.	6.7	PET	58#/58#	4.2/ 4.2	—	—	10	9	1	3	9	-40	250
									9	10	10	1	7		
Acrylic/ Rubber Differential Adhesive	9817L	Exposed side is acrylic, liner side is rubber-based. Excellent quick stick and adhesion to high and low energy surfaces.	3.3	PET	60# Kraft	3.5	54" x 200 yd	—	8	7	6	7	3	-40	175
	9817M		4.3	PET	74# Kraft		54" x 200 yd	—	8	8	7	6			
	9817H		5.3	PET	14 pt.Board		54" x 200 yd	—	8	8	7	6			
	9377	Flame retardant double coated tape for carpet installation to bond carpet to interior floorboards.	11.0	PP	58# PCK	4.2	24" x 25 yd	—	4/10	—	—	—	8	40	250

3M™ Removable/Repositionable Tapes

Adhesive Family[1]	Product	Description/ Application Ideas	Tape Cal. (mils)	Carrier Type	Liner[2] Type	Liner[2] Caliper (mils)	Master Size	Specs	Adhesion Metal	Adhesion HSE Plastic	Adhesion LSE Plastic	Adhesion Foam	Chem. Resist.	Temp. Range Low (°F)	Temp. Range High (°F)
400/1000* Differential Adhesive	9415PC	Differential adhesive. Polyester film carrier.	2	PET	78# PCK	6.0	48" x 216 yd	—	5	5	5	4	5	-20	150
	9416	Differential adhesive. Tissue carrier.	1	Tissue	70# PCK	5.6	48" x 216 yd	—	3	1	1	—	2		
	928 ATG	Reverse wound ATG version of 9416 on 1" core. Used with ATG700 Applicator.	1	Tissue	70# PCK	5.6	Width to 3/4" Length to 36 yd	—	3	1	1	—	2		
420/1050* Differential Adhesive	9425	High tack/medium tack for repositionable parts.	5.5	UPVC	58# PCK	4.2	48" x 144 yd	—	8	7	1	4	2	-20	125
									3	1	1	1	2		
	9425HT	High tack/medium tack acrylic adhesive offers permanent adhesion to one substrate with removability to the other.	5	PET	58# PCK	4.2	48" x 144 yd	—	8	7	1	4	2	-20	250
									3	1	1	1	2		
400/1070 Repositionable Acrylic	665	Differential adhesive. Linerless.	3.5	UPVC	None	—	46" x 108 yd	—	5	5	5	4	5	-60	125
	666	Differential adhesive. Linered.		UPVC	LDPE	4.0		—							
Differential Acrylic	97027	High tack/low tack acrylic adhesive with polyester carrier (formerly Venture 4447).	2.9	PET	74# PCK	3.5	54" x 250 yd	—	8	7	6	5	3	-40	250
									1	1	1	1			
	97042	High tack/medium tack acrylic adhesive with polyester film carrier (formerly Venture 523).	3.8		55# DK	3	54" x 250 yd	—	7	6	4	3	6	-40	275
									3	2	1	1			
1000 Repositionable Acrylic	9449S	Laminates to various substrates to make them repositionable.	0.4	None	55# DK	2.5	48" x 360 yd	—	3	1	1	—	2	-20	250
100 High Temp. Acrylic	9658F	Clear, closed foam acrylic foam tape. Initially repositionable, but will create permanent bond.	31.0	None	PET	2.0	47" x 175 yd	—	9	8	1	—	9	-40	450
800 Natural Rubber	401M	Temporary positioning or fixturing of parts during machining operations and plate mounting.	9.0	Paper	54# DK	3	22" x 108 yd	—	8	8	8	5	1	-40	180
	410M		6.0				23.5" x 108 yd							-40	200

1 – More information on pages 8–9. 2 – More information on page 15. *Second number reflects removable adhesive side.

Values: 1 = Lowest Performance; 10 = Highest Performance

Rankings are a general guide. Adhesives should be tested with actual components to ensure acceptable performance.

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

3M™ Extended Liner Tapes

Adhesive Family[1]	Product	Tape Thickness w/o liner mils (mm)	Liner Type[2]	Description	Temperature Resistance °F (°C) Minutes Hours	Temperature Resistance °F (°C) Days Weeks	Solvent Resistance	Relative Adhesion HSE	Relative Adhesion LSE	Application Ideas
340	466XL	2.0 (0.05)	62# DK White with Black Print	High tack; permanent	180 (82)	150 (65)	Med	High	High	Coated papers and low surface energy (LSE) plastics. Overnight envelopes. Features an end-of-roll indicator tab for automated dispensing.
400	465XL	2.0 (0.05)	60# DK Tan with Green Print	General purpose	250 (121)	180 (82)	Med	Med	Low	Seal flaps on overnight envelopes. Pressure sensitive edging on business forms. General commercial joining applications. For attaching materials that require more adhesive thickness. Larger outsert attachments.
	450EK	1.0 (0.025)	78# Extensible Kraft White without Print							Pharmaceutical outsert attachment. For applications requiring a more tear resistant liner.
	450XL	1.0 (0.025)	60# DK Tan with Green Print							Pharmaceutical outsert attachment. General paper attachment.
	920XL	1.0 (0.025)	40# DK White with Red Print							Seal flaps on poly-bags and envelopes. Pressure sensitive edging on business forms, literature, photos, posters and labels.
	9926XL	1.0 (0.025)	40# DK White with Red Print	General purpose	180 (82)	150 (65)	Med	Med	Low	Economical alternative for general paper-to-paper applications.
600	9934XL	4.0 (0.10)	60# DK Tan without Print	High tack to LSE materials	150 (65)	120 (49)	Med	High	High	P.O.P. displays. Difficult splicing applications, shelf talkers, price tags, polyethylene foam bonding. indirect food-contact applications.[3] High tack to LSE materials.
760	476XL	6.0 (0.16)	62# DK White with Red Print	High tack, double coated film	150 (65)	120 (49)	Med	High	High	Heavy-duty sealing. Mounting of promotional items. Core starting. Closure of overnight boxes, tubes and envelopes. Indirect food-contact applications.[3]
770	9925XL[4]	2.5 (0.065)	43# DK White with Black Print	Tissue reinforced; High initial adhesion to a wide variety of materials	150 (65)	100 (41)	Low	Med	Med	General mounting. P.O.P. items. Attaching tags and labels. Core starting. Permanent bonding paper-to-paper, business forms, traffic tickets, novelty items and literature. Indirect food-contact applications.[3]

1 – More information on pages 8–9.
2 – More information on page 15.
3 – FDA acceptable dry ingredients listed as indirect food-contact additives when used in food packing with minimal opportunity for exposure.
4 – Non-liner side is adhesive coated full width.

Relative Adhesion:
HSE – High Surface Energy
LSE – Low Surface Energy

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

3M™ Membrane Switch Spacers — Double Coated Spacers

Adhesive Family[1]	Product	Description/ Application Ideas	Construction: Total Thickness (mils)	Construction: Top Liner Adhesive Type Carrier Adhesive Type Bottom Liner	Construction: Caliper (mils)	Sheet Size Master Roll	Specs
100MP High Performance Acrylic	**7979**	Premium adhesive for harsh chemical and high temperature resistance. High shear strength withstands repeated stresses from switch actuation. Both liners are printed.	9	58# PCK 100 MP* Polyester 100 MP* 58# PCK	2 5 2	24" x 36" 48" x 360 yd	—
200MP High Performance Acrylic	**7945MP**	Excellent temperature, chemical and UV resistance. High shear strength withstands repeated stresses of switch actuation. Designed to separate switch circuitry until actuation. Both liners are printed.	5	58# PCK 200MP Polyester 200MP 58# PCK	2 1 2	24" x 36" 48" x 360 yd	UL
	7953MP	Same characteristics as 7945MP. Primary liner is printed. Also used for graphic attachment.	3.5	58# PCK 200MP Polyester 200MP 58# PCK	1.5 0.5 1.5	24" x 36" 48" x 360 yd	UL
	7953HL	Same characteristics as 7953MP with a single liner.	3.5	83# PCK 200MP Polyester 200MP	1.5 0.5 1.5	48" x 360 yd	—
	7956MP	Same characteristics as 7945MP. Both liners are printed.	6	58# PCK 200MP Polyester 200MP 58# PCK	2 2 2	24" x 36" 48" x 360 yd	UL
	7956MWS	For use in graphic and non-graphic applications. Metallized vapor coat and white color provide strong opacity for facilitating backlighting and eliminating floodcoats. Single liner.	6	58# PCK 200MP Polyester (white, vapor coated) 200MP	2 2 2	48" x 360 yd	UL
	7956WDL	Same characteristics as 7956MWS except in sheets.	6	58# PCK 200MP Polyester (white, vapor coated) 200MP 58# PCK	2 2 2	24" x 36" 48" x 360 yd	UL
	7957MP	Same characteristics as 7945MP, except thicker polyester. Both liners are printed.	7	58# PCK 200MP Polyester 200MP 58# PCK	2 3 2	24" x 36" 48" x 360 yd	UL
	7959MP	Same characteristics as 7945MP, except thicker polyester. Both liners are printed.	9	58# PCK 200MP Polyester 200MP 58# PCK	2 5 2	24" x 36" 48" x 360 yd	UL
	7961MP	Same characteristics as 7945MP, except thicker polyester. Both liners are printed.	11	58# PCK 200MP Polyester 200MP 58# PCK	2 7 2	24" x 36" 48" x 360 yd	UL
	7966MWS	For use in graphic and non-graphic applications. Metallized vapor coat and white color provide strong opacity for facilitating backlighting and eliminating floodcoats.	9	58# PCK 200MP Polyester (white) 200MP	2 2 5	48" x 360 yd	UL
	7966WDL	Same characteristics as 7966MWS except in sheets.	9	58# PCK 200MP Polyester (white, vapor coated) 200MP 58# PCK	2 2 5	24" x 36" 48" x 360 yd	UL
	9045MP	Excellent high temperature, chemical, and UV resistance. High cohesive strength withstands repeated stresses of switch actuation. Heavy liner for improved handling and lay-flat properties. Both liners are printed.	5	94# PCK 200MP Polyester 200MP 94# PCK	2 1 2	24" x 36" 48" x 360 yd	UL

1 – More information on pages 8–9. *Products in this platform are 3M™ VHB™ Tapes offering our highest strength.

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

3M™ Membrane Switch Spacers — Double Coated Spacers (cont.)

Adhesive Family[1]	Product	Description/ Application Ideas	Construction: Total Thickness (mils)	Construction: Top Liner Adhesive Type Carrier Adhesive Type Bottom Liner	Construction: Caliper (mils)	Sheet Size Master Roll	Specs
200MP High Performance Acrylic *(cont.)*	**9056MP**	Same characteristics as 9045MP, except thicker polyester. Both liners are printed.	6	94# PCK 200MP Polyester 200MP 94# PCK	2 2 2	24" x 36" 48" x 360 yd	UL
	9057MP	Same characteristics as 9045MP, except thicker polyester. Both liners are printed.	7	94# PCK 200MP Polyester 200MP 94# PCK	2 3 2	24" x 36" 48" x 360 yd	UL
	9059MP	Same characteristics as 9045MP, except thicker polyester. Both liners are printed.	9	94# PCK 200MP Polyester 200MP 94# PCK	2 5 2	24" x 36" 48" x 360 yd	UL
	9061MP	Same characteristics as 9045MP, except thicker polyester. Both liners are printed.	11	94# PCK 200MP Polyester 200MP 94# PCK	2 7 2	24" x 36" 48" x 360 yd	UL

1 – More information on pages 8–9.

3M™ Membrane Switch Spacers — Single Coated Spacers

Adhesive Family[1]	Product	Description/ Application Ideas	Construction: Total Thickness (mils)	Construction: Carrier Adhesive Type Bottom Liner	Construction: Caliper (mils)	Sheet Size Master Roll	Specs
200MP High Performance Acrylic	**7992MP**	Adhesive 200MP on one side of a clear polyester carrier.	4	Polyester Film 200MP 94# PCK	2 2	24" x 36" 48" x 360 yd	—
	7992MPW	Adhesive 200MP on one side of a white polyester carrier. Ideal for providing keypad light management in membrane switch circuit.	4	White Polyester Film 200MP 94# PCK	2 2	24" x 36" 48" x 360 yd	UL
	7993MP	Excellent temperature, chemical, and UV resistance. Used for lead protection, dome retainer sheets, and for printing conductive circuitry.	3	Polyester Film 200MP 94# PCK	1 2	24" x 36" 48" x 360 yd	UL
	7995MP	Same characteristics as 7993MP, except with thicker polyester.	5	Polyester 200MP 94# PCK	3 2	24" x 36" 48" x 360 yd	UL
	7997MP	Same characteristics as 7993MP, except with thicker polyester.	7	Polyester 200MP 94# PCK	5 2	24" x 36" 48" x 360 yd	UL

1 – More information on pages 8–9.

3M™ Screen Printable Adhesives

Product Group	Product	Description/ Application Ideas	Adhesion Specs	Size
Screen Printable Adhesives	**SP7533**	Water-dispersed, pressure sensitive. Excellent balance of peel and shear strength. High heat resistance.	Process dependent	1 liter (6/case) 5 liters (2/case) 1 gallon (4/case)
	SP7555	UV curable.	Process dependent	1 liter (6/case)

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

3M™ Industrial Attachment Tapes — X-Series

Product	Description/Application Ideas	Adhesive Caliper (mils)	Carrier Type	Liner[2] Type	Liner[2] Caliper (mils)	Master Size	Adhesion Metal	Adhesion HSE Plastic	Adhesion LSE Plastic	Adhesion Foam	Chem. Resist.	Temp. Range Low (°F)	Temp. Range High (°F)
Adhesive Transfer Tapes													
XG2105	Used for paper attachment.	2	n/a	55# DK	3.2	48" x 60 yd	5	5	5	4	5	-60	250
XT2105	Attach coated papers and plastics.	2	n/a	55# DK	3.2	48" x 60 yd	6	9	9	4	5	-40	200
XT2112	Attach paperboard and plastics.	5	n/a	55# DK	3.2	48" x 60 yd							
XP2112	Ideal for hanging posters and signs, trophy and recognition placards, and nameplates and emblems; securely attach smooth surface moldings and trim.	5	n/a	55# DK	3.2	48" x 36 yd	9	10	10	9	8	-40	450
Double Coated Tapes													
XG5110	Attach papers and plastic films in print, graphics and specialty packaging applications.	4	Clear PP	55# DK	3.2	27" x 60 yd	5	5	5	5	5	-60	250
XG6110	Used to attach papers and plastic film in print, graphic and specialty packaging applications.	4	Clear PET	55# DK	3.2	48" x 60 yd	5	5	5	5	5	-60	250
XP6114	High shear strength tape for mounting plastic and metal trim.	5.6	PET	58# PCK	4.2	48" x 36 yd	9	10	10	9	8	-40	450
XR4115	Aggressive rubber adhesive for superior quick stick adhesion. Clean removal from solid surfaces.	6	HDPE	58# DK	4	27" x 60 yd	8	9	9	2	2	-40	200
XR4123	Aggressive rubber adhesive with tough carrier for clean removal from solid surfaces.	9	HDPE	58# DK	4	27" x 36 yd	8	9	9	2	2	-40	200
XR8115	Hand tearable double coated paper tape for temporary holding and clean removal.	6	Paper	54# DK	3	23.5" x 36 yd	8	8	8	5	1	-40	200
XR8123	Hand tearable double coated paper tape with thick carrier for temporary holding and clean removal.	9.0	Paper	54# DK	3	22" x 36 yd	8	8	8	5	1	-40	180
XT6110	Attaching porous fabrics, flock, foams and heavy cardstocks.	3.9	PET	55# DK	3.2	48" x 36 yd	7	9	9	9	6	-40	250

2 – More information on page 15.

Values: 1 = Lowest Performance; 10 = Highest Performance

Rankings are a general guide. Adhesives should be tested with actual components to ensure acceptable performance.

Product	Tape Thickness w/o liner (mils)	Description	Temperature Resistance Minutes Hours	Temperature Resistance Days Weeks	Solvent Resistance	Relative Adhesion HSE	Relative Adhesion LSE	Application Ideas	Adhesive Transfer Tape Equivalent
ATG Adhesive Systems									
XT2105-ATG	2	High tack. Excellent adhesion to coated papers, paperboard and plastics.	200°F (93°C)	150°F (65°C)	Med	High	High	Attach coated papers and plastics in printing and graphic applications.	XT2105
XT2112-ATG	5							Perfect for plastics assembly and for attaching heavy paperboards and corrugated in P.O.P. and packaging applications.	XT2112

Relative Adhesion: HSE – High Surface Energy; LSE – Low Surface Energy

Scotch® ATG Applicator 700

Used for 3/4" and 1/2" wide tape

42

Scotch® ATG Applicator 714

Used for 1/4" wide tape

43

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

Scotch® ATG Adhesive Transfer Tapes

Adhesive Family[1]	Product	Tape Thickness w/o liner mils (mm)	Description	Temperature Resistance Minutes Hours	Temperature Resistance Days Weeks	Solvent Resistance	Relative Adhesion HSE	Relative Adhesion LSE	Application Ideas	Adhesive Transfer Tape Equivalent
300 High Tack Acrylic	**976**	2.0 (0.05)	High tack. Excellent adhesion to most plastics.	250°F (121°C)	150°F (65°C)	Med	High	High	Attach fabric swatches in sample books.	927
	969	5.0 (0.13)							Assemble P.O.P. displays. Bond trim strips to furniture or luggage. Bond labels to plastic toys. Attach gaskets or foams.	950
350 High Performance Acrylic	**926**	5.0 (0.13)	High performance. Excellent temperature and solvent resistance.	450°F (232°C)	300°F (149°C)	High	High	High	Bond fabric or trim to window blinds. Splice aluminum coils. Bond foam insulation. Mount nameplates on award plaques.	F9485PC
400 General Purpose Adhesive	**970XL**	1.0 (0.025)	General purpose. Excellent adhesion to most paper stocks.	250°F (121°C)	180°F (82°C)	Med	Med	Low	Attach photos to layouts. Attach labels.	920XL
	924	2.0 (0.05)							Seal pocket in folders. Bond mat board in picture frames. Splice paper, films and foils. General purpose bindery attaching.	465
	987*	1.7 (0.040)								9498
400/1000 Repositionable Adhesive	**928**	2.0 (0.05)	Differential tack. Repositionable.	180°F (82°C)	150°F (65°C)	Med	High/ Low	Low/ Low	Attach credit card in mailer. Core start/end tab paper, films and foils. Attach temporary labels.	9416

1 – More information on pages 8–9.
* 3M Brand

Relative Adhesion: HSE – High Surface Energy; LSE – Low Surface Energy

3M™ VHB™ Tapes

Product Number	Tape Thickness w/o Liner mils (mm)	Liner Type	Description	Adhesive Type	Temp. Resistance °F (°C) Minutes Hours	Temp. Resistance °F (°C) Days Weeks	Solvent Resistance	Relative Adhesion HSE	Relative Adhesion LSE	Application Ideas
4941 Tape Family										
4926	15 (0.4)	A	Gray, closed-cell acrylic foam carrier. Conformable. Good adhesion to many painted metals. Plasticizer resistant. UL 746C.	Multi-purpose acrylic	300 (149)	200 (93)	High	High	Med	Bond and seal polycarbonate lens over LCD. Bond and seal plastic windows to pre-painted control panels/switch gear. Mount vinyl wiring ducts and conduit channels. Seam vinyl banners.
4936	25 (0.64)	A								
4936F	25 (0.64)	F								
4941	45 (1.1)	A								
4941F	45 (1.1)	D								
4956	62 (1.6)	A								
4956F	62 (1.6)	F								
4991	90 (2.3)	F			250 (121)	200 (93)				
4991B	90 (2.3)	F	Black version of 4991.							
4919F	25 (0.64)	F	Black version of 4936F.		300 (149)	200 (93)				
4947F	45 (1.1)	F	Black version of 4941F.							
4979F	62 (1.6)	F	Black version of 4956F.							
5952 Tape Family										
5906	6 (0.15)	G	Black, closed-cell acrylic foam carrier. Good adhesion to many painted surfaces, including powder coated paint.	Modified Acrylic	300 (149)	250 (121)	High	High	Med	Bond and seal polycarbonate lens over LCD. Lens and touch panel bonding. Logo attachment. P.O.P. and display construction.
5907	8 (0.20)	G								
5908	10 (0.25)	G								
5909	12 (0.30)	G								
5915	16 (0.40)	F	Black or white, closed-cell acrylic foam carrier. Good adhesion to many painted surfaces, including powder coated paint. UL 746C.							Bonds to a variety of plastics and paint systems. Bond architectural signs to frames. Attach trim and extrusions. Hat channels and stiffeners.
5915P	16 (0.40)	E								
5915WF	16 (0.40)	F								
5925	25 (0.60)	F								
5925P	25 (0.60)	E								
5925WF	25 (0.60)	F								

Liner Types:
A – 3 mil 54# Densified Kraft Paper
B – 5 mil Clear Polyethylene Film
C – 2 mil Polyester Film
D – 5 mil Red Polyethylene Film
E – 4 mil 58# Polycoated Kraft Paper
F – 5 mil Red Printed Polyethylene Film
G – 3 mil Clear PET

Relative Adhesion:
HSE – High Surface Energy; LSE – Low Surface Energy

Multi-purpose Acrylic: Bonds to a wide range of materials including metals, glass, and high and medium surface energy plastics and paints. Resists migration of plasticizers in vinyl substrates.

Modified Acrylic: Bonds to medium low surface energy paints and plastics, including many powder coated paints in addition to the substrates listed with the multi-purpose acrylic adhesive (except plasticized vinyl).

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

3M™ VHB™ Tapes (cont.)

Product Number	Tape Thickness w/o Liner mils (mm)	Liner Type	Description	Adhesive Type	Temp. Resistance °F (°C) Minutes Hours	Temp. Resistance °F (°C) Days Weeks	Solvent Resistance	Relative Adhesion HSE	Relative Adhesion LSE	Application Ideas
5952 Tape Family (cont.)										
5930	32 (0.80)	F	Black or white, closed-cell acrylic foam carrier. Good adhesion to many painted surfaces, including powder coated paint. UL 746C.	Modified Acrylic	300 (149)	250 (121)	High	High	Med	Bonds to a variety of plastics and paint systems. Bond architectural signs to frames. Attach trim and extrusions. Hat channels and stiffeners.
5930P	32 (0.80)	E								
5930WF	32 (0.80)	F								
5952	45 (1.1)	F								
5952P	45 (1.1)	E								
5952WF	45 (1.1)	F								
5962	62 (1.6)	F								
5962P	62 (1.6)	E								
5962WF	62 (1.6)	F								
5958FR	40 (1.0)	F	Meets FAR 25.853 (a) 12 sec vertical burn Appendix F, Part 1 (a) (ii)		300 (149)	200 (93)				Overhead stow bins, signage, kick plates, galley modules, plastic and metal decorative trim, ceiling tile stiffeners, mirror mounting, air duct spuds, floor and wall panel attachment, clip attachment.
RP Tape Family										
RP16	16 (0.4)	A	Gray, closed-cell acrylic foam carrier. Conformable. Good adhesion to many painted metals.	Multi-purpose Acrylic	250 (121)	200 (93)	High	High	Med	Panel bonding, stiffener attachment and trim attachment.
RP16F	16 (0.4)	F								
RP25	25 (0.6)	A								
RP25F	25 (0.6)	F								
RP32	32 (0.8)	A								
RP32F	32 (0.8)	F								
RP45	45 (1.1)	A								
RP45F	45 (1.1)	F								
RP62	62 (1.6)	A								
RP62F	62 (1.6)	F								

Liner Types:
A – 3 mil 54# Densified Kraft Paper
B – 5 mil Clear Polyethylene Film
C – 2 mil Polyester Film
D – 5 mil Red Polyethylene Film
E – 4 mil 58# Polycoated Kraft Paper
F – 5 mil Red Printed Polyethylene Film
G – 3 mil Clear PET

Relative Adhesion:
HSE – High Surface Energy; LSE – Low Surface Energy

Multi-purpose Acrylic: Bonds to a wide range of materials including metals, glass, and high and medium surface energy plastics and paints. Resists migration of plasticizers in vinyl substrates.

Modified Acrylic: Bonds to medium low surface energy paints and plastics, including many powder coated paints in addition to the substrates listed with the multi-purpose acrylic adhesive (except plasticized vinyl).

3M™ Double Coated Foam Tapes

Carrier	Product	Liner Type	Tape Thickness mils (mm)	Description	Adhesive Type	Temp. Resistance °F (°C) Minutes Hours	Temp. Resistance °F (°C) Days Weeks	Solvent Resistance	Relative Adhesion HSE	Relative Adhesion LSE	Application Ideas
Urethane	**4004**	A	250 (6.4)	Off-white, open-cell urethane foam carrier. High shear adhesive with high temperature resistance.	100	380 (193)	220 (104)	Med	High	Low	Bond acoustic panels to walls. Mount air fresheners, soap dispensers, interior signs and nameplates. Attach wire clips to various surfaces. Mount electrical channel to wall.
	4026	A	62 (1.6)								
	4052	A	31 (0.8)	Black version of 4032.							
	4056	A	62 (1.6)	Black version of 4016 and 4026.							
	4085	E	45 (1.1)	Off-white, open-cell urethane foam carrier. High tack adhesive.	740	200 (93)	125 (52)				
Polyeth-ylene	**4451**	C	32 (0.8)	Black, closed-cell high density polyethylene foam carrier.	A135	150 (66)	120 (49)	Med	High	Low	Removable applications where good static is needed. Exhibits and trade shows. Nameplates.
	4462	B	31 (0.8)	White or black, closed-cell polyethylene foam carrier. High tack adhesive.	745	158 (70)	120 (49)	Med	High	Low	Attach hooks, wire clips and racks. Mount retail shelf price channels. Mount pen holders.
	4466	B	62 (1.6)								
	4492	C	31 (0.8)	White or black, closed-cell polyethylene foam carrier. High shear adhesive with high temperature resistance.	430	180 (82)	158 (70)	Med	High	Low	Mount nameplates on awards and novelties. P.O.P. displays and signs.
	4496	C	62 (1.6)								
Acrylic	**4658F**	D	31 (0.8)	Clear, closed-cell acrylic foam tape. Clean removability from many substrates.	100	212 (100)	175 (80)	High	High	Low	Removable P.O.P. displays, signs, exhibits and trade shows, nameplates.

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

3M™ Bonding Films

Product Number	Caliper (mils)	Base Resin	Color	Bond/ Cure Time	Bondline Temp. (°F)	Description	Size
406	3.0	EAA	Clear	2–5 sec.	320	Flexible, light colored, thermoplastic bonding film exhibits good adhesion to a variety of substrates, especially metals.	48" x 180 yd
583	2.0	Nitrile Phenolic	Brown	2–5 sec.	250	Heat or solvent-activated dry film adhesive.	48" x 180 yd
588	6.0	Nitrile Phenolic	Yellow	2–5 sec.	250	Heat or solvent-activated dry film adhesive.	21" x 180 yd
615	2.5 or 4.0	Polyester	Tan	2–5 sec.	280	Flexible, light colored, thermoplastic bonding films exhibit good adhesion to a variety of substrates. 615 contains a non-woven scrim.	0.6m x 155m
615S	6.0 or 9.0	Polyester	Tan	2–5 sec.	280	Flexible, light colored, thermoplastic bonding films exhibit good adhesion to a variety of substrates. 615S contains a non-woven scrim.	6 mil: 0.6m x 155m 9 mil: 0.6m x 80m
668	2.5 or 4.0	Polyamide	Tan	2–5 sec.	320	Flexible, light colored, thermoplastic bonding film is tacky at room temperature and has good adhesion to a variety of substrates at elevated temperatures.	0.6m x 155m
690	8.0	Polyester	Tan	2–5 sec.	280	Flexible, light colored, thermoplastic bonding film is tacky at room temperature and has good adhesion to a variety of substrates at elevated temperatures.	0.6m x 80m*

*MOQ is 2 rolls.

3M™ Tapes for Electronic Solutions

Adhesive Family[1]	Product	Description/ Application Ideas	Adhesive Caliper (mils)	Liner[2]		Master Size	Specs	Adhesion				Chem. Resist.	Temp. Range	
				Type	Caliper (mils)			Metal	HSE Plastic	LSE Plastic	Foam		Low (°F)	High (°F)
Electrically Conductive	**9703**	Z-axis only electrically conductive for interconnects, low outgassing version of 9705.	2.0	58# PCK	4.0	24" x 108 yd	—	5	4	4	—	6	20	160
	9705	Z-axis only electrically conductive for interconnects, acrylic adhesive, Ag fillers.	2.0	58# PCK	4.0	24" x 108 yd	—							
	9706	Z-axis only electrically conductive for interconnects, higher adhesion ECATT 9705 version, Ag fillers.	2.0	Dual Linered PET	2.0/ 2.0	24" x 108 yd	—	8	6	4	—	6	20	160
	9709	XYZ-axis conductive adhesive with inherent EMI shielding performance, Ag fillers.	2.0	Dual Linered PET	1.5/ 2.0	14" x 108 yd	—	5	5	4	4	6	20	160
	9709S	XYZ-axis conductive adhesive with inherent EMI shielding performance, Ag fillers. Good grounding to stainless steel and plated surfaces.	2.0	Dual Linered PET	1.5/ 2.0	14" x 108 yd	—							
	9709SL	Premium low release liner version of 9709S.	2.0	Dual Linered 58# PCK/PET	2.0/ 4.0	14" x 108 yd	—							
	9712	XYZ-axis conductive adhesive for EMI shielding (acrylic adhesive, carbon scrim).	5.0	58# PCK	4.0	24" x 108 yd	—							
	9713	XYZ-axis conductive adhesive for EMI shielding (acrylic adhesive, Ni-carbon scrim).	3.0	58# PCK	4.0	24" x 108 yd	—							
	9719	XYZ-axis conductive adhesive for EMI shielding (silicone adhesive, Ni-carbon scrim).	4.0	PET	4.0	14" x 108 yd	—							
Thermally Conductive	**8805**	Improved adhesion ceramic-filled thermally conductive adhesive transfer tape.	5.0	PET	2.0	14" x 36 yd	—	8	6	4	—	6	20	185
	8810	10 mil version of 8805.	10.0	PET	2.0	14" x 36 yd	—							
	8815	15 mil version of 8805.	15.0	PET	2.0	14" x 36 yd	—							

1 – More information on pages 8–9.
2 – More information on page 15.

Values: 1 = Lowest Performance; 10 = Highest Performance
Rankings are a general guide. Adhesives should be tested with actual components to ensure acceptable performance.

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

3M™ Tapes for Electronic Solutions (cont.)

Adhesive Family[1]	Product	Description/ Application Ideas	Adhesive Caliper (mils)	Liner[2] Type	Liner[2] Caliper (mils)	Master Size	Specs	Adhesion Metal	Adhesion HSE Plastic	Adhesion LSE Plastic	Adhesion Foam	Chem. Resist.	Temp. Range Low (°F)	Temp. Range High (°F)
Thermally Conductive (cont.)	**8820**	20 mil version of 8805.	20.0	PET	2.0	14" x 36 yd	—	**8**	**6**	**4**	**—**	**6**	**20**	**185**
	8904-02	Flame-retardant, ceramic-filled acrylic transfer tape. LED module/board bonding.	8.0	PET	2.0	600mm x 40m	UL							
	8904-025	10 mil version of 8904-02.	10.0	PET	2.0	600mm x 40m	UL							
	8904-05	20 mil version of 8904-02.	20.0	PET	2.0	600mm x 40m	UL							
	9882	Ceramic-filled adhesive transfer tape.	2.0	PET	2.0	14" x 36 yd	UL	7	4	2	—	6	20	160
	9885	5 mil version of 9882.	5.0	PET	2.0	14" x 36 yd	UL							
	9890	Soft thermal tape.	40.0	PCK	5.5	Call	—	5	5	4	—	5	20	160
	9889FR*	10 mil version of 9982.	10.0	PET	2.0	14" x 36 yd	UL	7	4	2	—	6	20	185

1 – More information on pages 8–9.
2 – More information on page 15.
*9889FR is not available in the U.S.

Values: 1 = Lowest Performance; 10 = Highest Performance

Rankings are a general guide. Adhesives should be tested with actual components to ensure acceptable performance.

Adhesive Family[1]	Product	Product Description: Base Material Type	Product Description: Thickness mil (mm)	Product Description: Filler Type	Product Description: Liner Type	Thermal Performance: Conductivity (W/m-K) 3M ASTM D5470 TM	Thermal Performance: Impedance °C-in2/W	Thermal Performance: Impedance °C-cm2/W	Dielectric Properties: Dielectric Strength (KV/mm)	Dielectric Properties: Volume Resistivity (ohm/cm)	UL Flammability Rating	Potential Operating Temperature Range (°C)***
Thermally Conductive Pads	**5516/ 5516S* Soft Pad**	Filled Silicone Polymer	20 (0.5)	Ceramic	PET	3.1	0.31	2.0	3.1	6.9×10^{14}	3M V1 or VO TM**	**Short Term:** 150 **Long Term:** 100–125
			40 (1.0)				0.53	3.4				
			60 (1.5)				0.76	4.9				
			80 (2.0)				0.98	6.3				
	5519/ 5519S* Soft Pad	Filled Silicone Polymer	20 (0.5)	Ceramic	PET	4.1	0.29	1.9	3.1	6.9×10^{14}	3M V1/VO or VO TM**	
			40 (1.0)				0.48	3.1				
			60 (1.5)				0.65	4.2				
			80 (2.0)				0.82	5.3				
	5591S* Ultra Soft Pad	Filled Silicone Polymer	20 (0.5)	Ceramic	PET	1.0	1.14	7.3	7.9	2.0×10^{12}	3M V1 or VO TM**	
			40 (1.0)				1.92	12.4				
			60 (1.5)				2.71	17.5				
			80 (2.0)				3.49	22.5				
	5592/ 5592S* Soft Pad	Filled Silicone Polymer	20 (0.5)	Ceramic	PET	1.1	0.64	4.1	14.7	3.0×10^{12}	3M V1 or VO TM**	
			40 (1.0)				1.15	7.4				
			60 (1.5)				1.66	10.7				
			80 (2.0)				2.43	15.7				
	5595/ 5595S* Soft Pad	Filled Silicone Polymer	20 (0.5)	Ceramic	PET	1.6	0.70	4.5	15.7	5.0×10^{12}	3M V1 or VO TM**	
			40 (1.0)				1.21	7.8				
			60 (1.5)				1.71	11.0				
			80 (2.0)				2.22	14.3				
	5589H* Soft Pad	Filled Acrylic Polymer	40 (1.0)	Ceramic	PET	2.0	1.33	8.6	21	3.4×10^{12}	UL VO	**Short Term:** 110 **Long Term:** 80
			60 (1.5)				1.67	1.67				
	5590H*	Filled Acrylic Polymer	20 (0.5)	Ceramic	PET	3.0	0.46	3.0	33	2.7×10^{12}	UL VO	
			40 (1.0)				0.70	4.5				
			60 (1.5)				0.95	6.1				

*The "S" version has a polymeric permanent film on one side to be used as a non-tacky surface for ease in reworking an assembly. Thermal Conductivity and Thermal Impedance are slightly changed with addition of the film, while Dielectric strength is improved. Optional thicknesses > 2.0mm. The "H" version has both a very low tack surface and a medium tack surface.
**Test results based on 3M UL Test Method. The 3M V1 TM testing applies to the 0.5mm thick products in the "S" version.
***Thermal impedance is measured with the test sample under a nominal 10 psi pressure to reflect a typical end use application. Short Term = Hours/Days. Long Term = Weeks/Months.

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3M™ Tapes for Electronic Solutions (cont.)

3M™ Double Coated Tapes

Adhesive Family[1]	Product	Description/ Application Ideas	Tape Cal. (mils)	Carrier Type	Liner[2] Type	Liner[2] Caliper (mils)	Master Size	Specs	Adhesion Metal	Adhesion HSE Plastic	Adhesion LSE Plastic	Adhesion Foam	Chem. Resist.	Temp. Range Low (°F)	Temp. Range High (°F)
200MP High Performance Acrylic	**9492MP**	2.5 mil version of 9495MP.	2.5	PET	58# PCK	4.2	48" x 180 yd	—	10	9	1	2	9	-40	400
	9495B	Black version of 9495MP.	5.7	Black	58# PCK PET	4.2	54" x 180 yd	—							
	9495FL	Same as 9495MP with two liners; 3.0 mil opaque white HDPE.	5.7	PET	HDPE/ 58# PCK	3.0/ 4.2	48" x 180 yd	—							
	9495MP	Double-coated version of 468MP. Offers improved handling and ease of die-cutting.	5.7	PET	58# PCK	4.2	54" x 180 yd	UL							
	9495MPF	9495MP with a 2 mil polyester film liner.	5.7	PET	PET	2.0	54" x 180 yd	—							
300LSE Low Surface Energy Acrylic	**9495LE**	Double-coated version of 9472LE. Improved handling and ease of die-cutting.	6.7	PET	58# PCK	4.2	54" x 180 yd	UL	9	10	10	1	7	-40	300
300MP/ 300LSE Differential Adhesive	**9490LE**	Adhesive 300MP for foam laminating. Adhesive 300LSE bonds to powder coated metals, oily metals and LSE plastics.	6.7	PET	58# PCK	4.2	54" x 180 yd	—	7 9	7 10	8 10	8 1	7 7	-40 -40	250 300
300MP High Tack Acrylic	**9609**	Thick double-coat for cell phone lens attachment. Provided on 6" core only.	9.0	PET	83# PCK	6.2	48" x 180 yd	—	7	7	8	9	7	-40	250
	9690	Double-coated version of 9695 for foam lamination and graphic attachment.	5.6	PET	83# PCK	6.2	54" x 180 yd	—							
	9690B	Black version of 9690. Ideal for LED lens attachment for pagers and cellular phones.	5.6	Black PET	83# PCK	6.2	54" x 180 yd	—							
	9786	Thin nonwoven carrier for dimensional stability and improved handling. Temperature resistance up to 300°F.	5.5	Non-woven	58# PCK printed	4.2	48" x 180 yd	—							
	9786NP	Same as 9786 except an unprinted liner.	5.5	Non-woven	58# PCK unprinted	4.2	54" x 180 yd	—							
420 Acrylic Adhesive	**9795**	Double coated version of F9755PC for foam lamination and graphic attachment.	5.6	PET	83# PCK	6.2	54" x 180 yd	—	7	7	8	4	6	-40	300
	9795B	Thin polyester black film carrier for improved handling, die-cutting and laminating.	5.6	Black PET	83# PCK	6.2	54" x 180 yd	—							

1 – More information on pages 8–9.
2 – More information on page 15.

Values: 1 = Lowest Performance; 10 = Highest Performance
Rankings are a general guide. Adhesives should be tested with actual components to ensure acceptable performance.

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Performance Label Materials

Strengthen Your Competitive Advantage

As a premier durable label material supplier, 3M provides technical solutions and superior products that enhance your customers' confidence in their image, product and processes.

Today's printing world is more complex than ever. With more than 150,000 combinations of 3M adhesives, topcoats, facestocks and liners, 3M has the solutions you need to strengthen your competitive advantage.

Adhesive Families — Label Materials

100

100 High Temperature Acrylic
- Up to 450°F short-term heat resistance and excellent solvent resistance.
- High peel strength compared to other acrylic formulations.
- Exceptional shear strength even at elevated temperatures.
- Exhibits low outgassing characteristics.

150

150 High Temperature Acrylic
- Up to 450°F short-term heat resistance and excellent solvent resistance.
- High internal strength ideal for applications on high surface energy plastics and metals.

200MP

200MP High Performance Acrylic
- Up to 400°F short-term heat resistance and excellent solvent resistance.
- Outstanding adhesion to metal and high surface energy plastics.
- Excellent shear strength to resist slippage and edge lifting.
- Short term repositionability for placement accuracy.

300

300 High Strength Acrylic
- Up to 250°F short-term heat resistance.
- Greater initial adhesion especially to low surface energy plastics.
- Quick flowing to speed lamination of textured plastics, foams, fabrics and coated papers.

310

310 High Precision Acrylic
- Provides firmness and high precision strength on a variety of surfaces including HSE plastics and metals.
- Compatible with a variety of print technologies including thermal transfer and laser printing.

320

320 High Tenacity Acrylic
- Up to 250°F short-term heat resistance.
- High bond strength to a variety of surfaces.
- Excellent flagging resistance on small diameter surfaces.

350

350 High-Holding Acrylic
- Ideal for very high bond strength to many surfaces.
- Most universal adhesive — ideal for powder coatings, LSE plastics and oily metals.
- Up to 350°F short-term heat resistance and excellent solvent resistance.

400

400 Low Temperature Acrylic
- Good low temperature performance and peel strength on many surfaces.
- Up to 250°F short-term heat resistance.
- Excellent adhesion to uncoated papers.
- Clarity and UV resistance for window label applications.

500

500 High Stability Acrylic
- Cleanly removes from most surfaces up to one year after application.
- Excellent for die-cut masks needing outdoor performance and removability.
- For vinyl label stocks only.

1000 Series

1000 Series Repositionable Acrylic
- Good holding to many surfaces.
- Clean removal or numerous reapplications.
- Stain resistance on many surfaces.

F2201

F2201 Freezer Acrylic
- Low 0°F application temperature, high initial tack.
- Good moisture resistance.
- Good long-term adhesion.

Go-To Product

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

G1120

G1120 Rubber Based Tire Tread
- Extremely aggressive.
- Designed for use in tire label applications.

P1110

P1110 Permanent Rubber Based
- Excellent ultimate adhesion.
- High initial tack.
- Good choice for labeling LSE or waxy surfaces.
- Good choice for toy labeling applications.

P1212

P1212 General Purpose Acrylic
- Excellent clarity, good initial tack.
- Excellent die-cutting properties.
- Good UV resistance.
- UL recognized for indoor use.

P1400

P1400 High Performance Tackified Acrylic
- Excellent UV and moisture resistance.
- Formulated for use in demanding environments.
- Excellent adhesion to wide variety of substrates.
- UL recognized for indoor/outdoor use.

P1410

P1410 Tackified Acrylic
- High tack.
- Neutral pH.
- Good adhesion to polyolefins.

P1425

P1425 High Shear Acrylic
- Good shear performance.
- Good plasticizer and chemical resistance.
- Adheres well to LSE plastics.

P1480

P1480 High Performance Tackified Acrylic
- High initial tack.
- Good ultimate adhesion on a wide variety of surfaces.
- Excellent choice for textured surfaces or powder coats.
- Designed to meet difficult automotive underhood battery specifications.

P1500

P1500 Medical Acrylic
- Excellent peel and tack.
- Suitable for direct skin contact or medical drapes.

P1650

P1650 High Performance Acrylic
- Designed to meet difficult automotive underhood specifications.
- Good chemical and moisture resistance.
- Excellent thermal stability.
- Resistance to many automotive and industrial fluids.

P1655

P1655 White Opaque High Performance Acrylic
- Excellent opacity.
- Designed to meet difficult automotive underhood specifications.
- Excellent thermal stability.

R3500

R3500 Ultra Removable Adhesive
- Good initial tack and long-term adhesion.
- Multi-repositionable, static cling alternative.
- Clean removability (no residue).

R3800

R3800 Ultra Removable Adhesive
- Lower tack version of adhesive R3500.
- Good initial tack and long-term adhesion.
- Clean removability (no residue).

Go-To Product

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

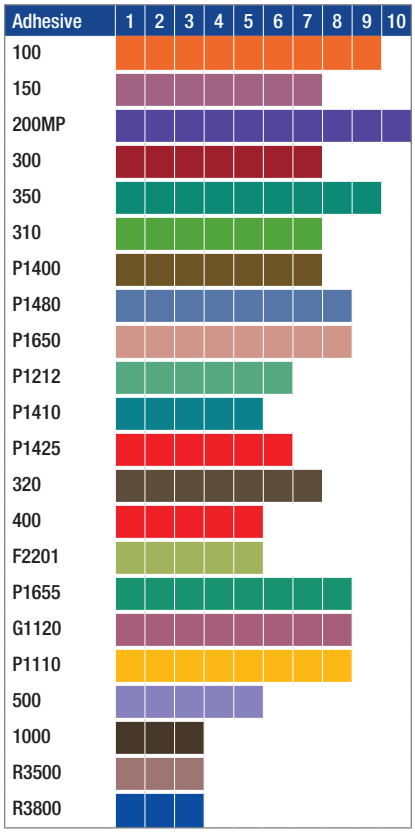
Adhesive Selection Guide Based on Surface Energy

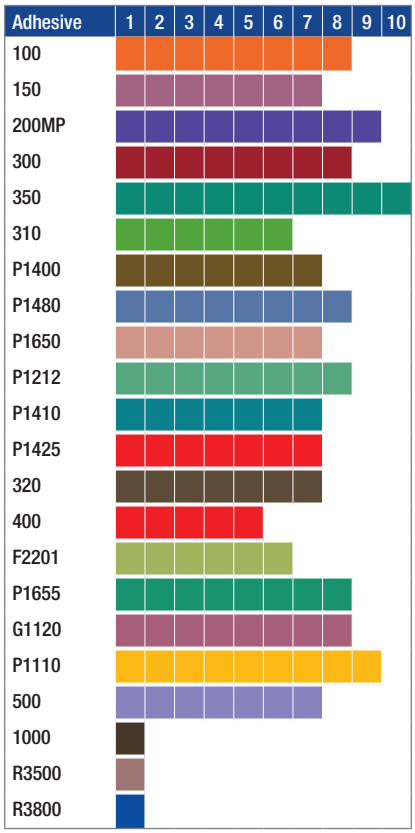
These charts are based on relative adhesion within each given surface energy category.

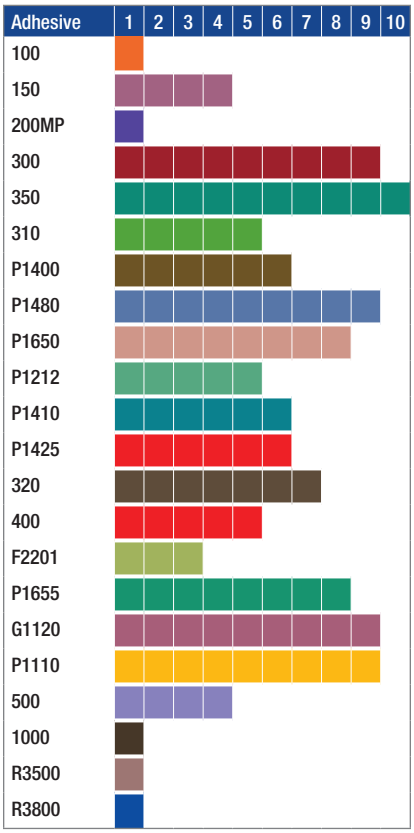
Metals	Surface Energy (Dynes/cm)
Copper	1103
Aluminum	840
Zinc	753
Tin	526
Lead	543

High Surface Energy (HSE) Plastics	Surface Energy (Dynes/cm)
Polyimide	50
Phenolic	47
Nylon®	46
Alkyd Enamel	45
Polyester	43
Epoxy Paint	43
Polyurethane	43
ABS	42
Polycarbonate	42
PVC	39
Modified PPE Resin	38
Acrylic	38
Polane® Paint	38

Low Surface Energy (LSE) Plastics	Surface Energy (Dynes/cm)
PVA	37
Polystyrene	36
Acetal	36
EVA	33
Polyethylene	31
Polypropylene	29
PVF	28
PTFE	18
Powder Coatings	Broad Range







Values: 1 – Lowest Performance; 10 – Highest Performance

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

Adhesive Properties

Adhesive Family	Temperature (°F)			Adhesive Properties			Adhesion to			Environmental Properties Resistance to:			
	Minimum Application	Low Service	High Service	Initial Peel	Ultimate Peel	Convertibility	Metal	HSE Plastic	LSE Plastic	Chemical	Ultra Violet	Moisture	
High Temperature Adhesives													
100	50	-40	450	3	9	10	9	8	1	10	10	10	8418, 7811, 7812, 8417
150	50	-40	450	6	7	10	7	7	4	5	10	9	3921, 76999
200	50	-40	350	3	10	10	10	9	1	7	8	8	3929, 3925
200MP	50	-40	400	4	10	10	10	9	1	10	10	10	9017FL, 9018 FL
High Performance Adhesives													
300	50	-40	300	6	7	4	7	8	9	7	7	8	7331, 7860, 7331FL, 7810, 7880, 7880HL, 7350FL, 7350, 7861, 7881, 7222, 7865, 7813, 7883, 7883HL, 7887, 7323, 7863, 7604FP, 7004, 7380, 7381, 7384, 7866, 7935, 7937, 7902, 7931, 7980, 7950, 7924, 7925
350	50	-40	350	7	9	8	9	10	10	9	7	10	7051SA, 7214SA, 7220SA, 7868, 7871, 7871FL, 7340FL, 7850TL, 7874, 7876, 7879FL, 7873, 7872, 7872FL, 7605, 7779, 7847, 7613T, 7930T, 7046, 7904, 76716, 7053, 7035, 7037, 7907, 7908, 7908FL, 7905, 7026, 7028, 7033, 7903, 7903FL, 7246, 7247
310	50	-40	300	5	6	6	7	7	5	7	7	8	7816, 7816FL, 7815, 7815FL, 7840, 7840TL, 7845TL, 7818, 7897, 7875, 7841, 7776
P1400	40	-20	302	4	6	6	7	7	6	5	8	7	OFM03402, OFM2502, FM02511K, OFM3102, OFM2402, OFM2802, OFM2902, OFM3602, OFV0202, FP032002, OFM0102, OFM010N, FV02610N, OFL020N, 7045, 7043, 7029, 7025, 7032, 7027, 7034, 7291, 7777
P1480	40	-22	300	6	8	4	8	8	9	7	5	7	FM041902, FM047202, FM047302, FV0216R2, FV022702, FV023202, FP022102, FP022202, FPE06505, FPE06602
P1650	40	-40	302	6	7	4	8	7	8	7	5	7	FM033202, FM034602, FP035402
General Purpose													
P1212	40	-20	302	4	5	6	6	8	5	4	5	6	FM122, FM282, FM031902, FM1182, FM162, FM042, FM142, FM232, FM092, FM052, FM062, FM152, FM112, FV032, FV031705-60, FV102, FV122, FV01462, FV232, FV362, FV018602, FP010402, FP012602, FP018802, FP011, FP082, FS022, FS442, FA032, FAC00102, FM011, FM01N, FM022, FM1142, FM292, FM452, FM45N, FM071, FM3602, FM125, FM3605, FV02800N, FV02490N, FL01N, FL02N, FA102, FA112, 8524, FM852, FM1852
P1410	40	-20	302	6	6	6	5	6	4	5	—	5	FV292, FV512, FV612, FP102, FMV01202, FMV01402, FMV02, FMV22

Values: 1 = Lowest Performance; 10 = Highest Performance

Rankings are a general guide. Adhesives should be tested with actual components to ensure acceptable performance.

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Adhesive Properties (cont.)

Adhesive Family	Temperature (°F)			Adhesive Properties			Adhesion to			Environmental Properties Resistance to:			
	Minimum Application	Low Service	High Service	Initial Peel	Ultimate Peel	Convertibility	Metal	HSE Plastic	LSE Plastic	Chemical	Ultra Violet	Moisture	
Specialty Adhesives													
320	50	-40	250	7	7	6	7	7	7	6	6	8	3690E, 3698E, 7800, 7801, 7002, 7000, 7000FL, 7011, 7110, 7940
400	10	-60	250	5	5	6	5	5	5	5	10	8	7120, 7733FL, 7830, 7864, 7831, 7730FL, 7731FL, 7741, 7732FL, 7742, 7744FL, 7745FL, 8041, 8042, 7735FL, 7737FL, 7738FL, 7920
F2201	0	-40	250	3	4	5	5	6	3	3	5	4	FM01961K, FV022902, FV100K, FV252, FP016102, FP024102
P1655	40	-40	302	1	7	4	8	8	8	7	5	7	FP032302
Rubber Based Adhesives													
G1120	40	-20	140	7	9	2	8	8	9	3	3	3	FP028502, FPE004302
P1110	55	-40	155	6	7	4	8	9	9	3	3	3	FM53R2, FV052, FP027402, FS242
Removable Adhesives													
500	50	-40	175	4	5	3	5	7	4	5	10	10	7600, 7901
1000	50	-20	250	2	3	7	3	1	1	2	5	3	7113, 7142
R3500	40	-20	155	1	3	6	3	1	1	2	7	3	7065, 7063, FM01972, FM1732R, FV1222, FV016402, FP016902, FP0862, FV1405
R3800	50	20	155	1	3	6	3	1	1	2	7	2	FV010002, FP024502, FP024402

Values: 1 = Lowest Performance; 10 = Highest Performance

Rankings are a general guide. Adhesives should be tested with actual components to ensure acceptable performance.

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Facestock Properties

Facestock	Film Properties	Processing Properties		Environmental Resistance to:			Features	
	Service Temperatures	Printability	Conformability	Chemical	Moisture	Outdoor/ UV		
Acetate	-20° to 140°F	—	2	2	2	2	Rigid film, tears easily, works well for security seals or overlaminate.	FA032, 8041, 8042, FA102, FA112
Acrylate	-40° to 175°F	Thermal Transfer	3	7	7	10	Excellent clarity and UV resistance. 5 year outdoor performance.	7735FL
Acrylate, Cast	-40° to 392°F 530° for 30 sec. 500° for 7 min.	Thermal Transfer	7	9	9	7	Ultra-high temperature performance.	3921, 76999
Acrylate, Cast Modified	-40° to 392°F 530° for 1 min. 482° for 5 min. 440° for 60 min.	Laser Markable	7	10	8	10	Ultra-high temperature performance. Can be imaged and kiss cut by a laser beam. Long-term readability, chemical and abrasion resistance.	7847
Acrylic	-20° to 140°F	Flexo	3	5	7	7	Good clarity and UV resistance.	FAC00102
Aluminum Foil	-40° to 350°F	Embossing, Flexo, Letterpress, Screen	4	7	10	10	Vinyl top-coated for ink receptivity. Facestock can be embossed using dot matrix impact printers.	7800, 7801, 7940
Polyimide	-40° to 500°F	Dot Matrix, Thermal Transfer	6	10	10	10	Ultra-high temperature performance. Easy readability of variable information and bar codes.	7811, 7812
Kimdura™, Smudgeproof Polyolefin	-20° to 170°F	Flexo, Screen, Thermal Transfer	5	7	7	7	Biaxially oriented film offers consistent caliper, suitable for high speed dispensing.	7291
Thermoplastic Polycarbonate	-40° to 250°F	—	4	8	9	7	Used to achieve the attractive appearance of subsurface screen printed polycarbonate.	7737FL, 7738FL, FL01N, FL02N, OFL010N, OFL020N
Paper	-40° to 350°F	Flexo, Thermal Transfer	3	3	2	6	Pharmaceutical and performance paper.	7002, 7004, 7000, 7000FL, 7113, 7142, 7110, 7120
Polyart®	-40° to 160°F	Dot Matrix, Flexo, Ion Deposition, Letterpress, Screen, Thermal Transfer	7	6	8	7	Non-glare surface, biaxially oriented, printable with some cold fusing and flash fusing laser printers. Accepts handwriting with a ballpoint pen or marker.	FPE05102
Polyester EDP, DMI and Laser TC	-40° to 302°F -20° to 257°F Clear only	Dot Matrix, Flexo, Laser, Letterpress, Offset, Screen, Thermal Transfer	2	9	9	8	Polyester EDP available in white, silver and clear. Optimal clarity for overlaminate applications. High quality rigid film with high tensile strength. Excellent dimensional stability. Not recommended for curved surfaces. High quality rigid film. High tear resistance, notch sensitive.	FM046302, FM162, OFM2502, FM142, FM14K, OFM3002, FM043302, FM152, OFM2702, 7480, 7840, 7880, 7880HL, FM162, 7745FL, 7881, 7883, 7883HL, 7887, 7897, 7840TL, 7840HL, FM01961K, FM031902, 7744FL 7845HL, 7845TL
Polyester, White and Clear Laser TC	-20° to 257°F	Dot Matrix, Flexo, Laser, Letterpress, Offset, Screen, Thermal Transfer	2	9	9	8	Polyester available in white, silver and clear. Clear polyester provides optimal clarity for overlaminate applications. High quality rigid film with high tensile strength. Excellent dimensional stability. Not recommended for curved surfaces. High quality rigid film. High tear resistance, notch sensitive.	FM02511K, FM1852, FM852
Polyester MC	-40° to 302°F	Flexo, Laser, Screen, Thermal Transfer	2	9	9	8		7231, FM01961K, FM022202, FM031902, FM034602, FM1182, OFM03502, FM01972
Polyester PT	-40° to 302°F -20° to 257°F Clear only	Flexo, Screen, Thermal Transfer	2	9	9	8		7037, 7903, 7903FL, 7909, 9017FL, 9018FL, 7340FL

Values: 1 = Lowest Performance; 10 = Highest Performance

Rankings are a general guide. Adhesives should be tested with actual components to ensure acceptable performance.

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

Facestock Properties (cont.)

Facestock	Film Properties	Processing Properties		Environmental Resistance to:			Features	
	Service Temperatures	Printability	Conformability	Chemical	Moisture	Outdoor/ UV		
Polyester TC	-40° to 302°F -20° to 257°F Clear only	Flexo, UV Inkjet, Hot Stamp, Letterpress, Offset, Screen, Thermal Transfer	2	9	9	8	Polyester films exhibit excellent water and moisture barrier properties making it an ideal face stock for durable label applications. Able to withstand higher temperatures, polyester has excellent dimensional stability and tensile strength. High quality overlaminate films utilize polyester for its optimal clarity. Compatible with a wide range of coatings, polyester film is commonly used in a wide range of printing applications including thermal transfer, laser, UV inkjet, flexographic and screen print processes.	7331, 7860, 7331FL, 7816, 7816FL, 7817, 7830, 7864, 7868, 7871, 7871FL, 8418, FM033202, FM041902, FM122, FM282, FM53R2, OFM0302, OFM03402, 7220SA, 7214SA, 7480, 7810, 7815, 7815FL, 7840, 7840TL, 7850TL, 7874, 7850, 7850HL, 7350FL, 7350, 7861, 7831, 7876, FM042, OFM1502, OFM3102, 7745FL, 7845TL, 7881, FM232, 7222, 7865, 7813, 7818, 7879FL, 7883, 7887, 7897, FM047202, FM092, OFM2402, 7323, 7863, 7873, FM047302, FM052, FM062, FM1172, FM912, OFM0702, OFM2802, FM046202, FM3602, FM125, FM3605, FM102, FM112, FM852, FM1852, OFM2902, 7819, 7872, 7872FL, 7875, OFM3602, 7744FL, 7745FL, 7380, 7381, 7866, 7384, 7935, 7937, FMV01202, FMV01402, FMV02, FMV22, FM1732R, 7034, 7035, 7907, 7908, 7908FL, 7920, 7931, 7935, 7937, 7980, 7029, 7905, 7950, 7025, 7026, 7032, 7028, 7033, 7924, 7925
Polyester NTC	-20° to 257°F	—	2	9	9	8	Optimal clarity for overlaminate applications.	7730FL, 7731FL, 7741, 8417, FM011, FM01N, FM022, FM1142, FM292, FM452, FM45N, OFM0102, OFM010N, 7732FL, 7742, FM071
Polyethylene	-20° to 140°F	Flexo	10	3	7	4	High tear resistance and elongation, low tensile strength.	FPE06505, FPE06602, FPE42, FPE004302, FPE05102
Polyolefin	-40° to 140°F	Flexo, Thermal Transfer	9	7	7	3	Extremely pliable and conformable, moisture resistant. PVC-free vinyl alternative.	FP035402
Polypropylene, Label-Lyte® EDP	-20° to 220°F	Flexo, Thermal Transfer	8	7	8	7	Outdoor UV durability up to one year. Excellent ink adhesion, good stiffness for auto application; excellent opacity.	FP010402
Polypropylene, Label-Lyte® T2S	-20° to 220°F	Flexo, Thermal Transfer	8	7	8	7		76716, 7776, 7777, 7779, FP018802, FP018902, FP029102
Polypropylene T1S	-20° to 140°F	Flexo	8	7	8	7	Semi-hard film with high tear resistance and good dimensional stability.	FP011
Polypropylene EDP	-20° to 140°F	Flexo, Ion Deposition, Lithography, Offset, Screen, Thermal Transfer	6	7	8	3	Excellent opacity, moisture and tear resistance, excellent dimensional stability, resistant to cracking and abrasion, antistatic coating to eliminate double feeding when printing and folding.	FP022102, FP024102, FP027402, FP032002

Values: 1 = Lowest Performance; 10 = Highest Performance

Rankings are a general guide. Adhesives should be tested with actual components to ensure acceptable performance.

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Facestock Properties (cont.)

Facestock	Film Properties	Processing Properties		Environmental Resistance to:			Features	
	Service Temperatures	Printability	Conformability	Chemical	Moisture	Outdoor/ UV		
Polypropylene TC, White, Clear or Metalized	-20° to 140°F	Flexo	8	7	8	7	High tensile strength, but notch sensitive.	FP031702, FP032302, FP082, FP092, FP102, FPM000902, FP012602, FP016102, FP022202, FP027202, FP011902, FP016902, FP024502, FP56N, FP024402, FP0862, FP029502
Polystyrene, Matte and Gloss Clear	-20° to 140°F	Flexo	2	2	5	2	Economical, hard, rigid film. Tear and temperature sensitive. Not recommended for outdoor use.	FS152, FS242, FS302, FS442
Retro-Reflective Film	-40° to 300°F	Thermal Transfer	7	7	9	8	When bar code printed, the facestock extends the max. and min. scanning distance of long-range scanners.	3929, 39294
Teslin®, Polyolefin	-40° to 250°F	Flexo, Continuous Laser	9	8	9	7	Durable alternative to paper labels, excellent abrasion properties.	7841, 7841TL, 7841HL
Vinyl (PVC) EDP, White	-20° to 140°F	Dot Matrix, Flexo, Laser, Thermal Transfer	10	4	7	7	Conformability reduces as gauge increases. Multi-purpose film available in flexible, semi-rigid or rigid. Polymerically plasticized for dimensional stability. Handles outdoor conditions well. Will burn in flame, but should be self-extinguishing after removal. Low tear resistance. Available in medical grades.	FV100K, FV1002, FV512, FV02410K
Vinyl (PVC) NTC, White, Clear, Color or Translucent	-20° to 140°F	Press Printable Solvent Inks	10	4	7	7		7605, FV1405, FV0216R2, IJ39-20, FV102, FV612, FV092, FV003602, FV362, 3690E, 3698E, 7045, 7046, FV027805, 7051, 7051SA, 7065, 7901, 7902, 7904, 7052, 7053, FV031705-60
Vinyl (PVC) TC, White	-20° to 140°F	Flexo, Letterpress	10	4	7	7		7604FP, 7613T, 7600, 7930T
Vinyl (PVC) TC2	-20° to 140°F	Flexo	10	4	7	7		FV052, FV232
Vinyl (PVC) TC3, White, Colors or Clear	-20° to 140°F	Flexo, Letterpress	10	4	7	7		FV023202, FV025102, FV032, FV122, FV252, FV292, FV010002, FV1222
Vinyl (PVC) TC6, White, Colors or Clear	-20° to 140°F	Flexo, Thermal Transfer	10	4	7	7		FV022702, FV022902, OFV0102, OFV0202, FV01462, FVS110S, FVS12S, FV016402, FV018602
Vinyl (PVC) TC9	-20° to 140°F	UV Flexo, UV Screen	10	4	7	7		7043
Vinyl, Textured	-20° to 140°F	—	10	4	7	7		FV02800N, FV02490N, FV02610N

Values: 1 = Lowest Performance; 10 = Highest Performance

Rankings are a general guide. Adhesives should be tested with actual components to ensure acceptable performance.

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Liner Selection

Liner	Mil (nominal) Thickness	Description	Layflat	Semi Layflat	Back Side Printable	Fanfold	Roll-to-Roll
40# SC, 43# DK	2.4	Semi-bleached, super calendered/densified kraft sheet.			■		■
2.2 Glassine	2.2	Double sided glassine liner assures consistent die cutting. The backside release coating helps minimize label blocking.					■
3.0 Glassine	3.0	Double sided glassine liner assures consistent die cutting. The backside release coating helps minimize label blocking.				■	■
44# Polykraft	3.1	Polypropylene has been laminated to a 44# brown kraft sheet. Excellent caliper control and strength making it ideal for high-speed labeling applications.			■		■
50# SC, 55# DK	3.2	Semi-bleached, super calendered/densified kraft sheet designed for high-speed die-cutting and matrix stripping. Not recommended for sheet on press applications.			■		■
50# C2S	3.2	Back side has been lightly coated with silicone to reduce label pick. Recommended when using very soft adhesives or where heavy adhesive coat weights are required.					■
50# TL	3.4	Stabilized bleached kraft sheet with good caliper control. Ideal for most sheet-on-press applications. Back side is printable.		■	■	■	■
78# CCK, HL	4.6	Bleached, clay-coated kraft sheet. Excellent for sheet-on-press applications where additional strength and stiffness is required.		■	■	■	■
90# Polycoated	7.0	Bleached kraft sheet polyethylene-coated on two sides.	■				
1.0 Polyester	1.0	Used when high strength and caliper control are important. Recommended for high-speed labeling application or where clarity of the adhesive is critical.					■
1.5 Polyester	1.5	Clear polyester. Used when high strength and caliper control are important. Recommended for high-speed labeling applications or where clarity of the adhesive is critical.					■
4.0 Polyester	4.0	Clear polyester. Excellent for doming applications where ultimate lay flat is required.	■				

The chart above is a general guide. Facestocks and adhesives should be tested with actual components to ensure acceptable performance.

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3M™ Roll Label Materials

Facestock	Product	Typical Performance Characteristics	Construction: Caliper (mils)	Construction: Facestock Adhesive Type Liner	Roll Width Minimum Mini-Master (shown in red)	Print Method	Specs
Polyester Gloss White	7816	Offers excellent durability. Film adhesive that resists oozing. Precision Roll Program — custom slit rolls as small as 2.5" x 1668 ft., as wide as 54", and with up to one splice.	2.0 0.8 3.2	PET, White TC **310** 55# Densified Kraft	54" 1668 ft. Min. **6"** Precision	Flexo, Thermal Transfer	UL CSA RoHS
	7816FL	Same as 7816 label stock, except with polyester liner.	2.0 0.8 1.5	PET, White TC **310** Polyester Film	54" 1668 ft. Min.	Flexo, Thermal Transfer	UL CSA RoHS
	FM122	Good initial tack. General purpose adhesive for durable goods and nameplate applications.	2.0 0.9 3.2	PET, White TC **P1212** 50# SC	54" 1668 ft. Min.	Flexo, Thermal Transfer	UL CSA RoHS
	7868	Excellent high temperature resistance. Excellent adhesion to LSE plastics and smooth powder coats. Precision Roll Program — custom slit rolls as small as 2.5" x 1668 ft., as wide as 54", and with up to one splice.	2.0 1.1 3.2	PET, White TC **350** 55# Densified Kraft	54" 1668 ft. Min. **6"** Precision	Flexo, Thermal Transfer	UL CSA RoHS
	7871	Heavy adhesive coat weight for textured surfaces. Excellent high temperature resistance. Excellent adhesion to LSE plastics and powder coats. Precision Roll Program — custom slit rolls as small as 2.5" x 1668 ft., as wide as 54", and with up to one splice.	2.0 1.8 3.2	PET, White TC **350** 55# Densified Kraft	54" 1668 ft. Min. **6"** Precision	Flexo, Thermal Transfer	UL CSA RoHS
	7871FL	Same as 7871 label stock, except with film liner.	2.0 1.8 1.5	PET, White TC **350** Polyester Film	54" 1668 ft. Min.	Flexo, Thermal Transfer	UL CSA RoHS
	7220SA	Gloss finish, adhesive allows trapped air to release to prevent bubbling, chemical resistant, good for powder coated surfaces, slightly oily metals, high performance adhesive.	2.0 1.1 6.8	PET, White TC **350** 90# Polycoated Kraft	Sheet: 20" x 27" Roll: 54" x 750"	Screen Flexo	RoHS
	FM033202	Chemical resistant film paired with adhesive designed for use in automotive applications. Excellent thermal stability.	2.0 1.2 3.2	PET, White TC **P1650** 50# SC	54" 1668 ft. Min.	Flexo, Thermal Transfer	RoHS
	FM041902	Durable film facestock with aggressive, high tack adhesive. Good adhesion to powder coats and textured surfaces.	2.0 1.3 3.2	PET, White TC **P1480** 50# SC	54" 1668 ft. Min.	Flexo, Thermal Transfer	RoHS
	FM53R2	Rubber-based adhesive with high adhesion to LSE plastics or waxy surfaces.	2.0 0.9 3.2	PET, White TC **P1110** 50# SC	54" 1668 ft. Min.	Flexo, Thermal Transfer	RoHS
	OFM03402	Glossy film label with excellent UV resistance and adhesion to a variety of substrates. Good choice for durable goods or lawn and garden applications.	2.0 0.9 3.2	PET, White TC **P1400** 50# SC	54" 1668 ft. Min. **6"**	Flexo, Thermal Transfer	UL RoHs
	7817	Glossy film label with excellent UV resistance and adhesion to a variety of substrates. Good choice for durable goods or lawn and garden applications.	2.0 0.9 3.2	PET, White Gloss TC **P1400** 50# SC	54" 1668 ft. Min.	Flexo, Thermal Transfer	UL RoHs
	7231	Print receptive film accepts most film ink systems and thermal transfer printing. General purpose adhesive for durable goods and nameplate applications.	2.0 0.9 3.2	PET, White MC **P1425** 50# SC	54" 1668 ft. Min.	Flexo, Thermal Transfer	UL RoHs
	7331/7860	High abrasion and solvent resistance. Good for indoor and outdoor use. Excellent bond to LSE plastics.	2.0 0.8 3.2	PET, White TC **300** 55# Densified Kraft	54" 1668 ft. Min. **6"**	Flexo, Thermal Transfer	UL CSA RoHS
	7331FL	Same as 7331 label stock with film liner for automatic application equipment.	2.0 0.8 1.5	PET, White TC **300** Polyester Film	54" 1668 ft. Min.	Flexo, Thermal Transfer	CSA RoHS
	7830/7864	Good abrasion and chemical resistance. Thin label profile provides good performance on small diameter packages. Excellent cold temperature performance.	1.0 0.8 3.2	PET, White TC **400** 55# Densified Kraft	54" 1668 ft. Min.	Flexo, Thermal Transfer	UL CSA RoHS
	FM282	Thinner version of FM122. Suitable for slightly curved surfaces.	1.0 0.8 3.2	PET, White TC **P1212** 50# SC	54" 1668 ft. Min.	Flexo, Thermal Transfer	UL CSA RoHS
	8418	Ideal for fuel line identification. Meets MIL-T-9906C when used with 8417 overlaminating film.	1.0 1.4 2.5	PET, White TC **100** 43# Densified Kraft	48" x 216 yd	Flexo, Thermal Transfer	UL M* RoHS

*Meets L-T-100B Type 1.

Go-To Product

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3M™ Roll Label Materials (cont.)

Facestock	Product	Typical Performance Characteristics	Construction: Caliper (mils)	Construction: Facestock Adhesive Type Liner	Roll Width Minimum Mini-Master (shown in red)	Print Method	Specs
Polyester Matte White	7815	Same as 7810 label stock, except #310 adhesive. Firm adhesive that resists oozing.	2.3 0.8 3.2	PET, White TT TC **310** 50# SC	54" 1668 ft. Min. **4.5", 6"**	Flexo, Thermal Transfer	UL CSA RoHS
	7246	Extreme durability topcoat. Eliminates the need for protective overlaminates in many applications.	2.2 1.8 2.2	PET TT3, Matte White **350** 40# Densified Glassine	48" 1668 ft. Min. **4.5", 6"**	Flexo, Thermal Transfer	UL RoHS
	7815FL	Same as 7815 label stock, except polyester liner.	2.3 0.8 1.5	PET, White TT TC **310** Polyester Film	54" 1668 ft. Min.	Flexo, Thermal Transfer	UL CSA RoHS
	7874	350 adhesive for performance applications that require thermal transfer printing and demand adhesive performance on difficult to stick to surfaces (e.g., LSE plastics or powder coats).	2.3 1.8 3.2	PET, White TT TC **350** 50# SC	54" 1668 ft. Min.	Flexo, Thermal Transfer	UL CSA RoHS
	7810	Features ultra smooth top-coat. Ideal for bar code applications. Good durability with a wide range of ribbons.	2.3 0.8 3.2	PET, White TT TC **300** 50# SC	54" 1668 ft. Min. **6"**	Flexo, Thermal Transfer	UL CSA RoHS
	FM034602	Micro-cavitated film with print receptive coating for use with most film inks systems and thermal transfer printing. Designed for use in automotive applications. Excellent thermal stability.	2.0 1.3 3.2	PET, White MC **P1650** 50# SC	54" 1668 ft. Min.	Flexo, Thermal Transfer, Laser	RoHS
Polyester Gloss Clear	7876	Heavy adhesive coat weight for textured surfaces. Excellent high temperature resistance. Excellent adhesion to LSE plastics and powder coats.	2.0 1.8 3.2	PET, Clear TC **350** 55# Densified Kraft	54" 1668 ft. Min. **4.5", 6"**	Flexo, Thermal Transfer	UL CSA RoHS
	0FM3102	Durable film offers thermal stability and moisture resistance. Adheres to a variety of surfaces and offers excellent UV resistance.	2.0 0.9 3.2	PET, Clear TC **P1400** 50# SC	54" 1668 ft. Min. **6"**	Flexo, Thermal Transfer	UL RoHs
	7350/7861	Offers high abrasion and solvent resistance. Excellent adhesion to LSE plastics. Ideal for indoor and outdoor applications.	2.0 0.8 3.2	PET, Clear TC **300** 55# Densified Kraft	54" 1668 ft. Min. **6"**	Flexo, Thermal Transfer	UL CSA RoHS
	7350FL	Same as 7350 label stock with film liner for automatic application equipment.	2.0 0.8 1.5	PET, Clear TC **300** Polyester Film	54" 1668 ft. Min.	Flexo, Thermal Transfer	CSA RoHS
	7831	Thin label profile provides good performance on small diameter packages. Excellent cold temperature performance.	1.0 0.8 3.2	PET, Clear TC **400** 55# Densified Kraft	54" 1668 ft. Min.	Flexo, Thermal Transfer	UL CSA RoHS
	FM042	High clarity general purpose adhesive with good initial tack and excellent die cutting properties. Adhesion to metals and HSE plastics.	2.0 0.9 3.2	PET, Clear TC **P1212** 50# SC	54" 1668 ft. Min.	Flexo, Thermal Transfer	UL CSA RoHS
Polyester Matte Clear	FM232	Matte film suitable for thin gauge label applications or as a printable overlaminate film. General purpose adhesive for HSE substrates.	1.0 0.8 3.2	PET, Clear TC **P1212** 50# SC	54" 1668 ft. Min.	Flexo, Thermal Transfer	UL CSA RoHS
Polyester Matte Silver	7247	Extreme durability topcoat. Eliminates the need for protective overlaminates in many applications.	2.3 1.8 2.2	PET TT3, Matte Silver, **350** 40# Densified Glassine	48" 1668 ft. Min. **4.5", 6"**	Flexo, Thermal Transfer	UL RoHS
	7818	Compatible with a wide range of ribbons. Firm adhesive that resists oozing. Excellent durability.	3.3 0.8 3.2	PET, Silver TT TC **310** 55# Densified Kraft	54" 1668 ft. Min. **4.5", 6"**	Flexo, Thermal Transfer	UL CSA RoHS
	7879FL	Heavy adhesive coat weight for textured surfaces. Excellent adhesion to LSE plastics and powder coats.	3.3 1.8 1.5	PET, Silver TT TC **350** Polyester Film	54" 1668 ft. Min.	Flexo, Thermal Transfer	UL CSA RoHS
	7222/7865	Offers high abrasion and chemical resistance. Excellent "quick stick" and bond to LSE plastics. Uses include instruction and schematic panels.	2.0 0.8 3.2	PET, Matte Silver Gloss TC **300** 55# Densified Kraft	54" 1668 ft. Min. **6"**	Flexo, Thermal Transfer	UL CSA RoHS
	7813	Ultra-smooth matte top-coat. Excellent durability with a wide variety of ribbons. Excellent adhesion to LSE plastics.	3.3 0.8 3.2	PET, Silver Matte TT TC **300** 55# Densified Kraft	54" 1668 ft. Min. **6"**	Flexo, Thermal Transfer	UL CSA RoHS
	FM043702	Thermal transfer printable top-coating. Designed for use in demanding environments including automotive underhood applications.	2.0 1.3 3.2	PET, Matte Silver TC **P1650** 50# SC	54" 1668 ft. Min.	Flexo, Thermal Transfer	RoHS

Go-To Product

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3M™ Roll Label Materials (cont.)

Facestock	Product	Typical Performance Characteristics	Construction: Caliper (mils)	Construction: Facestock Adhesive Type Liner	Roll Width Minimum Mini-Master (shown in red)	Print Method	Specs
Polyester Matte Silver (cont.)	**FM047202**	Metallized film offers excellent thermal stability and moisture resistance. High performance adhesive ideal for demanding applications, including powder coated paints.	2.0 1.2 3.2	PET, Matte Silver TC **P1480** 50# SC	54" 1668 ft. Min.	Flexo, Thermal Transfer	RoHS
	OFM2402	Durable, moisture resistant film. Adhesive offers adhesion to a variety of surfaces, including LSE plastics. Designed for use on durable goods in an outdoor environment.	2.0 0.9 3.2	PET, Matte Silver TC **P1400** 50# SC	54" 1668 ft. Min. **6"**	Flexo, Thermal Transfer	UL RoHS
	FM092	Matte film with gloss top-coating. Adhesive offers good initial tack and excellent die cutting properties. Excellent choice for use in nameplate applications.	2.0 0.9 3.2	PET, Matte Silver TC **P1212** 50# SC	54" 1668 ft. Min.	Flexo, Thermal Transfer	UL CSA RoHS
Polyester Bright Silver	**OFM2802**	Designed for use in outdoor applications. Good adhesion to HSE and LSE plastics.	2.0 0.9 3.2	PET, Bright Silver TC **P1400** 50# SC	54" 1668 ft. Min. **6"**	Flexo, Thermal Transfer	UL RoHS
	7323/7863	Excellent abrasion and chemical resistance. Excellent adhesion to LSE plastics.	2.0 0.8 3.2	PET, Silver Gloss TC **300** 55# Densified Kraft	54" 1668 ft. Min. **6"**	Flexo, Thermal Transfer	UL CSA RoHS
	7873	Heavy adhesive coat weight for textured surfaces. Excellent high temperature resistance. Excellent adhesion to LSE plastics and powder coats.	2.0 1.8 3.2	PET, Silver Gloss TC **350** 55# Densified Kraft	54" 1668 ft. Min.	Flexo, Thermal Transfer	UL CSA RoHS
	7340FL	Facestock uses unique 3M film technology to produce a mirror like film that reflects without metalization.	2.55 1.1 1.5	PET, Mirror Finish **350** Polyester	54" x 1668 ft.	Flexo, Thermal Transfer	RoHS
	FM047302	Reflects with 98% efficiency.	2.0 1.2 3.2	PET, Bright Silver TC **P1480** 50# SC	54" 1668 ft. Min.	Flexo, Thermal Transfer	RoHS
	FM1172	High tack rubber-based adhesive. Good adhesion to waxy surfaces.	2.0 1.2 3.2	PET, Bright Silver TC **P1110** 50# SC	54" 1668 ft. Min.	Flexo, Thermal Transfer	RoHS
	FM052	Good choice where a thinner profile label is required.	1.0 0.8 3.2	PET, Bright Silver TC **P1212** 50# SC	54" 1668 ft. Min.	Flexo, Thermal Transfer	UL CSA RoHS
	FM062	General purpose adhesive. Excellent die cutting properties.	2.0 0.9 3.2	PET, Bright Silver TC **P1212** 50# SC	54" 1668 ft. Min.	Flexo, Thermal Transfer	UL CSA RoHS
	FM912	Thicker version of FM1172 for use where more rigidity is required.	3.0 0.9 3.2	PET, Bright Silver TC **P1212** 50# SC	54" 1668 ft. Min.	Flexo, Thermal Transfer	RoHS
Polyester Brushed Silver	**7214SA**	Gloss finish, adhesive allows trapped air to release to prevent bubbling, chemical resistant, good for powder coated surfaces, slightly oily metals, high performance adhesive. Brushed silver finish.	2.0 1.1 6.8	PET, Brushed Silver TC **350** 90# Polycoated Kraft	Sheet: 20" x 27" Roll: 54" x 750"	Flexo, Thermal Transfer	RoHS
	FM046202	Aggressive, high tack adhesive. Designed for adhesion to difficult surfaces.	2.0 1.2 3.2	PET, Brushed Silver TC **P1480** 50# SC	54" 1668 ft. Min.	Flexo, Thermal Transfer	RoHS
	FM102	Durable high performance material with good moisture resistance. Designed for indoor and outdoor applications, with adhesion to a variety of surfaces.	1.0 0.8 3.2	PET, Brushed Silver TC **P1212** 50# SC	54" 1668 ft. Min.	Flexo, Thermal Transfer	UL CSA
	OFM2902	Durable high performance material with good moisture resistance. Designed for indoor and outdoor applications, with adhesion to a variety of surfaces.	2.0 0.9 3.2	PET, Brushed Silver TC **P1400** 50# SC	54" 1668 ft. Min. **6"**	Flexo, Thermal Transfer	UL RoHS
	FM112	Excellent choice for nameplate applications. Adheres well to metal and HSE plastics.	2.0 0.9 3.2	PET, Brushed Silver TC **P1212** 50# SC	54" 1668 ft. Min.	Flexo, Thermal Transfer	UL CSA

Go-To Product

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3M™ Roll Label Materials (cont.)

Facestock	Product	Typical Performance Characteristics	Construction: Caliper (mils)	Construction: Facestock Adhesive Type Liner	Roll Width Minimum Mini-Master (shown in red)	Print Method	Specs
Polyester Platinum	7872	Heavy adhesive coat weight for textured surfaces. Excellent adhesion to LSE plastics and powder coats. Precision Roll Program — custom slit rolls as small as 2.5" x 1668 ft., as wide as 54", and with up to one splice.	2.0 1.8 3.2	PET, Platinum TC **350** 55# Densified Kraft	54" 1668 ft. Min. 6" Precision	Flexo, Thermal Transfer	UL CSA RoHS
	7872FL	Same as 7872 label stock, except with film liner.	2.0 1.8 1.5	PET, Platinum TC **350** Polyester Film	54" 1668 ft. Min.	Flexo, Thermal Transfer	UL CSA RoHS
	7875	Durable facestock for harsh environments. Firm adhesive resists oozing. Precision Roll Program — custom slit rolls as small as 2.5" x 1668 ft., as wide as 54", and with up to one splice.	2.0 0.8 3.2	PET, Platinum TC **310** 55# Densified Kraft	54" 1668 ft. Min. 6" Precision	Flexo, Thermal Transfer	UL CSA RoHS
	0FM3602	Moisture resistant film paired with tackified acrylic designed for use in lawn and garden applications.	2.0 0.9 3.2	PET, Platinum TC **P1400** 50# SC	54" 1668 ft. Min.	Flexo, Thermal Transfer	UL CSA RoHS
	FM3602	Platinum silver polyester with permanent acrylic adhesive for bar code labels or nameplates.	2.0 0.9 3.2	PET, Platinum TC **P1212** 50#	54" 1668 ft. Min.	Flexo, Thermal Transfer	UL CSA RoHS
Vinyl White	FV032	Soft conformable vinyl that offers durability and moisture resistance. General purpose adhesive.	3.4 0.9 3.2	Soft White TC3 **P1212** 50# SC	54" 1668 ft. Min. 6"	Flexo	UL RoHS
	7051SA	Extended life, white finish, adhesive allows trapped air to release to prevent bubbles, good for powder coated surfaces, high performance adhesive.	3.8 1.1 6.8	Soft White EL Vinyl NT **350** 90# Polycoated Kraft	Sheet: 20" x 27" Roll: 54" x 750"	Flexo	RoHS
	7605	Conformable to contoured surfaces. Excellent adhesion to LSE plastics and textured powder coats.	3.4 1.8 3.2	Soft White NTC **350** 55# Densified Kraft	54" 1668 ft. Min.	Flexo	RoHS
	FV0216R2	High performance adhesive ideal for demanding applications, including powder coated paints. Excellent choice for machinery label applications.	3.4 1.2 3.2	Soft White NTC **P1480** 50# SC	54" 1668 ft. Min.	Flexo	RoHS
	FV022702	Soft conformable film offers durability and moisture resistance. High performance adhesive ideal for demanding applications, including powder coated paints.	3.4 1.2 3.2	Soft White TC6 **P1480** 50# SC	54" 1668 ft. Min.	Flexo, Thermal Transfer	RoHS
	FV023202	High initial tack adhesive with good moisture resistance. Performs well in ladder label applications.	3.4 1.2 3.2	Soft White TC3 **P1480** 50# SC	54" 1668 ft. Min.	Flexo	RoHS
	7604FP	Top-coated, conformable to contoured surfaces. Consistent, high-speed dispensing. Excellent squeeze bottle performance.	3.5 1.2 3.2	Soft White TC3 **300** 55# Densified Kraft	54" 1668 ft. Min.	Flexo	RoHS
	FV052	High initial tack adhesive. Good choice for retread tire label applications.	3.4 1.3 3.2	Soft White TC **P1110** 50# SC	54" 1668 ft. Min.	Flexo	RoHS
	FV292	Adheres to a variety of surfaces including polyolefins. Excellent choice for wire marking applications.	3.4 0.9 3.2	Soft White TC3 **P1410** 50# SC	54" 1668 ft. Min.	Flexo	RoHS
	0FV0202	Designed for use in outdoor applications. Good adhesion to HSE and LSE plastics.	3.4 0.9 3.2	Soft White TC6 **P1400** 50# SC	54" 1668 ft. Min. 6"	Flexo, Thermal Transfer	UL RoHS
	FV022902	Soft conformable film with thermal transfer printable top-coat. Excellent choice for drum labeling applications.	3.4 0.8 3.2	Soft White TC6 **F2201** 50# SC	54" 1668 ft. Min.	Flexo, Thermal Transfer	RoHS
	FV102	Non top-coated semi rigid white vinyl label product offers excellent moisture resistance paired with a general purposed adhesive.	3.4 0.9 3.2	Semi-rigid NTC **P1212** 50# SC	54" 1668 ft. Min.	Flexo	RoHS
	FV122	Semi rigid white vinyl label product that had been top-coated to accept a variety of flexo film and UV rotary letterpress inks. General purpose adhesive.	3.4 0.9 3.2	Semi-rigid TC3 **P1212** 50# SC	54" 1668 ft. Min.	Flexo	RoHS
	FV252	Freezer grade adhesive offers high initial tack and good clarity. Offers adhesion when applied at temperatures as low as 0°F.	3.4 0.8 3.2	Soft White TC3 **F2201** 50# SC	54" 1668 ft. Min.	Flexo	RoHS

Go-To Product

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3M™ Roll Label Materials (cont.)

Facestock	Product	Typical Performance Characteristics	Construction: Caliper (mils)	Construction: Facestock Adhesive Type Liner	Roll Width Minimum Mini-Master (shown in red)	Print Method	Specs
Vinyl White (cont.)	**7890**	Can be used on rigid and semi-rigid containers. Excellent for general purpose labeling such as drum labels.	3.5 1.1 3.2	Rigid White Gloss TC **300** 55# Densified Kraft	54" 1668 ft. Min.	Flexo, Thermal Transfer	UL RoHS
	FV025102	High performance adhesive ideal for demanding applications, including powder coated paints.	6.0 1.2 3.2	Semi-rigid TC3 **P1480** 50# SC	54" 1668 ft. Min.	Flexo	RoHS
	FV100K	Similar to FV02410K except with a freezer grade adhesive. Suitable for drum labeling applications.	3.4 0.8 5.9	Soft White EDP **F2201** 83# Laser	54" 5000 ft. Min.	Flexo, Thermal Transfer, DMI, Laser	RoHS
Vinyl Clear	**FV01462**	Thermal transfer printable clear vinyl.	4.0 0.9 3.2	Soft Clear TC6 **P1212** 50# SC	54" 1668 ft. Min.	Flexo, Thermal Transfer	RoHS
	FV018702	Firm clear vinyl label product offers excellent moisture resistance.	4.0 0.9 3.3	Rigid Clear NTC **P1212** 50# SC	54" 1668 ft. Min.	Flexo	RoHS
	FV172	Soft conformable translucent vinyl that has been topcoated for water-based flexo inks. High clarity general purpose adhesive.	3.4 0.9 3.2	Soft Translucent TC1 **P1212** 50# SC	54" 1668 ft. Min.	Flexo	RoHS
	FV612	Non top-coated vinyl is suitable for wire marking applications.	3.4 0.9 3.3	Soft Translucent NTC **P1410** 50# SC	54" 1668 ft. Min.	Flexo	RoHS
Vinyl Yellow & Black	**FV362**	Non top-coated conformable yellow vinyl with a general purpose adhesive.	3.4 0.9 3.2	Soft Yellow Vinyl NTC **P1212** 50# SC	54" 1668 ft. Min.	Flexo	—
	FV232	Top-coated version of FV362 for press printing.	3.4 0.9 3.2	Soft Yellow Vinyl TC2 **P1212** 50# SC	54" 1668 ft. Min.	Flexo	—
	FV018602	Top-coated black vinyl for press printing.	3.4 0.9 3.2	Soft Black Vinyl TC6 **P1212** 50# SC	54" 1668 ft. Min.	Flexo	—
Vinyl Cast	**3690E**	Durable coat film flexible and conformable. Outstanding weathering properties. Non-transferable on some surfaces.	2.0 1.0 3.2	Bright White NTC **320** 90g/sm glassine	48" 1620 ft. Min.	Thermal Transfer	UL CSA RoHS
	3698E	Same as 3690E except in matte silver. Outstanding weathering properties. Non-transferable on some surfaces.	2.0 1.0 3.2	Matte Silver NTC **320** 90g/sm glassine	48" 1620 ft. Min.	Thermal Transfer	UL CSA RoHS
Retro-reflective	**3929**	When bar code printed, the facestock extends the maximum scanning distance of long range scanners. Excellent for bin labels or shelf markers.	4.8 1.0 4.6	Silver Gloss TC **200** 78# Clay Coated Kraft	40" 2000 ft. Min. **6" x 450 ft.**	Flexo, Thermal Transfer	RoHS
	39294	Bead-free retro-reflective for improved die life. When bar code printed, the facestock extends the maximum scanning distance of long range scanners.	4.8 1.0 4.6	White Gloss TC **200** Polycoated Kraft	48" x 1668 ft. Min. 4.5", 6" x 1668 ft.	Flexo, Thermal Transfer	RoHS
	3925	Yellow retro-reflective version of 3929.	4.8 1.0 4.6	Yellow Gloss TC **200** 78# Clay Coated Kraft	40" 2000 ft. Min.	Flexo, Thermal Transfer	RoHS
Poly-propylene	**7776**	Light duty facestock with firm adhesive that resists oozing.	2.6 0.8 3.2	PP, Label-Lyte™ **310** 55# Densified Kraft	54" 1668 ft. Min.	Flexo, Thermal Transfer	UL CSA RoHS
	7777	Corona treated. Bright white facestock offers high opacity. Film stiffness allows for easy die cutting and dispensing for automatic applications. Can be thermal transfer printed with resin ribbon.	2.6 0.9 3.2	PP, Label-Lyte™ **Permanent Acrylic** 50# Densified Kraft	54" 1668 ft. Min. **6"**	Flexo, Thermal Transfer	UL CSA RoHS
	7779	Same as 7777 except with 350 adhesive. Excellent adhesion to powder coats and LSE plastics.	2.6 1.1 3.2	PP, Label-Lyte™ **350** 55# Densified Kraft	54" 1668 ft. Min.	Flexo, Thermal Transfer	UL CSA RoHS

Go-To Product

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3M™ Roll Label Materials (cont.)

Facestock	Product	Typical Performance Characteristics	Construction: Caliper (mils)	Construction: Facestock Adhesive Type Liner	Roll Width Minimum Mini-Master (shown in red)	Print Method	Specs
Poly-propylene (cont.)	76716	Extreme Durability when printed with 3M™ Durable Resin Ribbon 92904.	2.6 1.1 3.3	Polypropylene Film **350** 55# Densified Kraft	54" 1668 ft. Min.	Flexo, Thermal Transfer	RoHS
	FP012602	Press printable stock with good initial tack and excellent die cutting properties. Adhesion to HSE substrates.	2.3 0.9 3.2	PP, TC2S **P1212** 50# SC	54" 1668 ft. Min.	Flexo	RoHS
	FP016102	Conformable moisture resistant film. Freezer grade adhesive that can be applied at temperatures as low as 0°F.	2.3 0.8 3.2	PP, TC2S **F2201** 50# SC	54" 1668 ft. Min.	Flexo	RoHS
	FP018802	Bright white facestock with high opacity. Thermal transfer printable. Good adhesion to glass and metal.	2.6 0.9 3.2	PP, Label-Lyte™ T2S **P1212** 50# SC	54" 1668 ft. Min.	Flexo, Thermal Transfer	RoHS
	FP022102	High performance adhesive designed for demanding LSE substrates. Matte film.	3.0 1.2 3.2	PP, EDP **P1480** 50# SC	54" 1668 ft. Min. 6"	Flexo	RoHS
	FP022202	High performance adhesive ideal for demanding applications, including powder coated paints.	2.3 1.2 3.2	PP, TC2S **P1480** 50# SC	54" 1668 ft. Min.	Flexo	RoHS
	FP029102	High performance adhesive with high tack and peel from difficult textured LSE plastics.	2.6 1.2 3.2	PP, TC2S **P1480** 50# SC	54" 1668 ft. Min.	Flexo, Thermal Transfer	RoHS
	FP027402	High tack rubber-based adhesive. Good adhesion to waxy surfaces. Excellent choice for candle pad label applications or carpet backing labels.	3.0 1.3 3.2	PP, EDP C1S **P1110** 50# SC	54" 1668 ft. Min.	Flexo, Thermal Transfer	RoHS
	FP032002	High performance adhesive ideal for demanding applications, including powder coated paints. Excellent choice for machinery label applications, with adhesive designed for adhesion to smooth HSE and LSE substrates.	3.0 0.9 3.2	PP, EDP C1S **P1400** 50# SC	54" 1668 ft. Min.	Flexo, Thermal Transfer	RoHS
	FP032302	White opaque adhesive paired with metallized film offers exceptional opacity.	2.3 1.1 3.2	PP, Metallized TC **P1655** 50# SC	54" 1668 ft. Min.	Flexo	RoHS
	FP011	High clarity adhesive. Suitable for overlaminating applications or thin profile label applications. Corona treated film for press printing applications.	1.2 0.8 2.5	PP, Clear T1S **P1212** 40# SC	54" 1668 ft. Min.	Flexo	RoHS
	FP082	Durable moisture resistant film offers excellent conformability. Top-coated to accept flexographic film inks.	2.0 0.9 3.2	PP, Clear TC **P1212** 50# SC	54" 1668 ft. Min.	Flexo	RoHS
	FP092	Freezer grade adhesive. Adhesive dry ingredients are listed by FDA as indirect food contact additives when used in food packaging with minimum opportunity for exposure. See 21 CFR 175.105.	2.0 0.8 3.2	PP, Clear TC **F2201** 50# SC	54" 1668 ft. Min.	Flexo	RoHS
	FP102	General purpose adhesive offers excellent adhesion to a wide variety of substrates, including polyolefins.	2.0 0.9 3.2	PP, Clear TC **P1410** 50# SC	54" 1668 ft. Min.	Flexo	RoHS
	FPM000902	Bright silver conformable film with adhesive designed to adhere to multiple surfaces. Excellent choice for candle label applications.	2.0 0.9 3.2	PP, Silver TC **P1212** 50# SC	54" 1668 ft. Min.	Flexo	RoHS
Polystyrene	FS302	Hard rigid film that offers excellent moisture resistance. High clarity general purpose adhesive. Good for candle top applications.	2.0 0.9 3.2	Clear Polystyrene **F2201** 50# SC	54" 1668 ft. Min.	Flexo	RoHS
	FS152	Rigid film offers exhibits good dispensing properties. Good adhesion to smooth LSE substrates and folded cartons.	2.5 0.9 3.2	White Polystyrene **P1410** 50# SC	54" 1668 ft. Min.	Flexo	RoHS
	FS242	High initial tack rubber-based adhesive. Adheres to waxy surfaces and rubber hoses.	2.5 1.2 3.2	White Polystyrene **P1110** 50# SC	54" 1668 ft. Min.	Flexo	RoHS
	FS442	Matte clear durable hard rigid film that offers excellent moisture resistance. Good adhesion to metals, glass and HSE plastics.	2.0 0.9 3.2	Matte Polystyrene **P1212** 50# SC	54" 1668 ft. Min.	Flexo	RoHS

Go-To Product

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3M™ Roll Label Materials (cont.)

Facestock	Product	Typical Performance Characteristics	Construction: Caliper (mils)	Construction: Facestock Adhesive Type Liner	Roll Width Minimum Mini-Master (shown in red)	Print Method	Specs
Polyethylene	FPE05102	Biaxially oriented film that is compatible with a variety of print methods. General purpose adhesive designed to adhere to both smooth LSE and HSE surfaces.	3.8 0.9 3.2	Matte Polyart™ TC **P1425** 50# SC	54" x 1668 ft. Min.	Flexo, Thermal Transfer, DMI	RoHS
	FPE06602	Conformable film suitable alternative to vinyl label materials. Aggressive adhesive designed to adhere to both LSE and HSE surfaces.	2.5 1.1 3.2	White Polyethylene **P1480** 50# SC	54" x 1668 ft. Min.	Flexo, Thermal Transfer	RoHS
	FPE42	Conformable film suitable alternative to vinyl label materials. Aggressive adhesive designed to adhere to both LSE and HSE surfaces.	3.0 0.9 3.2	Clear Polyethylene **P1410** 50# SC	54" x 1668 ft. Min.	Flexo, Thermal Transfer	RoHS
Acetate	FA032	Matte high-quality film offers excellent dispensability. Die cuts easily to extend die life.	2.0 0.9 3.2	Matte Clear Acetate **P1212** 50# SC	48" 1668 ft. Min.	Flexo	RoHS
Acrylic	FAC00102	Clear acrylic film. General purpose adhesive with minimal cold flow. Durable overlaminate.	2.0 0.8 3.2	Clear Acrylic **P1212** 50# SC	54" 1668 ft. Min.	Flexo	UL CSA RoHS
Kimdura	7291	Smudge-proof top coat. Good for general purpose applications. Can be printed by dot-matrix, thermal transfer, and ion deposition.	3.7 0.9 3.2	Smudge-proof TC Kimdura™ **P1400** 50# Densified Kraft	54" 1668 ft. Min.	Flexo, Thermal Transfer	UL CSA RoHS
Teslin	7841	Excellent toner anchorage. Good conformability. Good print contrast when bar coding.	7.0 0.8 3.2	Matte White Teslin™ **310** 55# Densified Kraft	54" 1668 ft. Min.	Flexo, Laser	UL CSA RoHS
Paper	7000	High-gloss for fine printing. Adheres well to curved surfaces.	4.0 0.9 2.5	60# White High Gloss **320** 43# Densified Kraft	60" 1668 ft. Min.	Flexo	RoHS
	7000FL	Same as 7000 with film liner.	4.0 0.9 1.5	60# White High Gloss **320** Polyester Film	54" 1668 ft. Min.	Flexo	RoHS
	7002	Facestock provides excellent graphic reproductions. Excellent flag resistance on small diameter vials.	4.0 0.9 2.5	60# Bright White High Gloss **320** 43# Densified Kraft	60" 1668 ft. Min.	Flexo	RoHS
	7004	Excellent quick stick and adhesion to low surface energy plastics.	2.8 0.9 2.5	60# Bright White High Gloss **300** 43# Densified Kraft	54" 1668 ft. Min.	Flexo	RoHS
	7113	Ideal for data-processing applications. Can be cleanly removed and repositioned on most surfaces.	4.0 0.4 3.2	46# Uncoated Paper **1000** 50# Densified Kraft	48" 1668 ft. Min.	Flexo	RoHS
	7142	Good thermal transfer printable facestock. Can be removed cleanly or repositioned on most substrates.	3.5 0.4 2.5	55# Coated Paper **1000** 40# Kraft Glassine	48" 1668 ft. Min. 6"	Flexo, Thermal Transfer	RoHS
	7011	Excellent flag resistance on small diameter vials. Used for unit dose pharmaceutical packages.	2.3 0.9 2.5	32# Coated Paper **320** 43# Densified Kraft	60" 1668 ft. Min.	Flexo	RoHS
	7110	Readily fractures or delaminates. Ideal for tamper-resistant labeling. Provides write-on capability.	2.8 1.1 2.5	40# Uncoated Paper **320** 43# Densified Kraft	60" 1668 ft. Min.	Flexo	RoHS
	7120	Conforms to curved surfaces. Resists staining and moisture. Adheres to many textured surfaces.	3.5 1.3 2.5	60# Semi-gloss White Paper **400** 43# Densified Kraft	54" 1668 ft. Min.	Flexo	RoHS
Acrylate	3921	Offers ultra-high temperature performance. Thermal transfer printable.	2.0 1.0 3.0	Matte White Acrylate **150** 55# Densified Kraft	48" 1668 ft. Min. 6"	Thermal Transfer	UL CSA RoHS
	76999	Offers ultra-high temperature performance. Thermal transfer printable with un-branded liner.	2.0 1.0 3.1	Matte White Acrylate **150** 55# Densified Kraft	48" 1668 ft. Min.	Thermal Transfer	UL CSA RoHS
Polyimide White	7812	Offers ultra-high temperature performance. Easy readability of bar codes. Thermal transfer printable.	2.0 2.0 3.2	Polyimide, Matte White **100** 50# Densified Kraft	12" x 1000 ft. 6" x 500	Thermal Transfer	UL CSA RoHS

Go-To Product

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3M™ Dot Matrix Label Materials

Facestock	Product	Typical Performance Characteristics	Construction: Caliper (mils)	Construction: Facestock Adhesive Type Liner	Roll Width Minimum Mini-Master (shown in red)	Print Method	Specs
Polyester Matte White	**7840**	Matte top-coat offers excellent ink anchorage for various electronic printing technologies. Firm adhesive that resists oozing.	2.3 0.8 3.2	PET, White DMI TC **310** 55# Densified Kraft	54" 1668 ft. Min.	Flexo, DMI	UL CSA RoHS
	7880	Matte top-coat resists scuffing, chemicals and moisture. Excellent adhesion to LSE plastics. Liner perforates and fan-folds easily.	2.3 0.8 3.2	PET, White DMI TC **300** 55# Densified Kraft	54" 1668 ft. Min. 6"	Flexo, DMI	UL CSA RoHS
	7880HL	Heavy liner version of 7880 label stock for excellent liner stability in high humidity.	2.3 0.8 4.6	PET, White Laser TC **300** Clay Coated Kraft Laser	54" 1668 ft. Min.	Flexo, DMI	UL CSA RoHS
	FM162	Computer imprintable film that also accepts thermal transfer print. Adheres well to metals and HSE plastics.	2.0 0.9 3.2	PET, White EDP **P1212** 50# SC	54" 1668 ft. Min.	Flexo, Thermal Transfer, DMI	UL RoHS
	0FM2502	Absorbent matte coated for a variety of electronic print technologies. Good adhesion to both HSE and LSE plastics.	2.0 0.9 3.2	PET, White EDP **P1400** 50# SC	54" 1668 ft. Min.	Flexo, Thermal Transfer, DMI	UL RoHS
Polyester Matte Clear	**7745FL**	Dot-matrix imprintable matte top-coat. Ideal where variable information is needed.	1.3 0.8 1.5	PET, Clear DMI TC **400** Polyester Film	54" 1668 ft. Min. 6"	Flexo, DMI	UL CSA RoHS
	7881	Matte top-coat provides good chemical and abrasion resistance. Excellent adhesion to LSE plastics.	2.3 0.8 3.2	PET, Clear DMI TC **300** 55# Densified Kraft	54" 1668 ft. Min. 6"	Flexo, DMI	UL CSA RoHS
	FM142	Absorbent matte coated for a variety of electronic print technologies. General purpose adhesive for HSE substrates.	2.0 0.9 3.2	PET, Clear EDP **P1212** 50# SC	54" 1668 ft. Min.	Flexo, Thermal Transfer, DMI	UL RoHS
Polyester Matte Silver	**7883**	Matte top-coat resists scuffing, chemicals, and moisture. Excellent adhesion to LSE plastics. Liner can be perforated and fan-folded easily.	3.3 0.8 3.2	PET, Silver DMI TC **300** 55# Densified Kraft	54" 1668 ft. Min. 6"	Flexo, DMI	UL CSA RoHS
	7883HL	Heavy liner version of 7883 label stock for excellent liner stability in high humidity.	3.3 0.8 4.6	PET, Silver DMI TC **300** Clay Coated Kraft Laser	54" 1668 ft. Min.	Flexo, DMI	UL CSA RoHS
	7887	Same as 7883 label stock except thinner facestock.	2.3 0.8 3.2	PET, Silver DMI TC **300** 55# Densified Kraft	54" 1668 ft. Min.	Flexo, DMI	UL CSA RoHS
	7897	Firm adhesive resists oozing. Liner perforates and fan-folds easily.	2.3 0.8 3.2	PET, Silver DMI TC **310** 55# Densified Kraft	54" 1668 ft. Min.	Flexo, DMI	UL CSA RoHS
Polyester Bright Silver	**FM152**	Bright metallized film with a matte absorbent top-coating designed for computer imprinting applications. Excellent adhesion to HSE substrates.	2.0 0.9 3.2	PET, Bright Silver EDP **P1212** 50# SC	54" 1668 ft. Min.	Flexo, Thermal Transfer, DMI	UL RoHS
Vinyl White	**FV512**	Same film as FV062 with an adhesive designed to adhere to a variety of surfaces, including polyolefins.	3.4 0.9 3.2	Semi-rigid EDP **P1410** 50# SC	54" 1668 ft. Min.	Flexo, Thermal Transfer, DMI	RoHS
Polypropylene White	**FP010402**	Matte top-coating is designed for compatibility with a variety of film ink systems. Film stiffness allows for easy die cutting and dispensing.	2.8 0.9 3.2	PP, Label-Lyte™ EDP **P1212** 50# SC	54" 1668 ft. Min.	Flexo, Thermal Transfer, DMI	RoHS
	FP024102	Freezer grade adhesive that can be applied at temperatures as low as 0°F. Suitable for frozen food or drum label applications.	3.0 0.8 3.2	PP, EDP C1S **F2201** 50# SC	54" 1668 ft. Min.	Flexo, Thermal Transfer, DMI	RoHS
Polyimide White	**7811**	Offers ultra-high temperature performance. Easy readability of variable information and bar codes.	2.0 2.0 3.0	Matte Polyimide TC **100** 50# Densified Kraft	12" 1000 ft. 6" x 500	DMI	UL CSA RoHS

Go-To Product

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3M™ Digital Label Materials

Facestock	Product	Typical Performance Characteristics	Construction: Caliper (mils)	Construction: Facestock Adhesive Type Liner	Roll Width Minimum Mini-Master (shown in red)	Print Method	Specs
Vinyl White	**IJ39-20**	Solvent or UV inkjet printable film with high tack and peel adhesive	3.2 1.2 6.8	Matte Vinyl **Permanent Acrylic** 90# Polycoated Kraft	54" x 50 yd 60" x 50 yd	Inkjet, Screen, UV Flexo	RoHS
Polyester Matte White	**7840HL**	Matte top-coat offers excellent ink anchorage for various electronic printing technologies. Firm adhesive that resists oozing. Clay-coated liner.	2.3 0.8 4.6	PET, White Laser TC **310** Clay Coated Kraft Laser	54" 1668 ft. Min.	Flexo, Laser	UL CSA RoHS
	7850HL	Matte top-coat offers excellent ink anchorage for laser toner and dot-matrix. Excellent high temperature performance especially to LSE plastics and smooth powder coats.	2.3 1.1 4.6	PET, White Laser TC **350** Clay Coated Kraft Laser	54" 1668 ft. Min.	Flexo, Laser	UL CSA RoHS
	FM01961K	Adhesive can be applied at temperatures as low as 0°F. Liner has special surface finish on the back side to enhance feed and reduce static problems. Excellent for drum labeling applications.	2.0 0.8 4.6	PET, White MC **F2201** Clay Coated Kraft Laser	54" 5000 ft. Min. **9"**	Flexo, Thermal Transfer, Laser	RoHS
	FM031902	Print receptive film accepts most film ink systems and thermal transfer printing Excellent for temporary membership card applications. Film is also laser printable.	5.0 0.9 3.2	PET, White MC **P1212** 50# SC	54" 5000 ft. Min.	Flexo, Thermal Transfer, Laser	RoHS
Polyester Gloss White Laser	**FM1852**	Unique gloss top coat compatible with laser toner print technology for short run digitally printed labels. Pattern adhesive keeps digital press clean.	2.0 0.9 3.2	PET, White Laser TC **P1212 Pattern** 50# SC	54" 1668 ft. Min. 8.5" x 1250 ft. PreSlit	Flexo, Laser	RoHS
Polyester Gloss Clear	**FM02511K**	Durable film with clear laser topcoat. Adheres to a variety of substrates. Offers excellent UV resistance. Liner designed for lay-flat through laser applications.	2.0 0.9 4.6	PET, Clear Laser TC **P1400** Clay Coated Kraft Laser	54" 1668 ft. Min.	Flexo, Thermal Transfer, Laser	RoHS
	FM852	Unique gloss top coat compatible with laser toner print technology for short run digitally printed labels. Pattern adhesive keeps digital press clean.	2.0 0.9 3.2	PET, Clear Laser TC **P1212 Pattern** 50# SC	54" 1668 ft. Min. 8.5" x 1250 ft. PreSlit	Flexo, Laser	RoHS
Polyester Matte Clear	**7845HL**	Matte top-coat provides good chemical and abrasion resistance. Excellent adhesion to HSE plastics and metals.	1.3 0.8 4.6	PET, Clear Laser TC **310** Clay Coated Kraft Laser	54" 1668 ft. Min.	Flexo, Laser	UL RoHS
	FM02090K	Translucent matte coated for a variety of electronic print technologies. Liner has a special surface finish on the back side to enhance feed and reduce static problems.	2.0 0.8 4.6	PET, Translucent EDP **P1212** Clay Coated Kraft Laser	54" 5000 ft. Min.	Flexo, Thermal Transfer, Laser	RoHS
	FM14K	Matte coated for a variety of electronic print technologies. Liner has a special surface finish on the back side to enhance feed and reduce static problems.	2.0 0.8 4.6	PET, Clear EDP **P1212** Clay Coated Kraft Laser	54" 5000 ft. Min.	Flexo, Thermal Transfer, Laser	UL RoHS
	FM1681	Translucent matte coated for a variety of electronic print technologies. Excellent for use as a laser printable overlaminate.	2.0 0.8 2.5	PET, Translucent EDP **P1212** 40# SC	54" 1668 ft. Min.	Flexo, Thermal Transfer, Laser	RoHS
Vinyl White	**FV02410K**	Top-coated for laser printing applications. Liner has a special surface finish on the back side to enhance feed and reduce static problems.	3.4 0.9 4.6	Soft White EDP **P1425** Clay Coated Kraft Laser	54" 5000 ft. Min.	Flexo, Thermal Transfer, DMI, Laser	RoHS
	FV100K	Similar to FV02410K except with a freezer grade adhesive. Suitable for drum labeling applications.	3.4 0.8 4.6	Soft White EDP **F2201** Clay Coated Kraft Laser	54" 5000 ft. Min.	Flexo, Thermal Transfer, DMI, Laser	RoHS
Acrylate	**7847**	Excellent temperature, chemical, and environmental resistance. Two-layered film construction provides excellent long-term performance. Excellent adhesion to LSE plastics. Brittle facestock provides destructibility on some substrates.	2.4 1.2 3.2	Matte Black/White **350** 65# Densified Kraft	48" 984 ft. **3.5", 4.75"**	Laser Etch	UL CSA RoHS
	7848	Same as 7847 label stock, except with matte silver/ black facestock.	2.4 1.2 3.2	Matte Silver/White **350** 65# Densified Kraft	48" 984 ft.	Laser Etch	UL CSA RoHS

Go-To Product

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3M™ Removable Label Materials

Facestock	Product	Typical Performance Characteristics	Construction: Caliper (mils)	Construction: Facestock Adhesive Type Liner	Roll Width Minimum Mini-Master (shown in red)	Print Method	Specs
Polyester White	**FM01972**	Matte film that offers thermal stability. Suitable for masking applications.	2.0 0.8 3.2	PET, White MC **R3500** 50# SC	54" 1668 ft. Min.	Flexo, Thermal Transfer	RoHS
	FM1732R	Thermal transfer printable with resin ribbons. Removable from a variety of surfaces.	2.0 0.8 3.2	PET, White TC **R3500** 50# SC	54" 1668 ft. Min.	Flexo, Thermal Transfer	RoHS
Vinyl White	**7600**	Top-coated, high bond, but offers clean removability on most surfaces for up to one year. Excellent for plasticizer resistance.	3.5 1.0 2.5	Soft White Gloss TC **500** 43# Densified Kraft	54" 1668 ft. Min. 6"	Flexo	RoHS
	FV010002	Ultra removable adhesive. Static cling alternative.	3.4 0.8 3.2	Soft White Vinyl TC3 **R3800** 50# SC	54" 1668 ft. Min.	Flexo	RoHS
	FV1222	Soft conformable vinyl that offers long term adhesion with clean removability.	3.4 0.8 3.2	Soft White Vinyl TC3 **R3500** 50# SC	54" 1668 ft. Min.	Flexo	RoHS
Vinyl Clear	**FV016402**	Top-coated vinyl is an excellent alternative to static cling. Designed for high-speed die cutting and matrix stripping.	4.0 0.8 3.2	Soft Clear Vinyl TC6 **R3500** 50# SC	54" x 1668 ft. Min.	Flexo, Thermal Transfer	RoHS
Vinyl Static Cling	**FVS110S**	Highly plasticized vinyl label material that adheres to most clean smooth surfaces without the use of pressure sensitive adhesives.	7.5 — 3.4	Clear Vinyl TC6 **None** 60# Gloss	54" 1668 ft. Min.	Flexo, Thermal Transfer	RoHS
	FVS12S	White version of FVS110S. Utilizes a non-silicone coated liner specially designed for static cling vinyl.	7.5 — 3.4	White Vinyl TC6 **None** 60# Gloss	54" 1668 ft. Min.	Flexo, Thermal Transfer	RoHS
Polypropylene White	**FP011902**	Removable adhesive from polyethylene and polypropylene surfaces only.	2.3 0.8 3.2	PP, White TC2S **RMR10** 50# SC	54" 1668 ft. Min.	Flexo	RoHS
	FP016902	Good conformability. Good removability from a variety of surfaces. Excellent alternative to static cling.	2.3 0.8 3.2	PP, White TC2S **R3500** 50# SC	54" 1668 ft. Min. 6"	Flexo	RoHS
	FP024502	Glossy white label paired with adhesive designed to be easily removable from a variety of surfaces with lower peel and tack than R3500 adhesive.	2.3 0.8 3.2	PP, White TC2S **R3800** 50# SC	54" 1668 ft. Min.	Flexo	RoHS
Polypropylene Clear	**FP56N**	Clear conformable label offers long term adhesion with clean removability. Excellent alternative to static cling with film liner for high speed dispensing.	2.0 0.8 1.0	PP, Clear TC2S **R3500** Clear Polyester	54" 1668 ft. Min.	Flexo	RoHS
	FP024402	Specially formulated adhesive designed to be easily removable from a variety of surfaces. Offers lower peel and tack than R3500 adhesive.	2.0 0.8 3.2	PP, Clear TC2S **R3800** 50# SC	54" 1668 ft. Min.	Flexo	RoHS
	FP0862	Clear conformable label offers long term adhesion with clean removability. Excellent alternative to static cling.	2.0 0.8 3.2	PP, Clear TC2S **R3500** 50# SC	54" x 1668 ft. Min. 6"	Flexo	RoHS
Paper White	**7113**	Ideal for data-processing applications. Can be cleanly removed and repositioned on most surfaces.	4.0 0.4 3.2	46# Uncoated Paper **1000** 50# Densified Kraft	48" 1668 ft. Min.	Flexo	RoHS
	7142	Good thermal transfer printable facestock. Can be removed cleanly or repositioned on most substrates.	3.5 0.4 2.5	55# Coated Paper **1000** 40# Kraft Glassine	48" 1668 ft. Min. 6"	Flexo, Thermal Transfer	RoHS

Go-To Product

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3M™ Tamper Evident Label Materials

Facestock	Product	Typical Performance Characteristics	Construction: Caliper (mils)	Construction: Facestock Adhesive Type Liner	Roll Width Minimum Mini-Master (shown in red)	Print Method	Specs
Destructible Facestocks	7110	Readily fractures or delaminates. Ideal for tamper-resistant labeling. Provides write-on capability.	2.8 1.1 2.5	40# Uncoated White Paper **320** 43# Densified Kraft	60" 1668 ft. Min.	Flexo	UL* RoHS
	7613T	Resists one-piece removal. Facestock fractures and tears easily. Excellent adhesion to powder coating, LSE plastics and oily metals.	2.0 0.8 3.2	White Vinyl TC **350** 55# Densified Kraft	48" 1668 ft. Min. **4.5", 6"**	Flexo, Thermal Transfer	UL CSA RoHS
	7930T	Same as 7613, except with 90# polycoated kraft liner.	2.0 0.8 6.7	White Vinyl TC **350** 90# Polycoated Kraft	Sheet: 20"x 27" Roll: 48" x 750 ft.	Screen, Flexo, Thermal Transfer	UL CSA RoHS
	3812	This destructible, non-shrink white film is designed as a non-removable security label. Once applied in a correct manner, one-piece removal is not possible on most surfaces.	1.6 1.2 3.2	Urethane, Matte White **350** Glassine	48" 1668 ft. Min. 6" PreSlit	Flexo, Thermal Transfer	RoHS
	FA102	Same as FA112 with a white film.	2.0 0.9 3.2	White Acetate **P1212** 50# SC	48" 1668 ft. Min.	Flexo	RoHS
	FA112	High-quality film resists one piece removal, fractures easily. Good initial tack adhesive.	2.0 0.9 3.2	Clear Acetate **P1212** 50# SC	48" 1668 ft. Min.	Flexo	RoHS
Polyester Tamper Indicating Films	7380	Tamper evident VOID. Ideal for security rating plates and certification plates.	2.3 0.8 3.2	Matte White VOID DMI TC **300** 55# Densified Kraft	54" 1668 ft. Min. **6"**	Flexo, DMI	UL CSA RoHS
	7381/7866	Used for closures in packaging of OTC drugs. Facestock resists harsh environments.	2.0 0.8 3.2	Gloss White VOID TC **300** 55# Densified Kraft	54" 1668 ft. Min. **4.5", 6"**	Flexo, Thermal Transfer	UL CSA RoHS
	7384	Tamper evident VOID. Mirror finish hides security feature. Ideal for security closure seal.	2.0 0.8 3.2	PET, Bright Silver TC **300** 55# Densified Kraft	54" 1668 ft. Min. **4.5", 6"**	Flexo, Thermal Transfer	UL CSA RoHS
	7935	Facestock resists harsh environments. Heavy lay-flat liner. Ideal for screen printing.	2.0 0.8 6.7	Gloss White VOID TC **300** 90# Polycoated Kraft	Sheet: 20"x 27" Roll: 54" x 750 ft.	Screen, Flexo	UL RoHS
	7937	Ideal for security rating plates and certification plates. Heavy lay-flat liner. Ideal for screen printing.	2.3 0.8 6.7	Matte White VOID DMI TC **300** 90# Polycoated Kraft	Sheet: 20"x 27" Roll: 54" x 750 ft.	Screen, Flexo, DMI	UL RoHS
	FMV01402	Tamper evident with triangle pattern. Alternative to standard VOID labels.	2.0 0.9 3.2	White Triangle TC **P1410** 50# SC	54" 1668 ft. Min. **4.5", 6"**	Flexo, Thermal Transfer	RoHS
	FMV01202	Same as FMV01402 in bright silver finish.	2.0 0.9 3.2	Bright Silver Triangle TC **P1410** 50# SC	54" 1668 ft. Min. **4.5", 6"**	Flexo, Thermal Transfer	RoHS
	FMV02	Thermal transfer printable VOID label. General purpose adhesive offers excellent adhesion to a wide variety of substrates, including polyolefins.	2.0 0.9 3.2	Bright Silver VOID TC **P1410** 50# SC	54" 1668 ft. Min. **6"**	Flexo, Thermal Transfer	RoHS
	FMV22	Same as FMV02 in white finish.	2.0 0.9 3.2	White VOID TC **P1410** 50# SC	54" 1668 ft. Min.	Flexo, Thermal Transfer	RoHS

*Can be used to display the UL listing mark, but each case must be reviewed and approved by UL follow-up services before use.

Go-To Product

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3M™ Health Care Label Materials

Facestock	Product	Typical Performance Characteristics	Construction: Caliper (mils)	Construction: Facestock Adhesive Type Liner	Roll Width Minimum Mini-Master (shown in red)	Print Method	Specs
Paper	7000	High-gloss for fine printing. Adheres well to curved surfaces.	3.2 0.9 2.5	60# White High Gloss **320** 43# Densified Kraft	60" 1668 ft. Min. 6"	Flexo	RoHS
	7000FL	Same as 7000 with film liner.	3.2 0.9 1.5	60# White High Gloss **320** Polyester Film	54" 1668 ft. Min.	Flexo	RoHS
	7002	Facestock provides excellent graphic reproductions. Excellent flag resistance on small diameter vials.	2.8 0.9 2.5	60# Bright White High Gloss **320** 43# Densified Kraft	60" 1668 ft. Min.	Flexo	RoHS
	7004	Excellent quick stick and adhesion to low surface energy plastics.	2.8 0.9 2.5	60# Bright White High Gloss **300** 43# Densified Kraft	54" 1668 ft. Min.	Flexo	RoHS
Litho White	7113	Ideal for data-processing applications. Can be cleanly removed and repositioned on most surfaces.	4.0 0.4 3.2	46# Uncoated Paper **1000** 50# Densified Kraft	48" 1668 ft. Min.	Flexo	RoHS
	7142	Good thermal transfer printable facestock. Can be removed cleanly or repositioned on most substrates.	3.5 0.4 2.5	55# Coated Paper **1000** 40# Kraft Glassine	48" 1668 ft. Min.	Flexo, Thermal Transfer	RoHS
Litho Tamper-Indicating White	7110	Readily fractures or delaminates. Ideal for tamper-resistant labeling. Provides write-on capability.	2.8 1.1 2.5	40# Uncoated Paper **320** 43# Densified Kraft	60" 1668 ft. Min.	Flexo	RoHS
	7011	Excellent flag resistance on small diameter vials. Used for unit dose pharmaceutical packages.	2.3 0.9 2.5	35# Coated Paper **320** 43# Densified Kraft	60" 1668 ft. Min.	Flexo	RoHS
Saturated Latex Impregnated White	7120	Conforms to curved surfaces. Resists staining and moisture. Adheres to many textured surfaces.	3.5 1.3 2.5	60# Semi-gloss White Paper **400** 43# Densified Kraft	54" 1668 ft. Min.	Flexo	RoHS
Poly-olefin	FP035402	Offers excellent durability, conformability and moisture resistance. Conforms for use with blood bags.	3.3 1.3 3.1	Matte White Polyolefin **P1650** 50# SC	54" 5000 ft. Min.	Flexo, Thermal Transfer	RoHS

Go-To Product

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3M™ Sheet Label Materials (Standard Sheet Size 20" x 27" Packed 100 sheets/box)

Facestock	Product	Typical Performance Characteristics	Construction: Caliper (mils)	Construction: Facestock Adhesive Type Liner	Roll Width Minimum	Print Method	Specs
Vinyl White	FV031705	Flexible film, ideal for screen printing with solvent ink systems, UV inkjet or UV flexo.	3.2 0.9 6.8	Soft White Vinyl NTC **P1212** 90# Polycoated Kraft	Sheet: 20" x 27" Master: 54"" x 750 ft.	Screen	RoHS
	7043	Specially top-coated vinyl for UV curable screen inks. Good general purpose adhesive for a variety of surfaces.	3.2 0.9 6.8	Soft White Vinyl TC9 **P1400** 90# Polycoated Kraft	Sheet: 20" x 27" Master: 54" x 750 ft.	Screen	UL RoHS
	7045	Non top-coated film with good conformability. Excellent choice for curved surfaces	3.2 0.9 6.8	Soft White Vinyl NTC **P1400** 90# Polycoated Kraft	Sheet: 20" x 27" Master: 54" x 750 ft.	Screen	UL RoHS
	7046	Flexible film, ideal for screen printing with solvent ink systems.	3.2 1.1 6.8	Soft White Vinyl NTC **350** 90# Polycoated Kraft	Sheet: 20" x 27" Master: 54" x 750 ft.	Screen	UL RoHS
	FV027805	Flexible film, ideal for printing with solvent, UV inkjet or UV flexo inks. High tack and peel adhesive suitable for outdoor, textured LSE substrates.	3.2 1.1 6.8	Soft White Vinyl NTC **P1480** 90# Polycoated Kraft	Sheet: Custom Sizes Master: 54" or 60" x 750 ft.	Screen	RoHS
	7049	Up to 5 year extended life vinyl.	3.8 0.9 6.8	Soft White EL Vinyl NTC **P1400** 90# Polycoated Kraft	Sheet: 20" x 27" Master: 54" x 750 ft.	Screen	UL RoHS
	7051	Up to 5 year extended life vinyl. High performance adhesive.	3.8 1.1 6.8	Soft White EL Vinyl NTC **350** 90# Polycoated Kraft	Sheet: 20" x 27" Master: 54" x 750 ft.	Screen	UL RoHS
	7051SA	Extended life, white finish, adhesive allows trapped air to release to prevent bubbles, good for powder coated surfaces, high performance adhesive.	3.8 1.1 6.8	Soft White EL Vinyl NT **350** 90# Polycoated Kraft	Sheet: 20" x 27" Roll: 54" x 750 ft.	Flexo	RoHS
	7065	Ultra removable from smooth surfaces. Topcoated. Excellent alternative to static cling.	4.0 0.8 6.8	Soft White Vinyl NTC **R3500** 90# Polycoated Kraft	Sheet: 20" x 27" Master: 54" x 750 ft.	Screen	RoHS
	7902	Non top-coated. Conformable to contoured surfaces. Heavy lay-flat liner. Ideal for screen printing.	3.5 1.2 6.8	Soft White Vinyl NTC **300** 90# Polycoated Kraft	Sheet: 20" x 27" Roll: 54" x 750 ft.	Screen	UL CSA RoHS
	7904	Conformable to contoured surfaces. Excellent adhesion to LSE plastics and textured powder coats.	3.4 1.8 6.8	Soft White Vinyl NTC **350** 90# Polycoated Kraft	Sheet: 20" x 27" Roll: 54" x 750 ft.	Screen	RoHS
	7901	Non top-coated. High bond, but offers clean removability on most surfaces for up to one year. Excellent for plasticizer resistance.	3.5 1.0 6.8	Soft White Vinyl NTC **500** 90# Polycoated Kraft	Sheet: 20" x 27" Roll: 54" x 750 ft.	Screen	RoHS
	7930T	Resists one-piece removal. Facestock fractures and tears easily. Excellent adhesion to powder coating, LSE plastics and oily metals.	2.0 0.8 6.8	White Destructible TC **350** 90# Polycoated Kraft	Sheet: 20" x 27" Roll: 48" x 750 ft.	Screen	UL CSA RoHS
Vinyl Clear	7053	Semi-flexible, non top-coated film designed for screen printing applications.	4.0 1.1 6.8	Soft Clear Vinyl NTC **350** 90# Polycoated Kraft	Sheet: 20" x 27" Master: 54" x 750 ft.	Screen	RoHS
	FV1405	Ultra removable from smooth surfaces. Non-topcoated. Excellent alternative to static cling.	4.0 0.8 6.8	Soft Clear Vinyl NTC **R3500** 90# Polycoated Kraft	Sheet: 20" x 27" Rolls: 27" x 750 ft. Master: 54" x 750 ft.	Screen	RoHS

Go-To Product

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3M™ Sheet Label Materials (Standard Sheet Size 20" x 27" Packed 100 sheets/box) (cont.)

Facestock	Product	Typical Performance Characteristics	Construction: Caliper (mils)	Construction: Facestock Adhesive Type Liner	Roll Width Minimum	Print Method	Specs
Polyester White	7034	Glossy white film, excellent choice for screen printing applications. Good convertibility.	2.0 0.9 6.8	PET, White TC **P1400** 90# Polycoated Kraft	Sheet: 20" x 27" Master: 54" x 750 ft.	Screen, Flexo	UL RoHS
	7035	Excellent adhesion to LSE plastics and powder coated paints. Moderate coat weight of adhesive improves processing.	2.0 1.1 6.8	PET, White TC **350** 90# Polycoated Kraft	Sheet: 20" x 27" Master: 54" x 750 ft.	Screen, Flexo	UL RoHS
	7037	Same film as 7036 with aggressive adhesive for difficult substrates.	2.0 1.1 6.8	PET, White MC **350** 90# Polycoated Kraft	Sheet: 20" x 27" Master: 54" x 750 ft.	Screen, Flexo	UL RoHS
	7220SA	Adhesive allows trapped air to release to prevent bubbling, chemical resistant, goo for powder coated surfaces, slightly oily metals, high performance adhesive.	2.0 1.1 6.8	PET, Gloss White TC **350** 90# Polycoated Kraft	Sheet: 20" x 27" Roll: 54" x 750 ft.	Screen, Flexo	RoHS
	7907	350 adhesive for performance applications that require thermal transfer printing and demand adhesive performance on difficult to stick to surfaces (e.g. HSE plastics or powder coats).	2.3 1.8 6.8	PET, Matte White TC **350** 90# Polycoated Kraft	Sheet: 20" x 27" Roll: 54" x 750 ft.	Screen, Flexo	UL CSA RoHS
	7908	Heavy adhesive coat weight for textured surfaces. Excellent high temperature resistance. Excellent adhesion to LSE plastics and powder coats.	2.0 1.8 6.8	PET, Gloss White TC **350** 90# Polycoated Kraft	Sheet: 20" x 27" Roll: 54" x 750 ft.	Screen, Flexo	UL CSA RoHS
	7908FL	Same as 7908 except with thick polyester liner suitable for domed decals.	2.0 1.8 4.0	PET, Gloss White TC **350** Polyester	Sheet: 20" x 27" Roll: 54" x 750 ft.	Screen, Flexo	UL CSA RoHS
	7920	Good abrasion and chemical resistance. Excellent cold temperature performance. Ideal for screen printing.	1.0 0.8 6.8	PET, Gloss White TC **400** 90# Polycoated Kraft	Sheet: 20" x 27" Roll: 54" x 750 ft.	Screen, Flexo	UL CSA RoHS
	7931	High abrasion and solvent resistance. Good for indoor and outdoor use. Excellent bond to LSE plastics.	2.0 0.8 6.8	PET, Gloss White TC **300** 90# Polycoated Kraft	Sheet: 20" x 27" Roll: 54" x 750 ft.	Screen, Flexo	UL CSA RoHS
	7935	Facestock resists harsh environments. Heavy layflat liner. Ideal for screen printing.	2.0 0.8 6.8	PET, Gloss White VOID TC **300** 90# Polycoated Kraft	Sheet: 20" x 27" Roll: 54" x 750 ft.	Screen, Flexo	UL RoHS
	7937	Ideal for security rating plates and certification plates. Heavy lay-flat liner. Ideal for screen printing.	2.3 0.8 6.8	PET, Matte White VOID DMI TC **300** 90# Polycoated Kraft	Sheet: 20" x 27" Roll: 54" x 750 ft.	Screen, Flexo	UL RoHS
	7980	Matte top-coat resists scuffing, chemicals, and moisture. Excellent adhesion to smooth LSE plastics. Designed for screen printing.	2.3 0.8 6.8	PET, Matte White TC **300** 90# Polycoated Kraft	Sheet: 20" x 27" Roll: 54" x 750 ft.	Screen, Flexo, DMI	UL RoHS
	FM125	Gloss white polyester with permanent acrylic adhesive for bar code labels or nameplates with layflat liner for screen printed durable graphics.	2.0 0.9 7.0	PET, White TC **P1212** 90# Polycoated Kraft	Custom Sheet Sizes Roll: 54" x 750 ft.	Screen	RoHS
Polyester Clear	7029	Excellent UV resistance. Good adhesion to a variety of surfaces.	2.0 0.9 6.8	PET, Clear TC **P1400** 90# Polycoated Kraft	Sheet: 20" x 27" Master: 54" x 750 ft.	Screen, Flexo	UL RoHS
	7905	Heavy adhesive coat weight for textured surfaces. Excellent high temperature resistance. Excellent adhesion to LSE plastics and powder coats.	2.0 1.8 6.8	PET, Gloss Clear TC **350** 90# Polycoated Kraft	Sheet: 20" x 27" Roll: 54" x 750 ft.	Screen, Flexo	UL CSA RoHS
	7950	Offers high abrasion and solvent resistance. Excellent adhesion to smooth LSE plastics. Ideal for indoor and outdoor applications.	2.0 0.8 6.8	PET, Gloss Clear TC **300** 90# Polycoated Kraft	Sheet: 20" x 27" Roll: 54" x 750 ft.	Screen, Flexo	UL CSA RoHS

Go-To Product

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3M™ Sheet Label Materials (Standard Sheet Size 20" x 27" Packed 100 sheets/box) (cont.)

Facestock	Product	Typical Performance Characteristics	Construction: Caliper (mils)	Construction: Facestock Adhesive Type Liner	Roll Width Minimum	Print Method	Specs
Polyester Silver	7025	General purpose adhesive designed for outdoor applications. Designed for use with smooth surfaces.	2.0 0.9 6.8	PET, Bright Silver TC **P1400** 90# Polycoated Kraft	Sheet: 20" x 27" Master: 54" x 750 ft.	Screen, Flexo	UL RoHS
	7026	Excellent chemical and moisture resistance.	2.0 1.1 6.8	PET, Bright Silver TC **350** 90# Polycoated Kraft	Sheet: 20" x 27" Master: 54" x 750 ft.	Screen, Flexo	UL RoHS
	7027	Good adhesion to smooth HSE and LSE surfaces. Ideal for indoor and outdoor applications.	2.0 0.9 6.8	PET, Brushed Silver TC **P1400** 90# Polycoated Kraft	Sheet: 20" x 27" Master: 54" x 750 ft.	Screen, Flexo	UL RoHS
	7028	Similar to 7909 with slightly lower coat weight for easier processing.	2.0 1.1 6.8	PET, Brushed Silver TC **350** 90# Polycoated Kraft	Sheet: 20" x 27" Master: 54" x 750 ft.	Screen, Flexo	UL RoHS
	FM3605	Platinum silver polyester with permanent acrylic adhesive for bar code labels or nameplates with layflat liner for screen printed durable graphics.	2.0 0.9 7.0	PET, Silver TC **P1212** 90# Polycoated Kraft	Custom Sheet Sizes Master: 54" x 750 ft.	Screen	RoHS
	7032	Excellent lay-flat performance for screen printing applications.	2.0 0.9 6.8	PET, Matte Silver TC **P1400** 90# Polycoated Kraft	Sheet: 20" x 27" Master: 54" x 750 ft.	Screen, Flexo	UL RoHS
	7033	Aggressive adhesive for harsh environments.	2.0 1.1 6.8	PET, Matte Silver TC **350** 90# Polycoated Kraft	Sheet: 20" x 27" Master: 54" x 750 ft.	Screen, Flexo	UL RoHS
	7214SA	Adhesive allows trapped air to release to prevent bubbling, chemical resistant, good for powder coated surfaces, slightly oily metals, high performance adhesive.	2.0 1.1 6.8	PET, Brushed Silver TC **350** 90# Polycoated Kraft	Sheet: 20" x 27" Roll: 54" x 750 ft.	Flexo	RoHS
	7903	Heavy adhesive coat weight for textured surfaces. Excellent high temperature resistance. Excellent adhesion to LSE plastics and powder coated paints.	2.0 1.8 6.8	PET, Bright Silver PT **350** 90# Polycoated Kraft	Sheet: 20" x 27" Roll: 54" x 750 ft.	Screen, Flexo	UL CSA RoHS
	7903FL	Same as 7903 except with thick polyester liner suitable for domed decals.	2.0 1.8 4.0	PET, Bright Silver PT **350** Polyester	Sheet: 20" x 27" Roll: 54" x 750 ft.	Screen, Flexo	CSA RoHS
	7924	Excellent abrasion and chemical resistance. Excellent adhesion to smooth LSE plastics. Ideal for indoor and outdoor applications.	2.0 0.8 6.8	PET, Gloss Silver TC **300** 90# Polycoated Kraft	Sheet: 20" x 27" Roll: 54" x 750 ft.	Screen, Flexo	UL CSA RoHS
	9017FL	Bright silver with thick polyester liner suitable for domed decals. Thick, high-performance adhesive for durable applications.	2.0 5.0 4.0	PET, Bright Silver PT **200MP** Polyester	Sheet: 20" x 27" Roll: 54" x 750 ft.	Screen, Flexo	RoHS
	9018FL	Brushed silver with thick polyester liner suitable for domed decals. Thick, high-performance adhesive for durable applications.	2.0 5.0 4.0	PET, Brushed Silver PT **200MP** Polyester	Sheet: 20" x 27" Roll: 54" x 750 ft.	Screen, Flexo	RoHS
Polyester Gold	7925	Offers high abrasion and solvent resistance. Excellent quick stick and bond to smooth LSE plastics. Uses include instruction and schematic panels.	2.0 0.8 6.8	PET, Gloss Gold TC **300** 90# Polycoated Kraft	Sheet: 20" x 27" Roll: 54" x 750 ft.	Screen, Flexo	UL CSA RoHS
Aluminum Foil Silver	7940	Vinyl top-coated for ink receptivity. Heavy adhesive coat weight suitable for textured surfaces.	2.0 1.7 6.8	Matte Silver TC **320** 90# Polycoated Kraft	Sheet: 20" x 27" Rolls: See product 7800	Screen, Flexo, DMI	UL CSA RoHS
Polyethylene	FPE06505	Biaxially oriented film that is compatible with a variety of print methods. Aggressive adhesive designed to adhere to both LSE and HSE surfaces.	3.8 1.1 3.2	Matte Polyart™ TC **P1480** 90# Polycoated Kraft	54" x 1668 ft. Min. Custom Sheet Sizes	Screen, Flexo, Thermal Transfer, DMI	RoHS

Go-To Product

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3M™ Overlaminate Label Materials

Facestock	Product	Typical Performance Characteristics	Construction: Caliper (mils)	Construction: Facestock Adhesive Type Liner	Roll Width Minimum Mini-Master (shown in red)	Print Method	Specs
Polyester Gloss Clear	7730FL	Non top-coated. Film liner offers excellent graphic appearance. Ideal for metallized or dark colors. Excellent durability and UV resistance.	1.0 0.8 1.5	PET, Clear NTC **400** Polyester Film	54" 1668 ft. Min. 6"	—	UL CSA RoHS
	7731FL	Non top-coated. Same as 7730FL, except with 2.0 mil facestock.	2.0 0.8 1.5	PET, Clear NTC **400** Polyester Film	54" 1668 ft. Min. 6"	—	UL CSA RoHS
	7733FL	Resists UV exposure for extended periods of time. Provides premium clarity that will not impart haze on underlying graphics.	1.0 0.8 1.5	PET, Clear UV **400** Polyester	54" 1668 ft. Min. 6", 12.25"	—	UL RoHS
	7741	Non top-coated. For general purpose overlaminating. Excellent abrasion, chemical, and UV resistance.	1.0 0.8 2.5	PET, Clear NTC **400** 43# Densified Kraft	54" 1668 ft. Min.	—	UL CSA RoHS
	8417	Non top-coated. Ideal for fuel line identification. Meets MIL-T-9906C when used with 8418 press printable film label stock.	1.0 1.2	PET, Clear NTC **100**	48" 216 yd	—	UL Military* RoHS
	FM011	Basic polyester overlaminating film with general purpose adhesive.	1.0 0.8 2.5	PET, Clear NTC **P1212** 40# SC	54" 1668 ft. Min. Precision	—	UL RoHS
	FM01N	Same as FM011 with film liner.	1.0 0.8 1.0	PET, Clear NTC **P1212** Clear Polyester	54" 1668 ft. Min.	—	UL RoHS
	FM022	General purpose overlaminating film for indoor use.	2.0 0.9 3.2	PET, Clear NTC **P1212** 50# SC	54" 1668 ft. Min.	—	UL RoHS
	FM1142	4.0 mil version of FM022.	4.0 0.9 3.2	PET, Clear NTC **P1212** 50# SC	54" 1668 ft. Min.	—	RoHS
	FM292	High clarity adhesive. Abrasion resistant film. Designed for indoor applications.	3.0 0.9 3.2	PET, Clear NTC **P1212** 50# SC	54" 1668 ft. Min.	—	UL RoHS
	FM452	Heavy gauge durable non top-coated film designed for overlaminating applications. Abrasion resistant. Designed for indoor applications.	5.0 0.9 3.2	PET, Clear NTC **P1212** 50# SC	54" 1668 ft. Min.	—	UL RoHS
	FM45N	Same as FM452 with a film liner for ultimate adhesive clarity.	5.0 0.9 1.0	PET, Clear NTC **P1212** Clear Polyester	54" 1668 ft. Min.	—	UL RoHS
	OFM0102	Excellent UV resistance. Designed for indoor and outdoor overlaminating applications.	1.0 0.8 3.2	PET, Clear NTC **P1400** 50# SC	54" 1668 ft. Min.	—	UL RoHS
	OFM010N	Same as OFM0102 with a clear liner for ultimate adhesive smoothness.	1.0 0.8 1.0	PET, Clear NTC **P1400** Clear Polyester	54" 1668 ft. Min.	—	UL RoHS
Polyester Matte Clear	7732FL	Non top-coated. Film liner provides excellent clarity. Ideal for metallized or dark colors. Excellent durability and UV resistance.	1.0 0.8 1.5	PET, Matte NTC **400** Polyester Film	54" 1668 ft. Min.	—	UL CSA RoHS
	7742	Non top-coated. For general purpose overlaminating. Excellent abrasion, chemical and UV resistance.	1.0 0.8 2.5	PET, Matte NTC **400** 43# Densified Kraft	54" 1668 ft. Min.	—	UL CSA RoHS
	7744FL	Thermal transfer printable matte top-coat. Ideal where variable information is needed. Film liner provides smoother adhesive appearance.	1.3 0.8 1.5	PET, Matte TT TC **400** Polyester	54" 1668 ft. Min.	Flexo, Thermal Transfer	UL CSA RoHS
	7745FL	Dot-matrix imprintable matte top-coat. Ideal where variable information is needed.	1.3 0.8 1.5	PET, Matte DMI TC **400** Polyester Film	54" x 1668 ft. Min. 6"	Flexo, DMI	UL CSA RoHS
	FM071	Matte clear film for general purpose overlaminating applications.	1.0 0.8 2.5	PET, Matte NTC **P1212** 40# SC	54" 1668 ft. Min.	—	UL RoHS

* Meets L-T-100B Type.

Go-To Product

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3M™ Overlaminate Label Materials (cont.)

Facestock	Product	Typical Performance Characteristics	Construction: Caliper (mils)	Construction: Facestock Adhesive Type Liner	Roll Width Minimum Mini-Master (shown in red)	Print Method	Specs
Acetate Clear	**8042**	Matte overlaminate designed for use with 803 chart tape.	1.6 0.7	Matte Acetate **400**	47" 216 yd	—	RoHS
Acrylate Clear	**7735FL**	Ideal for long term outdoor applications. Special UV resistant film provides 5 years outdoor durability.	3.0 0.8 1.5	UV Resistant Acrylate **400** Polyester Film	48" 1668 ft. Min. **6"**	Flexo, Thermal Transfer	UL CSA RoHS
Acrylic Clear	**8524**	Clear overlaminate for outdoor applications. Ideal for use with IJ8624.	2.0 0.9 3.2	UV Resistant Film **P1212** 50# SC	54" x 50 yd	—	RoHS
Textured Vinyl Clear	**FV02800N**	Textured, durable film is an alternative to polycarbonate for less demanding applications. High clarity general purpose adhesive with good initial tack and excellent die cutting properties.	4.0 0.9 1.0	Textured Vinyl NTC **P1212** Clear Polyester	54" 1668 ft. Min.	—	RoHS
	FV02490N	Thicker version of FV02800N.	5.0 0.9 0.0	Textured Vinyl NTC **P1212** Clear Polyester	54" 1668 ft. Min.	—	RoHS
	FV02610N	Adhesive offers excellent UV resistance for outdoor applications.	5.0 1.0 1.0	Textured Vinyl NTC **P1400** Clear Polyester	54" 1668 ft. Min.	—	RoHS
Polycarbonate Clear	**7737FL**	Used to achieve the attractive appearance of a subsurface screen printed polycarbonate.	3.0 0.8 1.5	Velvet Clear Lexan™ **400** Polyester Film	54" 1668 ft. Min.	—	UL CSA RoHS
	7738FL	Same as 7737FL, except with 5.0 mil facestock.	5.0 0.8 1.5	Velvet Clear Lexan™ **400** Polyester Film	54" 1668 ft. Min.	—	UL CSA RoHS
	FL01N	Liner offers high strength and caliper control Recommended where the clarity of the adhesive is critical.	5.0 1.1 1.0	Velvet Clear Lexan™ **P1212** Clear Polyester	54" 1668 ft. Min. **6"**	—	RoHS
	FL02N	Similar to 7737FL. High clarity general purpose adhesive. Designed for indoor use.	3.0 1.1 1.0	Velvet Clear Lexan™ **P1212** Clear Polyester	54" 1668 ft. Min. **6"**	—	UL RoHS
	OFL010N	Specialty durable polycarbonate overlaminate. High performance adhesive formulated for demanding applications. Adheres to a variety of surfaces. Excellent UV resistance.	3.0 1.0 1.0	Velvet Clear Lexan™ **P1400** Clear Polyester	54" 1668 ft. Min.	—	UL RoHS
	OFL020N	Thicker caliper version of OFL010N.	5.0 1.0 1.0	Velvet Clear Lexan™ **P1400** Clear Polyester	54" 1668 ft. Min.	—	UL RoHS

Go-To Product

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3M™ Foil Label Materials

Facestock	Product	Typical Performance Characteristics	Construction: Caliper (mils)	Construction: Facestock Adhesive Type Liner	Roll Width Minimum Mini-Master (shown in red)	Print Method	Specs
Aluminum Foil	7800	Vinyl top-coated for ink receptivity. Heavy adhesive coat weight suitable for textured surfaces. Excellent adhesion to LSE plastics.	2.0 1.7 3.0	Matte Silver TC **320** 60# Densified Kraft	40" 1668 ft. Min. 6.5"	Flexo, DMI	UL CSA RoHS
	7801	Vinyl top-coated for ink receptivity. Heavy adhesive coat weight ideal for textured surfaces. Excellent adhesion to LSE plastics.	2.0 1.7 3.0	Bright Silver TC **320** 60# Densified Kraft	40" 1668 ft. Min.	Flexo, DMI	UL CSA RoHS
	7940	Vinyl top-coated for ink receptivity. Excellent for rough or textured surfaces. High-temperature resistant adhesive.	2.0 3.5 6.8	Matte Silver TC **320** 90# Polycoated Liner	Roll: 40" x 750 ft. Min. Sheet: 20" x 27"	Flexo, Screen	UL CSA RoHS

3M™ Tire Label Materials

Facestock	Product	Typical Performance Characteristics	Construction: Caliper (mils)	Construction: Facestock Adhesive Type Liner	Roll Width Minimum Mini-Master (shown in red)	Print Method	Specs
Polypropylene	FP028502	Excellent film opacity. Extremely aggressive rubber-based adhesive designed for use in tire label applications	2.6 1.8 3.2	PP, White TC2S **G1120** 50# SC	54" 1668 ft. Min.	Flexo, Thermal Transfer	RoHS
Polyethylene	FPE004302	Conformable film for easy printing with flexo or thermal transfer ribbons. Extremely aggressive rubber-based adhesive designed for use in tire label applications.	3.8 1.5 3.2	Polyart TC **G1120** 50# SC	54" 1668 ft. Min.	Flexo, Thermal Transfer	RoHS

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Commercial Graphics

Give Your Customers Peace of Mind

When customers invest in your commercial graphics, they put their reputations on display. For long-, medium- and short-term applications, 3M films stand up to the elements to ensure a high-quality image and give your customers peace of mind.

Graphics using 3M materials apply easily and resist fading, peeling and cracking. This is the image that keeps your customers coming back with repeat business.

3M™ Graphic Films

Product Number	Product Name	Colors	Adhesive	Signs & Graphics	Window	Walls	Floors	Sidewalk	Durability
Digital Printable Films									
Translucent Films									
IJ63	3M™ Scotchcal™ Changeable Translucent Graphic Film	Matte White	Removable	■	■				1.5 yrs.
IJ3630	3M™ Scotchcal™ Translucent Graphic Film	White	Permanent	■	■				7 yrs.
Opaque Films									
IJ35	3M™ Scotchcal™ Graphic Film	White (Gloss & Matte)	Permanent	■		■			5 yrs.
IJ35C	3M™ Scotchcal™ Graphic Film with Comply™ Adhesive	White (Gloss & Matte)	Permanent	■		■			5 yrs.
IJ40C	3M™ Scotchcal™ Graphic Film with Comply™ Adhesive	White (Gloss & Matte)	Removable	■		■	■		1 yr. floors, 7 yrs. walls
40C	3M™ Controltac™ Graphic Film	White (Gloss & Matte)	Removable	■		■	■		
IJ86E	3M™ Wall Decorating Film	Matte White	Removable						1 yr.
IJ160	3M™ Controltac™ Graphic Film	White	Removable, Slideable			■			5 yrs.
IJ160C	3M™ Controltac™ Graphic Film with Comply™ Adhesive	White	Removable, Slideable			■			5 yrs.
IJ162	3M™ Controltac™ Graphic Film	White, Transparent	Removable, Slideable				■	■	1 yr.
IJ170Cv3	3M™ Scotchcal™ Graphic Film with Comply™ v3 Adhesive	White	Removable	■		■			1 yr.
IJ3650	3M™ Scotchcal™ Graphic Film	White, Transparent	Permanent			■			7 yrs.
IJ8624	3M™ Scotchcal™ Graphic Film for Textured Surfaces	White	Removable			■			1 mo.
Reflective Films									
IJ680	3M™ Scotchlite Reflective Graphic Film	White	Permanent, Repositionable	■					9 yrs.
IJ680CR	3M™ Scotchlite™ Removable Reflective Graphic Film with Comply™ Adhesive	White	Removable, Repositionable	■					9 yrs.
IJ5000	3M™ Scotchlite™ Reflective Graphic Film	White	Permanent	■					1.5 yrs.
IJ5100	3M™ Scotchlite™ Reflective Graphic Film	White	Permanent	■					7 yrs.
IJ5100R	3M™ Scotchlite™ Reflective Graphic Film	White	Removable	■					7 yrs.
Transparent Films									
IJ8150	3M™ Scotchcal™ Clear View Graphic Film	Transparent	Removable	■	■				3 yrs.
IJ61	3M™ Changeable Window Graphic Film	Transparent	Removable	■	■				1 yr.
Perforated Films									
IJ66	3M™ Scotchcal™ Perforated Window Graphic Film, 50% Perforation	White	Removable		■				1 yr.
IJ67	3M™ Scotchcal™ Perforated Window Graphic Film, 40% Perforation	White	Removable		■				1 yr.
IJ8171	3M™ Scotchcal™ Perforated Window Graphic Film	White	Removable		■				3 yrs.
Screen Printable Films									
Translucent Films									
3630	3M™ Scotchcal™ Translucent Graphic Film Series	Various	Permanent	■	■				7 yrs.
Opaque Films									
50	3M™ Scotchcal™ Graphic Film Series	Various	Removable	■	■				3 yrs.
160	3M™ Controltac™ Graphic Film Series	White, Transparent, Black	Removable, Slideable	■		■			5 yrs.
160C	3M™ Controltac™ Graphic Film with Comply™ Adhesive Series	White, Black	Removable, Slideable	■		■			5 yrs.
162	3M™ Controltac™ Graphic Film Series	White, Transparent	Removable, Slideable				■		1 yr.
164	3M™ Controltac™ Graphic Film	White	Removable, Slideable				■		5 mo.
180	3M™ Controltac™ Graphic Film Series	Various	Removable, Slideable	■		■			7 yrs.
180C	3M™ Controltac™ Graphic Film with Comply™ Adhesive Series	Various	Removable, Slideable	■		■			7 yrs.
180Cv2	3M™ Controltac™ Graphic Film with Comply™ v2 Adhesive	White	Removable, Slideable	■		■			7 yrs.
181	3M™ Controltac™ Graphic Film	White	Removable, Slideable	■					8 yrs.
1000	3M™ Scotchcal™ Graphic Film Series	Various	Permanent	■					5 yrs.
3545C	3M™ Controltac™ Removable Graphic Film with Comply™ Adhesive	White	Removable, Slideable	■	■	■			3 yrs.
3470	3M™ Scotchcal™ Graphic Film	White	Removable, Slideable	■		■			3 yrs.
3475	3M™ Scotchcal™ Graphic Film	Black	Removable, Slideable	■		■			3 yrs.
3500C	3M™ Controltac™ Changeable Graphic Film with Comply™ Adhesive	White	Removable, Slideable	■		■			2 yrs.

Removable products are only removable with heat. Durability information is for outdoor applications.

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3M™ Graphic Films (cont.)

Product Number	Product Name	Colors	Adhesive	Signs & Graphics	Window	Walls	Floors	Sidewalk	Durability
Screen Printable Films (cont.)									
Opaque Films									
3650	3M™ Controltac™ Graphic Film Series	White, Transparent, Black	Removable, Slideable	■	■	■			7 yrs.
3552C	3M™ Controltac™ Changeable Graphic Film with Comply™ Adhesive	White	Removable, Slideable	■	■				2 yrs.
3662	3M™ Controltac™ Graphic Film	White	Removable, Slideable				■	■	3 mo.
3670LF	3M™ Scotchcal™ Graphic Film	White	Permanent	■					3 yrs.
3690	3M™ Scotchcal™ Graphic Film Series	White, Transparent, Black	Permanent	■		■			5 yrs.
3690C	3M™ Controltac™ Removable Graphic Film with Comply™ Adhesive Series	White ,Transparent, Black	Removable, Slideable	■		■			5 yrs.
7125	3M™ Scotchcal™ Electrocut™ Graphic Film Series	Various	Permanent	■	■	■			5 yrs.
7725	3M™ Scotchcal™ Electrocut™ Graphic Film Series	Various	Permanent	■	■	■			5 yrs.
7725SE	3M™ Scotchcal™ Electrocut™ Graphic Film Series	Various Fluorescent	Permanent	■					1 yr.
8000	3M™ Scotchcal™ Graphic Film Series	Various	Removable	■					8 yrs.
Reflective Films									
680	3M™ Scotchlite™ Reflective Graphic Film Series	Various	Removable, Repositionable	■					9 yrs.
680CR	3M™ Scotchlite™ Reflective Graphic Film Series	Various	Removable, Repositionable	■					9 yrs.
5000	3M™ Scotchlite™ Reflective Graphic Film Series	White	Permanent	■					1.5 yrs.
5100	3M™ Scotchlite™ Reflective Graphic Film Series	Various	Permanent	■	■				7 yrs.
5100R	3M™ Scotchlite™ Reflective Graphic Film Series	Various	Removable	■					7 yrs.
Transparent Films									
180C-114	3M™ Controltac™ Graphic Film with Comply™ Adhesive	Transparent	Removable, Slideable	■		■			7 yrs.
8000	3M™ Scotchcal™ Graphic Film Series	Transparent	Removable	■					8 yrs.
Perforated Films									
8171	3M™ Scotchcal™ Perforated Window Graphic Film, 50% Perforation	White	Removable	■	■				1 yr.
Diffuser Films									
3635-30	3M™ Diffuser Films	Translucent	Permanent	■					9 yrs.
3635-70	3M™ Diffuser Films	Translucent	Permanent	■					9 yrs.
3735-50	3M™ Diffuser Films	Translucent	Permanent	■					9 yrs.
3735-60	3M™ Diffuser Films	Translucent	Permanent	■					9 yrs.

Removable products are only removable with heat. Durability information is for outdoor applications.

Product Number	Product Name	Colors	Adhesive	Durability	Comments
Overlaminate Films					
3619	3M™ Scotchcal™ Luster Overlaminate	Transparent	Permanent	7 yrs.	Flexible, conformable and more durable
3620	3M™ Scotchcal™ Matte Overlaminate	Transparent	Permanent	7 yrs.	For digitally imaged backlit signs
3658G	3M™ Scotchcal™ Gloss Overlaminate	Transparent	Permanent	7 yrs.	For flexible surfaces
3660M	3M™ Scotchcal™ Matte Overlaminate	Transparent	Permanent	7 yrs.	For use on illuminated signs
8508	3M™ Scotchcal™ Gloss Overlaminate	Transparent	Permanent	1 yr.	Vinyl film offers good UV protection
8509	3M™ Scotchcal™ Luster Overlaminate	Transparent	Permanent	1 yr.	For flat and simple curves
8518	3M™ Scotchcal™ Gloss Overlaminate	Transparent	Permanent	5 yrs.	Flexible and conformable film
8519	3M™ Scotchcal™ Luster Overlaminate	Transparent	Permanent	5 yrs.	Flexible and conformable film
8520	3M™ Scotchcal™ Matte Overlaminate	Transparent	Permanent	5 yrs.	Flexible and conformable film
8528	3M™ Scotchcal™ Gloss Overlaminate	Transparent	Permanent	7 yrs.	For harsh environments
8580	3M™ Scotchcal™ Gloss Overlaminate	Transparent	Permanent	5 yrs.	Stretchy and conformable for complex contours
8908	3M™ Scotchcal™ Luster Overlaminate	Transparent	Permanent	3 yrs.	Polyolefin film with low solvents
8909	3M™ Scotchcal™ Matte Overlaminate	Transparent	Permanent	3 yrs.	Polyolefin film with low solvents
8914	3M™ Scotchcal™ Optically Clear Overlaminate	Transparent	Permanent	5 yrs.	For perforated window films
8915	3M™ Scotchcal™ Ultra-Matte Overlaminate	Transparent	Permanent	5 yrs.	For flat surfaces
8991	Scotchgard™ Graphic and Surface Protection Film	Transparent	Permanent	5 yrs.	Film resists abrasion, stains, graffiti and cleans easily
8993	Scotchgard™ Graphic and Surface Protection Film	Transparent	Permanent	5 yrs.	Film resists abrasion, stains, graffiti and cleans easily

Durability information is for outdoor applications.

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3M™ Graphic Films (cont.)

Product Number	Product Name	Colors	Adhesive	Durability	Comments
Overlaminate Films (cont.)					
Anti-Slip Overlaminates					
3645	3M™ Scotchcal™ Luster Overlaminate	Transparent	Permanent	8 yrs.	Skid and scuff resistant for floor graphics
3647	3M™ Scotchcal™ Matte Overlaminate	Transparent	Permanent	8 yrs.	Slip and scuff resistant for sidewalk graphics
3648	3M™ Scotchcal™ High Gloss Overlaminate	Transparent	Permanent	8 yrs.	Slip and scuff resistant for floor graphics

Durability information is for outdoor applications.

3M™ Screen Printing Inks

Product Number	Product Name	Colors	Print Method	Comments
Inks				
1900	3M™ Screen Printing Ink Series	Various (Gloss & Matte)	Solvent Screenprint	Fast drying opaque inks
2900	3M™ Screen Printing Ink Series	Various (Gloss & Matte)	Solvent Screenprint	Transparent inks formulated for Scotchlite™ Reflective Films
9800	3M™ Screen Printing Ink Series	Various (Gloss & Matte)	UV Screenprint	Weather resistant and excellent color retention

3M™ Commercial Graphics — Glossary

3M™ Comply™ Adhesive	3M brand name for a characteristic that permits air bubbles to escape through channels in the adhesive as a film is being applied.
3M™ Controltac™ Graphic Film	3M brand name for films with pressure-activated adhesive that is slideable and repositionable until pressure bonds it to the substrate.
3M™ Scotchcal™ Graphic Film	3M brand name for films with pressure-sensitive adhesive that bonds upon contact.
3M™ Scotchcal™ Overlaminate	3M brand name for a transparent film that can enhance or change the gloss of a graphic as well as provide resistance to dirt, abrasion and harmful UV light.
3M™ Scotchlite™ Reflective Graphic Film	3M brand name for a retroreflective film that allows a graphic to be clearly seen in low or no ambient light situations when a light source is directed at it from a point near the viewer's location.
Cast Film	Highest quality vinyl film for the best in image quality, conformability, dimensional stability and durability.
Changeable Film	Can be removed without heat or chemicals and leaves little or no adhesive residue.
Compound Curves	A surface with three-dimensional curves.
Conformable	A feature in some graphic films that allows it to conform around curves and rivets.
Perforated	A grid of small holes found in some printable films that allows an image to be seen on one side of a clear substrate, but allows a viewer to see through the film from the other side.
Permanent Adhesive	Adhesive that is not intended to be removable.
Positionable or Repositionable (As used in 3M™ Controltac™ Graphic Films only)	Light finger pressure may be used to tack the film in place to check for proper positioning and then repositioned if necessary. Firm pressure applied by any means, as well as high application temperature or removing and trying to reapply any liner, eliminates this feature.
Pressure-Activated Adhesive (As used in 3M™ Controltac™ Graphic Films)	Slideable, positionable and repositionable until firm pressure is applied with hand, squeegee or other application tool. Incompletely dried solvent in piezo inkjet printed film may reduce the slideability. An applied film cannot be moved to another position.
Pressure-Activated Adhesive (As used in 3M™ Scotchlite™ Graphic Films 680/680CR)	Slideable until firm pressure is applied with hand, squeegee or other application tool. Incompletely dried solvent in piezo inkjet printed film may reduce the slideability. An applied film cannot be moved to another position.
Pressure-Sensitive Adhesive	Adheres upon contact to the substrate. Does not slide and cannot be repositioned.
Removable Adhesive	Can be removed with heat leaving little or no adhesive residue. Occasionally chemicals are also needed.

All fleet graphics and other graphics subjected to abrasion require graphic protection. Please refer to the applicable product bulletin for a list of compatible products and intended uses.

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Choose from a Variety of Solutions

Your customers have many different needs, and 3M offers a variety of liner and film solutions, including paper and film, silicone-free liners, non-adhesive backed films and clear films.

3M™ Release Liners and Printable Films

Product Group	Product	Description/Application Ideas	Construction		Master Size	Print Method	Specs
			Caliper (mils)	Liner			
Release Liners Non-silicone	**4935**	3M proprietary fluoropolymer release coat one side.	3.0	Polyester, Clear	40" x 360 yd	—	—
	5053	3M proprietary fluoropolymer release coat one side.	3.0	Polyester, Clear	40" x 360 yd	—	—
	5932	3M proprietary fluoropolymer release coat one side.	2.0	Polyester, Clear	54" x 360 yd	—	—
Release Liners Silicone	**4986**	High-density polyethylene is transparent for graphic inspection. Release coat one side. For delamination/ relamination only.	3.0	HDPE Film, Clear	48" x 360 yd	—	—
	4988	Neutral-colored, polycoated lay-flat kraft liner. Release coat one side.	6.2	83# Polycoated Kraft, Neutral Color	48" x 360 yd	—	—
	4994	Caliper controlled liner for rotary die-cutting. Release coated two sides. Very low release for double linering #300 high-strength adhesive.	3.2	55# Densified Kraft, White	54" x 360 yd	—	—
	4996	Clear film is ideal for graphics inspection of backlit panels. Release coat one side.	1.4	Polyester Film, Clear	54" x 360 yd	—	—
	4997	Heavy liner ideal for kiss-cutting and lay-flat applications. Release coat one side.	4.0	70# Densified Kraft, Clear	54" x 360 yd	—	—
	4998	Release coat two sides (matte).	4.2	58# Polycoated Kraft, Tan	50" x 360 yd	—	—
	4999	Caliper controlled liner for rotary die-cutting. Release coat one side.	3.2	55# Densified Kraft, White	54" x 360 yd	—	—
	5002	Clear polyester film for rotary cutting. Release coat one side.	2.0	Polyester Film, Clear	60" x 360 yd	—	—
	5002D	Clear polyester film for rotary cutting. Release coat two sides.	2.0	Polyester Film, Clear	60" x 360 yd	—	—
	5004	Thick, clear polyester film for rotary cutting. Release coat one side.	4.0	Polyester Film, Clear	50" x 360 yd	—	—
	5051	Special PCK liner for double linering 300LSE tapes. Release coat one side.	4.2	58# Polycoated Kraft	48" x 180 yd	—	—
	7526L	Tan polycoated kraft. Release coat two sides (matte).	4.2	58# Polycoated Kraft	48" x 360 yd	—	—
	7527L	Cloudy high-density polyethylene. Release coat one side.	3.0	HDPE Film	48" x 360 yd	—	—
Printable Polyester Films — Label Component Films	**8038**	Top-coated film for use with standard printing inks. Top-coat is wound inside. Clear film allows for subsurface printing. Used for automotive, electronics, and other durable goods applications.	2.0	Polyester, Gloss Clear	48" x 720 yd	Press	—
	8049	Matte top-coat for dot-matrix printing. Clear film allows for subsurface printing of inks.	2.5	Polyester, Matte Clear	54" x 720 yd	Dot Matrix	UL
	8050	Matte top-coat for dot-matrix printing. Excellent abrasion and chemical resistance.	2.5	Polyester, Matte White	54" x 720 yd	Dot Matrix	UL
	8053	Same as 8050, except matte silver.	2.5	Polyester, Matte Silver	54" x 720 yd	Dot Matrix	UL
	8057	Provides excellent durability. Used for automotive, electronic, and other durable goods applications.	2.0	Polyester, Gloss White	54" x 720 yd	Thermal Transfer	—

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Single Coated Tapes

Modify Surfaces to Improve Appearance

Whether you need to protect surfaces against scratches, mask paint, reflect heat, repel sticky materials or modify surfaces in other ways, 3M can help.

3M's single coated tapes are designed to modify surfaces, while improving their appearance, function and productivity.

Selecting the Right Product for the Job

To help you make sure you find the optimum 3M tape or other adhesive-backed product for your particular application, you'll want to consider several factors:

- Backing material
- Adhesive type
- Application time and temperature
- Surface characteristics (e.g., roughness, surface energy, contours, etc.)
- End use conditions (e.g., temperature, UV exposure, abrasion, etc.)

The information on these two pages integrates those factors to help you narrow your selection to fewer products for a more in-depth evaluation.

3M Backing Materials

In many applications, 3M backings add a second surface that affects how the underlying surface relates to the environment.

To optimize that relationship, 3M backings offer a wide choice of performance and handling characteristics.

3M Pressure Sensitive Adhesives

Most of the products in this section feature a 3M pressure sensitive adhesive that bonds the backing to another surface on contact. Each adhesive has different characteristics that affect production and end use performance.

Backings	Characteristics
Paper	
Crepe	Conformable, easy tear
Flatback	Strong, smooth, good for straight line masking
Kraft	Strong, some versions are repulpable
Tissue	Thin, porous to allow adhesive penetration of sheet
Plastic	
Polyester	Strong even when thin, chemical resistant, high temperature resistance
Polypropylene	Resistant to most solvents, conformable, tear resistant
Polyethylene	Conformable, easy to stretch, chemical/acid/moisture resistant, economical
Polyethylene/ Polypropylene Co-polymer	Conformable, chemical/acid/moisture resistant
UHMW-PE	High abrasion resistance, low coefficient of friction, anti-stick surface easy to clean
Polyvinyl Chloride (Vinyl)	Conformable, abrasion resistant, resistant to most chemicals
Polyimide	High temperature resistance, excellent dimensional stability, good insulation properties
Polyamide (Nylon)	High temperature resistance, high strength and toughness, good chemical resistance but can absorb moisture
Polytetrafluoroethylene (PTFE)	Low coefficient of friction, excellent high temperature and chemical resistance, anti-stick/release properties
Polyvinyl Alcohol (PVA)	Water-soluble, organic solvent resistant, high temperature resistance
Polyurethane	Abrasion/scratch resistant, impact/puncture resistant, UV and corrosion resistant
Polyvinyl Fluoride	Excellent weather resistance, excellent long-term UV resistance, thin yet stiff feel
Cloth	
Cotton	Strong, easy tear by hand, soft and drapable
Glass Cloth	Strong, high temperature resistance, flame-resistant
Vinyl Coated	Strong yet hand tearable, abrasion resistant, water-resistant, conformable
Non-woven	
Fiber	Air permeable, strong enough to hold expanding foams
Metals	
Aluminum	Heat and light reflective, moisture and chemical resistant, flame-resistant, outdoor weather resistant, conformable
Copper	EMI/RFI shielding
Lead	Electrically conductive, acid resistant, high conformability, x-ray opacity
Stainless Steel	Corrosion resistant
Rubber	
Neoprene	Abrasion resistant, die-cuttable
Combination (Laminates)	
Paper/Polyethylene	Weather and chemical resistant, hand tearable, stretch resistant
Metallized/Polyester	Reflective, decorative
Glass Cloth/PTFE	High temperature resistance, high strength
Glass Cloth/Aluminum	Very high temperature resistance, high strength
Non-woven/Aluminum	High heat and cold resistance

Adhesives			
Rubber	**Standard Acrylic**	**Modified Acrylic**	**Silicone**
High initial bond	Moderate initial bond	Bonds to wider variety than standard acrylic	Fair initial bond
Softer	Firmer	Softer	Very firm
Widest variety of surfaces including low surface energy materials*	High surface energy*	Many surfaces	Fewer surfaces
Up to 350°F	Up to 450°F	Up to 300°F	Up to 600°F, excellent low temperature performance
Fair chemical resistance	Excellent chemical resistance	Good chemical resistance	Excellent chemical resistance
Fair UV resistance	Excellent UV resistance	Moderate UV resistance	Excellent UV resistance
Poor aging	Excellent aging	Durable	Excellent aging
Removable	Permanent	Various	Removable
Good solvent resistance	Excellent solvent resistance	Good solvent resistance	Excellent solvent resistance

*Surface energy ranges from high to low. The substrate must be unified, dry, and clean to maximize adhesive contact.

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Tape Reference Charts

To help select the tape backing for your application, consult the following charts. Each backing is rated in eight critical categories.

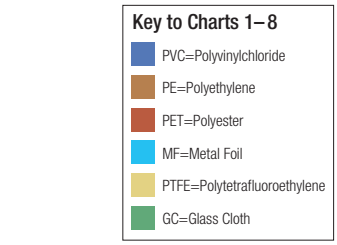


Chart 1. Backings Thickness (Caliper)

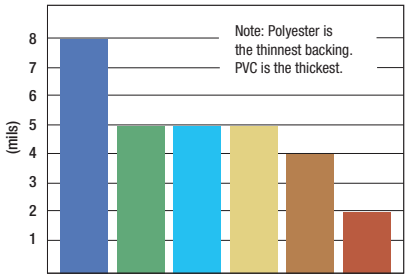


Chart 2. Temperature Range of Tape Backings

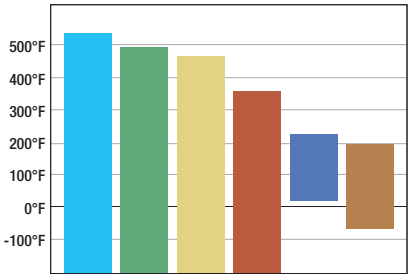


Chart 3. Conformability of Backings

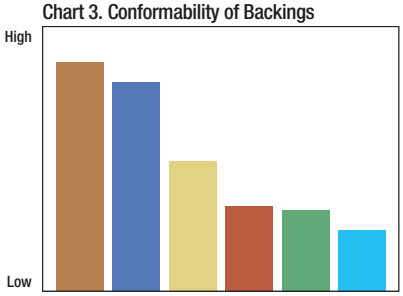


Chart 4. Backing Cost

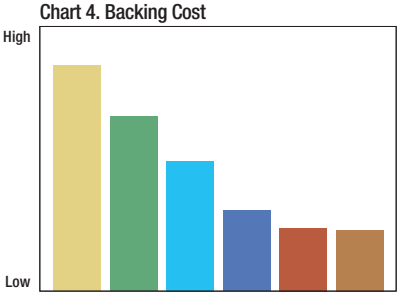


Chart 5. Backings as Moisture Barriers

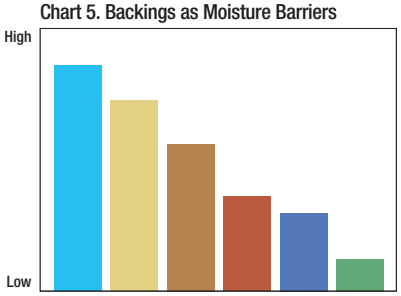


Chart 6. Chemical Resistance of Backings

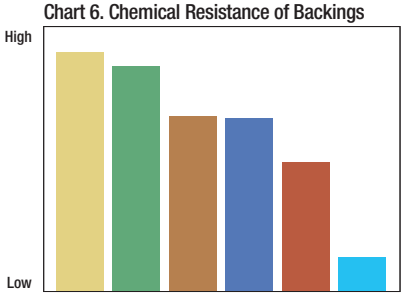


Chart 7. Solvent Resistance of Backings

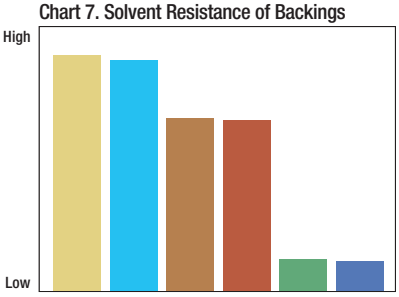
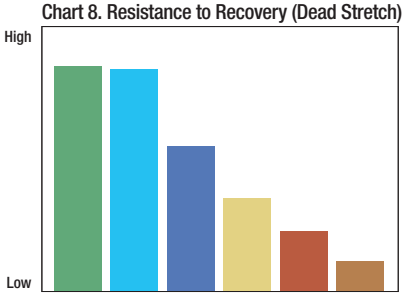


Chart 8. Resistance to Recovery (Dead Stretch)



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To help select the adhesive for your application, consult the charts below. Each adhesive is rated in five critical categories.

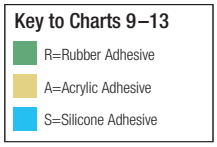


Chart 9. Initial Tack

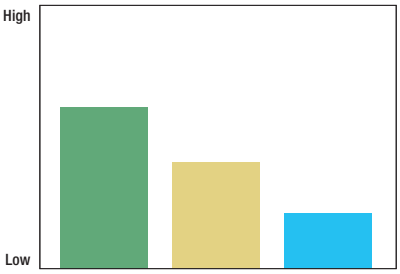


Chart 10. Ultimate Adhesion to Steel

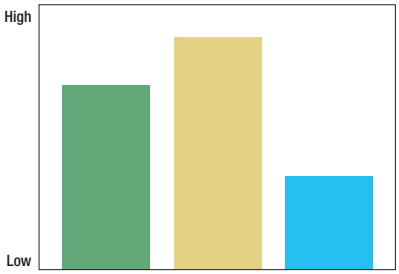


Chart 11. Temperature Ranges of Adhesives

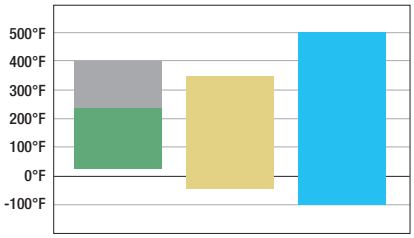


Chart 12. Long-Aging Capabilities

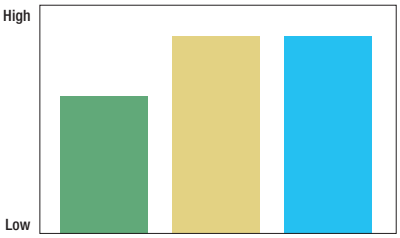
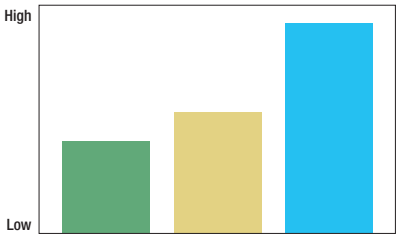


Chart 13. Cost of Adhesives



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3M™ Single Coated Tapes

Material (alphabetical order)	Product	Typical Performance Characteristics/ Application Ideas	Color	Total Caliper mils (mm)	Backing		Adhesive Type	Specs
					Material	Caliper mils (mm)		
Premium Performance Aluminum Foil Tape	363/ 363L	An aluminum foil/glass cloth tape that can be used as a high temperature, heat reflective, protective wrap for certain cables and other components in aerospace and industrial applications. 363L is linered version.	Silver	7.3 (0.19)	Aluminum Foil Laminated to Glass Cloth	3.4 (0.086)	Silicone	F.A.R. 25.853(a)
	425	Dead-soft aluminum foil tape. Masking of sensitive components to protect from damage during aircraft paint stripping. In white goods appliances, tape provides an excellent moisture barrier, helps reflect and dissipate heat.	Silver	4.6 (0.12)	Aluminum Foil	2.8 (0.07)	Acrylic	F.A.R. 25.853(a); SAE AMS T-23397; UL 723; UL 746C; LT-80 C
	427	Dead-soft aluminum foil tape. Linered version of 425 that can be easily die-cut into special sizes or shapes. Mask sensitive components to protect from damage during paint stripping or reflect and dissipate heat.	Silver	4.6 (0.12)	Aluminum Foil	2.8 (0.07)	Acrylic	F.A.R. 25.853(a); UL 723; UL 746C; LT-80 C
	431	Dead-soft aluminum foil with transparent acrylic adhesive for many permanent sealing, holding, splicing or masking applications requiring the protection offered by a foil backing.	Silver	3.1 (0.08)	Aluminum Foil	1.9 (0.05)	Acrylic	F.A.R. 25.853(a)
	433	Dead-soft aluminum foil backing with silicone adhesive that can be used in many high temperature applications.	Silver	3.6 (0.09)	Aluminum Foil	2.0 (0.05)	Silicone	F.A.R. 25.853(a); US Gov A-A-59258; MIL-T-47014
	433L	Linered version of 433.	Silver	3.5 (0.09)	Aluminum Foil	2.0 (0.05)	Silicone	F.A.R. 25.853(a)
	437	Dead-soft aluminum foil tape.	Silver	8.0 (0.20)	Aluminum Foil	2.8 (0.07)	Acrylic	—
	438/ 438L	Thickest aluminum tape. 438L is linered version.	Silver	7.2 (0.18)	Aluminum Foil	5.0 (0.13)	Acrylic	F.A.R. 25.853(a)
	439	Conformable aluminum foil with 1.2 mil acrylic adhesive on a 5.6 mil, 83# brown kraft liner. Linered version of 431.	Silver	3.1 (0.08)	Aluminum Foil	1.9 (0.05)	Acrylic	F.A.R. 25.853(a)
	3302	Aluminum foil tape. EMI/RFI shielding. Perforated.	Silver	3.5 (0.09)	Aluminum Foil	2.0 (0.05)	Conductive Acrylic	UL 510
	3334	Works well in very cold and hot temperatures. Perforated.	Silver	6.9 (0.18)	Aluminum Foil/Scrim/ Polypropylene	5.4 (0.14)	Acrylic	—
	3338	60 lb. moisture stable liner.	Silver	7.0 (0.18)	Aluminum Foil	5.0 (0.13)	Acrylic	—
	33801	High temperature acrylic adhesive at 425°F.	Silver	4.0 (0.10)	Aluminum Foil	2.0 (0.05)	Acrylic	UL 723
	33806	High temperature acrylic adhesive at 425°F.	Silver	5.0 (0.13)	Aluminum Foil	3.0 (0.076)	Acrylic	—
	1430	Dead-soft aluminum foil tape combined with a non-woven web. It has a pressure sensitive adhesive and offers superior sealing benefits of foil with ease of handling and strength of cloth.	Silver	5.5 (0.14)	Aluminum/ Non-Woven Web	5.0 (0.13)	Acrylic	—
General Purpose Aluminum Foil Tape	3311	Designed for maximum adhesion over clean, dry surfaces. Scotch® Tape branded product.	Silver	3.6 (0.09)	Aluminum Foil	2.0 (0.05)	Rubber	UL 723
	3369	Thinnest aluminum foil tape.	Silver	2.4 (0.06)	Aluminum Foil	1.1 (0.028)	Acrylic	UL 723
	33803	Highest tack rubber adhesive.	Silver	3.6 (0.09)	Aluminum Foil	1.8 (0.05)	Rubber	UL 723
	97065	Good for die-cut applications.	Silver	3.4 (0.09)	Aluminum Foil	1.8 (0.05)	Acrylic	—
	3380	Good for narrow slit rolls.	Silver	3.3 (0.08)	Aluminum Foil	2.0 (0.05)	Acrylic	UL 723
	4380	General purpose aluminum foil tape.	Silver	3.3 (0.08)	Aluminum Foil	2.0 (0.05)	Acrylic	—
	34383	General purpose aluminum foil tape.	Silver	4.5 (0.11)	Aluminum Foil	2.8 (0.07)	Acrylic	—
	3363	Good for narrow slit rolls.	Silver	5.0 (0.13)	Aluminum Foil	3.0 (0.08)	Acrylic	UL 723
	3367	Good for die-cut applications.	Silver	4.4 (0.11)	Aluminum Foil	3.0 (0.08)	Acrylic	UL 723
HVAC Construction	3320	Aluminum foil/scrim/laminate.	Silver	6.7 (0.17)	Aluminum Foil	6.0 (0.16)	Acrylic	UL 723
	3340	Aluminum foil tape for use with rigid and flexible ducts.	Silver	4.0 (0.10)	Aluminum Foil	2.0 (0.05)	Acrylic	UL 181A-P; UL 181B-FX
	3350	Polypropylene tape for use with flexible ducts.	Silver	3.1 (0.08)	Silver Polypropylene Film	1.6 (0.04)	Acrylic	UL 181 B-FX
	3380	General purpose aluminum foil tape. Go to product for this market.	Silver	3.3 (0.08)	Aluminum Foil	2.0 (0.05)	Acrylic	UL 723
	3381	Value grade aluminum foil tape.	Silver	2.7 (0.07)	Aluminum Foil	1.4 (0.04)	Acrylic	UL 723
	3382	Foil/PET laminate, tear resistance. Roof and gutter repair tape.	Silver	4.2 (0.11)	Aluminum Foil	2.5 (0.06)	Acrylic	—

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3M™ Single Coated Tapes (cont.)

Material (alphabetical order)	Product	Typical Performance Characteristics / Application Ideas	Color	Total Caliper mils (mm)	Backing		Adhesive Type	Specs
					Material	Caliper mils (mm)		
Aluminum Sound Damping Foil	434	Aluminum foil constraining layer coated with a 2.0 mil (0.05mm) pressure sensitive viscoelastic polymer on a blue polyethylene easy-release liner. Controls resonant vibrations from -76°F to 68°F (-60°C to 20°C).	Silver	7.5 (0.19)	Aluminum	5.5 (0.14)	Viscoelastic Polymer	F.A.R. 25.853(a)
	435	Thicker version of 434.	Silver	13.5 (0.34)	Aluminum	8.0 (0.2)	Viscoelastic Polymer	F.A.R. 25.853(a)
	436	Aluminum foil constraining layer coated with a 5.5 mil (0.14mm) pressure sensitive viscoelastic polymer on a blue polyethylene easy-release liner. Controls resonant vibrations from -76°F to 68°F (-60°C to 20°C).	Silver	17.5 (.045)	Aluminum	12.0 (0.31)	Viscoelastic Polymer	F.A.R. 25.853(a)
	2542	Aluminum foil constraining layer coated with a 5.0 mil (0.13mm) pressure sensitive viscoelastic polymer on a 58# paper liner.	Silver	10.0 (0.25)	Aluminum	5.0 (0.13)	Viscoelastic Polymer	—
	2552	Aluminum foil constraining layer coated with a 5.0 (0.13mm) pressure sensitive viscoelastic polymer on a polycoated paper easy-release liner. Controls resonant vibrations from -25°F to 175°F (-32°C to 80°C).	Silver	15.0 (0.38)	Aluminum	10.0 (0.25)	Viscoelastic Polymer	F.A.R. 25.853(a)
	4014	Foil/foam sheet laminate.	Silver	250.0 (6.35)	Aluminum-Urethane	3.0 (0.09)	Viscoelastic Polymer	F.A.R. 25.853(a)
Fiberglass Cloth	361	Glass cloth tape coated with a silicone adhesive for many applications requiring high temperature resistance, high adhesion and a very strong abrasion-resistant backing.	White	6.4 (0.16)	Glass Cloth	5.0 (0.13)	Silicone	F.A.R. 25.853
	365	Splicing textured surfaces / thermosetting adhesive.	White	8.3 (0.20)	Glass Cloth	4.8 (0.12)	Thermoset Rubber	—
	398FR	Glass cloth film tape with acrylic adhesive. Used for sealing seams on aircraft ducting and cargo area panels. Flame retardant. Skip-slit liner for ease of application.	White	7.0 (0.18)	Glass Cloth	5.0 (0.13)	Acrylic	BMS 5-146; F.A.R. 25.853(a); F.A.R. 25.855(d)
	398FRP	Printed backing version of 398FR.	White	7.0 (0.18)	Glass Cloth	5.0 (0.13)	Acrylic	BMS 5-146; F.A.R. 25.853(a); F.A.R. 25.855(d)
	399FR	Thicker adhesive. Flame resistant.	White	9.5 (0.24)	Glass Cloth	5.0 (0.13)	Acrylic	F.A.R. 25.853(a)
	3615	An easy unwind glass tape for many applications requiring high temperature resistance, high adhesion, and a very strong abrasion-resistant backing.	White	7.0 (0.18)	Glass Cloth	5.0 (0.13)	Silicone	—
	3650	Splicing textured surfaces/thermosetting adhesive. Film linered version of 365.	White	8.3 (0.20)	Glass Cloth	4.8 (0.12)	Thermoset Rubber	—
Lead Foil	420	Lead foil backing with rubber adhesive and a clear, easy-release film liner.	Dark Silver	6.8 (0.17)	Lead Foil	4.7 (0.12)	Rubber	—
	421	Self-wound plating tape.	Dark Silver	6.3 (0.16)	Lead Foil	4.0 (0.10)	Rubber	—
	4201	Permanent acrylic adhesive.	Dark Silver	6.5 (0.17)	Lead Foil	5.0 (0.13)	Acrylic	—
	34201	Removable rubber adhesive.	Dark Silver	6.3 (0.16)	Lead Foil	5.0 (0.13)	Rubber	—
Copper Foil	3313	EMI/RFI shielding.	Copper	3.0 (0.08)	Copper Foil	1.4 (0.04)	Conductive Acrylic	UL 510
	3325	EMI/RFI shielding.	Copper	3.0 (0.08)	Copper Foil	1.5 (0.04)	Acrylic	UL 510
	33315	"Tinned," corrosion resistant.	Copper	3.3 (0.08)	Copper Foil	1.5 (0.04)	Acrylic	—
	33316	"Tinned," corrosion resistant.	Copper	3.0 (0.08)	Copper Foil	1.5 (0.04)	Conductive Acrylic	UL 510
Stainless Steel Foil	3361	Corrosion resistant.	Silver	3.8 (0.10)	Stainless Steel	2.0 (0.05)	Acrylic	—

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3M™ Single Coated Tapes (cont.)

Material (alphabetical order)	Product	Typical Performance Characteristics/ Application Ideas	Color	Total Caliper mils (mm)	Backing		Adhesive Type	Specs
					Material	Caliper mils (mm)		
Non-Woven	394	Air-permeable backing.	White	5.0 (0.13)	Non-Woven	4.5 (0.11)	Acrylic	—
	3294	Most permeable venting tape.	Pink	5.0 (0.13)	Non-Woven	4.5 (0.11)	Acrylic	—
Paper	101+	Indoor use. Light-duty applications.	Tan	5.1 (0.13)	Crepe Paper	—	Rubber	—
	200	Good instant adhesion.	Tan	4.4 (0.11)	Crepe Paper	—	Rubber	—
	201+	General indoor use. Light-to-medium duty. Clean removal.	Tan	4.4 (0.11)	Crepe Paper	—	Solvent-Free Rubber	—
	202	Good holding power.	Tan	6.3 (0.16)	Crepe Paper	—	Rubber	ASTM D 6123; D 6123M-97
	203	Low temperature tape. General purpose masking tape for holding, bundling, sealing and more.	Beige	4.7 (0.12)	Crepe Paper	—	Rubber	—
	213	Good on anodized aluminum.	Tan	6.0 (0.15)	Crepe Paper	—	Rubber	ASTM D 6123; D 6123M-97
	214	Stain resistant.	Tan	5.8 (0.15)	Crepe Paper	—	Rubber	ASTM D 6123; D 6123M-97
	225	Outdoor use.	Silver	5.8 (0.15)	Crepe Paper	—	Rubber	—
	226	Outdoor use.	Black	10.6 (0.27)	Polyethylene/ Crepe Paper	—	Rubber	—
	231	Best all-purpose paint masking tape.	Tan	7.6 (0.19)	Crepe Paper	—	Rubber	ASTM D 6123; D 6123M-97
	231A	Best all-purpose paint masking tape.	Tan	7.6 (0.19)	Crepe Paper	—	Rubber	ASTM D 6123; D 6123M-97
	232	Good paint lines.	Tan	6.3 (0.16)	Crepe Paper	—	Rubber	—
	234	Excellent controlled unwind.	Tan	5.9 (0.15)	Crepe Paper	—	Rubber	ASTM D 6123; D 6123M-97
	235	Photographic masking.	Black	7.0 (0.17)	Crepe Paper	5.0 (0.12)	Rubber	—
	250*	Flatback tape. Used in paint adhesion testing.	Tan	6.0 (0.15)	Flatback Paper	—	Rubber	ASTM D 6123; D 6123M-97
	253	Silicone butt splicing tape.	Tan	4.6 (0.12)	Treated Flatstock Paper	3.5 (0.09)	Silicone	—
	256*	Printable, accepts marking inks.	White, Red, Green	6.7 (0.17)	Flatback Paper	—	Rubber	ASTM D 6123; D 6123M-97
	301+	Good conformability to irregular surfaces. Great paint lines.	Yellow	6.3 (0.16)	Crepe Paper	—	Solvent-Free Rubber	—
	401+	Highly conformable to many surfaces. Superior adhesion to metal, rubber, glass and plastic. Great paint lines.	Green	6.7 (0.17)	Crepe Paper	—	Solvent-Free Rubber	—
	501+	Exceptionally conformable to irregular surfaces. Superior adhesion to metal, rubber, glass and plastic. Removes cleanly in one piece with no residue. Great paint lines.	Tan	7.3 (0.19)	Crepe Paper Treated with a Heat Resistant Saturant	—	High Temp Rubber	ASTM D 6123
	2214	Good for holding and bundling.	Tan	5.4 (0.14)	Crepe Paper	—	Rubber	—
	2307	Solvent-free construction; non-critical paint masking.	Tan	5.2 (0.13)	Crepe Paper	—	Rubber	—
	2308	Good transfer resistance.	Tan	5.3 (0.13)	Crepe Paper	—	Rubber	—
	2364	High temperature, crepe paper masking tape for general masking application. Good holding power.	Tan	6.5 (0.17)	Crepe Paper	—	Synthetic Rubber	ASTM D 6123; D 6123M-97

*Scotch brand.

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3M™ Single Coated Tapes (cont.)

Material (alphabetical order)	Product	Typical Performance Characteristics / Application Ideas	Color	Total Caliper mils (mm)	Backing		Adhesive Type	Specs
					Material	Caliper mils (mm)		
Paper (cont.)	**2380**	High temperature. Best holding to widest variety of surfaces.	Tan	7.2 (0.18)	Crepe Paper	—	Synthetic Rubber	ASTM D 6123; D 6123M-97
	2393	Smooth, heavy duty, high temperature masking tape.	Tan	7.6 (0.19)	Crepe Paper	—	Rubber	ASTM D 6123; D 6123M-97
	2460	For paint bake operations at temperatures up to 300°F (149°C). 14 days outdoor.	Gold	3.3 (0.08)	Flatback Paper	—	Acrylic	—
	2480S	A thin, strong, smooth flat back paper that gives sharp paint lines with low paint ridge. 60 days outdoor.	Green	4.0 (0.10)	Flatback Paper	—	Acrylic	—
	2510	General purpose masking tape for holding, bundling, sealing and general paint masking where a dark colored tape is required.	Black	5.6 (0.14)	Crepe Paper	—	Rubber	ASTM D 6123; D 6123M-97
	2515**	General purpose splicing, holding and bundling applications.	Tan	6.7 (0.17)	Kraft Paper	—	Rubber	—
	2517*	Excellent splicing, holding and bundling applications.	Medium Brown	6.5 (0.15)	Kraft Paper	—	Rubber	ASTM D 6123; D 6123M-97
	2525*	Premium splicing, bright color.	Orange	9.5 (0.24)	Flatback Paper	—	Rubber	—
	2526*	Excellent adhesion and strength for textile applications.	White	9.8 (0.24)	Flatback Paper	—	Rubber	—
	2693	Very aggressive holding; excellent for multi-bake paint cycles.	Tan	7.9 (0.20)	Crepe Paper	—	Synthetic Rubber	ASTM D 6123; D 6123M-97
	3051	Very low tack.	White	3.8 (0.10)	Flatback Paper	3.4 (0.09)	Acrylic	—
Polyester	**396**	Adhesion to low energy surfaces.	Transparent	4.1 (0.10)	Polyester	1.7 (0.04)	Rubber	—
	685	Transparent film with a green adhesive coated on the edges of tape only.	Transparent/ Green	1.7 (0.04)	Polyester	1.0 (0.02)	Rubber	—
	850	Polyester film tape with acrylic adhesive. Used for splicing, holding, decorating, color-coding and sealing.	Transparent, Red, Black, White, Silver	1.9 (0.05)	Polyester	0.9 (0.02)	Acrylic	—
	851	Performance silicone plating.	Green	3.6 (0.09)	Polyester	0.9 (0.02)	Synthetic Rubber	L-T-100
	853	Transparent polyester film tape with solvent-resistant adhesive. Used for butt splicing and tabbing applications.	Transparent	2.2 (0.06)	Polyester	1.1 (0.03)	Acrylic	L-T-100 F.A.R. 25.853(a)
	856	Economy edge and hole reinforcing.	Transparent	2.0 (0.05)	Polyester	1.0 (0.02)	Acrylic	—
	1279	Plating tape.	Orange	4.1 (0.10)	Polyester	0.9 (0.02)	Synthetic Rubber	—
	1280	Performance silicone plating.	Red	3.6 (0.09)	Polyester	0.9 (0.02)	Synthetic Rubber	—
	3305	De-taping applications, clean room.	Transparent	2.7 (0.07)	Polyester	1.6 (0.04)	Rubber	—
	5557	Water-contact indicator.	White	10.2 (0.26)	Polyester	—	Paper/ Acrylic	UL-969
	5558	Ultra thin water-contact indicator.	White	6.0 (0.15)	Polyester	—	Paper/ Acrylic	—

*Scotch brand. **Tartan brand.

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3M™ Single Coated Tapes (cont.)

Material (alphabetical order)	Product	Typical Performance Characteristics/ Application Ideas	Color	Total Caliper mils (mm)	Backing		Adhesive Type	Specs
					Material	Caliper mils (mm)		
Polyester (cont.)	**8401**	Splicing many release coated paper.	Translucent Cream	1.9 (0.05)	Polyester	1.0 (0.03)	Silicone/ Rubber Blend	—
	8402	Splicing tape. Adheres well to silicone.	Translucent Green	1.9 (0.05)	Polyester	0.9 (0.02)	Silicone	—
	8403/ 8403L	Splicing tape. Adheres well to silicone. 8403L is a linered version of 8403.	Translucent Green	2.4 (0.06)	Polyester	1.4 (0.04)	Silicone	—
	8411	Edge and hole reinforcing.	Transparent	1.5 (0.04)	Polyester	1.0 (0.02)	Acrylic	—
	8412	Heavy-duty edge and hole reinforcing.	Transparent	6.3 (0.16)	Polyester	4.7 (0.12)	Acrylic	—
	8421	Photo film splicing.	White	2.5 (0.06)	Polyester	1.4 (0.04)	Rubber	—
	8422	Photo film splicing.	Black	2.5 (0.06)	Polyester	1.4 (0.04)	Rubber	—
	8429	Photo film splicing.	Yellow	3.2 (0.08)	Polyester	2.0 (0.05)	Rubber	—
	8437	Low emissivity, reflective tape.	Silver	2.1 (0.05)	Polyester	0.9 (0.02)	Acrylic	—
	8901	High temperature coating.	Blue	2.4 (0.06)	Polyester	0.9 (0.02)	Silicone	—
	8902	High temperature coating.	Blue	3.5 (0.08)	Polyester	2.0 (0.05)	Silicone	—
	8905	High temperature coating.	Blue	6.5 (0.17)	Polyester	5.0 (0.12)	Silicone	—
	8911	High temperature label protection.	Transparent	2.3 (0.05)	Polyester	0.9 (0.02)	Silicone	—
	8991/ 8991L	Thin tapes, powder coat masking, high temperature applications. 8991L is linered version.	Blue	2.4 (0.06)	Polyester	1.0 (0.03)	Silicone	—
	8992/ 8992L	Powder coat and anodized masking, high temperature applications. 8992L is linered version.	Green	3.2 (0.08)	Polyester	2.0 (0.05)	Silicone	—
Polypropylene	**218/ 218L**	Polypropylene plastic film tape with rubber adhesive. A high performance film backed tape with low profile and high adhesion to achieve excellent paint line and for other masking and holding applications. 218L is linered version.	Green	5.0 (0.13)	Polypropylene	—	Rubber	—
	265	In-mold composite masking where sharp, clean, gel-coat color separation lines are desired.	Green	5.1 (0.13)	Polypropylene	—	Rubber/ Silicone	—
	8087	Construction seaming tape.	Red	3.0 (0.08)	Biaxially Oriented Polypropylene Film	1.5 (0.04)	Acrylic	—
PTFE — Slick Surface	**547**	Pipe thread sealant.	White	3.0 (0.08)	PTFE	3.0 (0.08)	none	—
	5151/ 5151L/ 5151PL	A woven glass cloth impregnated with PTFE tape which provides a high temperature release surface for protection and insulation. 5151L is a linered version. 5151PL is a thicker, premium liner.	Light Brown	5.3 (0.13)	Glass Cloth Impregnated w/PTFE	3.0 (0.08)	Silicone	—
	5153/ 5153L	Thicker version of 5151. 5153L is a linered version.	Light Brown	8.0 (0.20)	Glass Cloth Impregnated w/PTFE	5.8 (0.15)	Silicone	—
	5180	Skived PTFE film tape used for roller wrapping and other slick surface applications.	Gray	3.5 (0.09)	PTFE	2.0 (0.05)	Silicone	—
	5181	Thicker version of 5180.	Gray	6.5 (0.17)	PTFE	5.0 (0.13)	Silicone	—

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3M™ Single Coated Tapes (cont.)

Material (alphabetical order)	Product	Typical Performance Characteristics / Application Ideas	Color	Total Caliper mils (mm)	Backing		Adhesive Type	Specs
					Material	Caliper mils (mm)		
PTFE — Slick Surface (cont.)	**5451**	A woven glass cloth impregnated with PTFE tape which provides a high temperature release surface for protection and insulation.	Brown	5.6 (0.14)	Glass Cloth Impregnated w/PTFE	3.2 (0.08)	Silicone	—
	5453	Thicker version of 5451.	Brown	8.2 (0.21)	Glass Cloth Impregnated w/PTFE	6.0 (0.15)	Silicone	—
	5480	Skived PTFE film tape used for roller wrapping and other slick surface applications.	Gray	3.7 (0.09)	PTFE	2.0 (0.05)	Silicone	—
	5481	Heavy-duty skived PTFE film tape used for roller wrapping and other slick surface applications.	Gray	6.8 (0.17)	PTFE	5.0 (0.13)	Silicone	—
	5490	PTFE Film tape with silicone adhesive used in many slick surface applications. Lay-flat backing.	Gray	3.7 (0.09)	PTFE	2.0 (0.05)	Silicone	—
	5491	Thicker version of 5490.	Gray	6.7 (0.17)	PTFE	5.0 (0.13)	Silicone	—
	5498	Extruded PTFE film tape with rubber silicone-free adhesive.	Brown	4.0 (0.10)	PTFE	2.0 (0.05)	Rubber	—
Polyethylene-Ultra High Molecular Weight (UHMW-PE) — Slick Surface	**5421**	General purpose tape to protect plastic and metal chutes, guide rails and containers from wear.	Transparent	6.7 (0.17)	UHMW-PE	5.0 (0.13)	Rubber	—
	5423	Excellent abrasion resistance and low coefficient of friction makes this an effective solution for noise and vibration problems.	Transparent	11.7 (0.30)	UHMW-PE	10.0 (0.25)	Rubber	—
	5425	Solvent resistant adhesive with low coefficient of friction and abrasion resistance.	Transparent	5.0 (0.13)	UHMW-PE	3.0 (0.08)	Acrylic	—
	5430	Transparent UHMW-PE film tape with high tack acrylic adhesive.	Transparent	7.0 (0.18)	UHMW-PE	5.0 (0.13)	Acrylic	—
	9324	Black version of 5430.	Black	6.5 (0.17)	UHMW-PE	5.0 (0.13)	Acrylic	—
	9325	Thin version of 5430.	Transparent	5.0 (0.13)	UHMW-PE	3.0 (0.08)	Acrylic	—
Vinyl	**470**	Conformable and abrasion resistant for masking various surfaces during electroplating and anodizing.	Tan	7.1 (0.18)	Vinyl	6.3 (0.16)	Rubber	—
	471	Vinyl plastic tape ideal for color-coding, abrasion protection, decoration, sealing, patching, splicing, wrapping, and general purpose. Available in 9 colors and transparent.	Yellow, White, Red, Black, Brown, Green, Orange, Purple, Blue, Transparent	5.2 (0.13)	Vinyl	4.1 (0.10)	Rubber	MIL-STD 2041D (SH)
	471+	Superior conformability, sharp paint lines, clean removal.	Indigo	5.3 (0.13)	Vinyl	4.1 (0.10)	Rubber	—
	472	Abrasion resistant, high temperature resistant.	Black	10.4 (0.26)	Vinyl	9.0 (0.23)	Rubber	—
	477	Abrasion resistant.	Transparent	7.2 (0.18)	Vinyl	6.0 (0.15)	Rubber	—
	484	Lower adhesion than 470.	Tan	6.7 (0.17)	Vinyl	5.6 (0.14)	Rubber	—
	764	A general purpose vinyl tape for use in non-critical applications such as color-coding, bundling and safety marking.	Yellow, Red, White, Black, Blue, Green, Orange, Gray, Purple, Brown, Transparent	5.0 (0.13)	Vinyl	4.1 (0.10)	Rubber	—
	766	A general purpose hazard marking vinyl tape for use in non-critical applications.	Black & Yellow Stripes	5.0 (0.13)	Vinyl	4.1 (0.10)	Rubber	—
	767	A general purpose hazard marking vinyl tape for use in non-critical applications.	Red & White Stripes	5.0 (0.13)	Vinyl	4.1 (0.10)	Rubber	—
	4712	Linered version of 471 for die-cutting applications.	Brown, White, Blue, Green, Yellow, Orange, Red, Black, Purple, Transparent	5.2 (0.13)	Vinyl	4.1 (0.10)	Rubber	MIL-STD 2041D (SH)

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3M™ Single Coated Tapes (cont.)

Material (alphabetical order)	Product	Typical Performance Characteristics/ Application Ideas	Color	Total Caliper mils (mm)	Backing		Adhesive Type	Specs
					Material	Caliper mils (mm)		
Vinyl (cont.)	**4731**	Electroplating. Flame retardant and weather resistant.	Blue, Gray, Orange, Purple, White, Yellow	7.0 (0.18)	Vinyl	5.8 (0.15)	Rubber	—
	4735	Highly conformable, high temperature vinyl fine line tape for fascia panels, two-tone and other multiple color applications where critical paint break lines are required.	Orange	5.4 (0.14)	Vinyl	—	Rubber	—
	4737S	Highly visible backing version of 4737T.	Solid Blue	5.4 (0.14)	Vinyl	—	Rubber	—
	4737T	Conformable, high temperature vinyl fine line tape for fascia panels, two-tone and other multiple color applications where critical paint break lines are required.	Translucent Blue	5.4 (0.14)	Vinyl	—	Rubber	—
	4737TL	Linered version of 4737T.	Blue	5.4 (0.14)	Vinyl	—	Rubber	—
	5700	Critical applications. Adhesive side printing. For lane and safety marking.	Black & White Stripes	5.5 (0.14)	Vinyl	4.2 (0.11)	Rubber	—
	5702	Critical applications. Adhesive side printing. For lane and safety marking.	Black & Yellow Stripes	5.5 (0.14)	Vinyl	4.2 (0.11)	Rubber	—
Miscellaneous Film Tapes	**215**	Medium temperature. Fine line masking tape. Excellent conformability.	Blue	4.8 (0.12)	Copolymer Plastic Film	—	Rubber	—
	480	Good chemical and solvent resistance, conformable, abrasion resistant.	Transparent	5.1 (0.13)	Polyethylene	4.0 (0.10)	Acrylic	—
	481	Preservation sealing tape. Clean removal up to 2 years.	Black	9.8 (0.24)	Polyethylene	7.7 (0.20)	Rubber	MIL-T-22085 Amend 3, Type IV
	4811	Preservation sealing tape. Clean removal up to 1 year.	White	9.5 (0.24)	Polyethylene	7.5 (0.18)	Rubber	—
	483	Conformability, UV resistance, and clean removal for sealing end cap on metal pipes stored outdoors.	Black, Blue, Green, Red, White, Yellow, Transparent	5.0 (0.13)	Polyethylene	3.9 (0.10)	Rubber	MIL-STD 2041D (SH)
	616	Lithographers tape.	Ruby Red	2.4 (0.06)	UPVC	1.6 (0.04)	Rubber	—
	695	Polyethylene film with a rubber-strip coated along edges of tape only and tack-free center. Riveters tape.	Yellow	3.0 (0.08)	Polyethylene	2.0 (0.05)	Acrylic*	—
	838	Weather-resistant film.	White	3.4 (0.09)	PVF	2.1 (0.05)	Acrylic	MIL-T-22085 Amend 3, Type IV; F.A.R. 25.853(a).
	855	Composite bonding tape.	White	3.2 (0.08)	Nylon	2.0 (0.05)	Rubber	—
	5401	High coefficient of friction for traction.	Tan	9.3 (0.24)	Fiberglass Reinforced Silicone	8.0 (0.20)	Silicone	—
	5414	Water-soluble tape.	Transparent	2.5 (0.06)	PVA	1.3 (0.03)	Synthetic	—
	5461	High friction roller tape.	White	9.1 (0.23)	Silicone Rubber	7.8 (0.19)	Rubber	—
	8067	Window and door flashing tape.	Tan	10.0 (0.25)	Multilayer Elastomeric Film	5.0 (0.13)	Acrylic	ICC AC 148, AAMA 711
	8777	Air and water tight sealing tape.	Tan	10.0 (0.25)	Multilayer Elastomeric Film	5.0 (0.13)	Acrylic	
	8555	Thicker version of 855, composite bonding tape.	White	6.0 (0.15)	Nylon	5.0 (0.13)	Rubber	—

*Strip coated along edges of tape only.

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3M™ Single Coated Foam Tapes

Product Number	Color	Description	Adhesive	Approximate Thickness in. (mm)	Density lb/cu ft (kg/cu m)	Tensile Strength psi (kPa)	Compression Deflection 25% psi (kPa)	Compression Set % Loss	Temperature Tolerance Short-Term	Temperature Tolerance Long-Term
Urethane										
4104*	Natural White	Firm, rigid, open cell urethane foam for cushioning. Allows air or gas vapors to pass through. Not recommended for outdoor use.	350 Acrylic	0.250 (6)	12 (192)	115 (795)	4 (27.6)	8	350°F (176°C)	200°F (93°C)
4108	Natural White		350 Acrylic	0.125 (3)	16 (256)	130 (895)	6 (82.8)	8		
4116	Natural White		350 Acrylic	0.062 (1.5)	18 (288)	115 (795)	12 (82.8)	12		
4314	Charcoal Gray	Soft conformable, low density foam can help seal out air, dust and light when compressed 50%. Used to help damp sound and absorb vibration in electronics.	430 Acrylic	0.250 (6)	2 (32)	25 (170)	0.3 (2.1)	5	250°F (121°C)	150°F (66°C)
4317*	Charcoal Gray		430 Acrylic	0.375 (9.5)	2 (32)	25 (170)	0.3 (2.1)	5		
4318	Charcoal Gray		430 Acrylic	0.125 (3)	2 (32)	25 (170)	0.3 (2.1)	5		
Vinyl										
4504*	Black	Durable, flexible, closed cell vinyl foams with excellent aging characteristics. Weather resistant. Can help to seal out dust, light and moisture when placed under 30% compression. Liner over PSA.	430 Acrylic	0.250 (6)	20 (320)	90 (620)	4 (27.6)	15	250°F (121°C)	150°F (66°C)
4508*	Black		430 Acrylic	0.125 (3)	20 (320)	100 (690)	4 (27.6)	15		
4516*	Black		430 Acrylic	0.062 (1.5)	25 (400)	130 (895)	4 (27.6)	15		
4714*	Black		430 Acrylic	0.250 (6)	14 (225)	75 (515)	2 (13.8)	5		
4718*	Black		430 Acrylic	0.125 (3)	20 (320)	100 (690)	4 (27.6)	15		
4726*	Black		430 Acrylic	0.062 (1.5)	20 (320)	130 (895)	3 (20.7)	15		

*Meets requirements of UL 94HBF.

3M™ Single Coated Foil/Foam Sheets

Product Master	Description	Sheets Per Case	Sheet Size (in.)
4014	250.0 Mil Aluminum/ Urethane Foam	50	6 x 48
		25	12 x 48
		15	18 x 48

3M™ Extreme Sealing Tapes

Product	Color	Backing/ Adhesive	Tape Thickness mils (mm)	Tensile Strength lb/in (N/cm)	90° Peel Adhesion Strength† lb/in (N/cm) Alumi-num	Stainless Steel	Glass	Truck Paint	PVC	ABS	Application Ideas
4411G	Grey	Ionomer Film/ Pressure Sensitive Acrylic	40 (1)	13 (23)	15 (26)	16 (28)	15 (26)	15 (26)	15 (26)	16 (28)	Seals RV trailers and roofs. Seals metal enclosures and awnings. Seals trailer home roofs and metal storage buildings. Seals vent stacks and windows. Seals gutters and downspouts. Seals skylights. Seals outdoor signs/displays. Leak patching and repairs.
4411N	Neutral/Translucent		40 (1)		15 (26)	15 (26)	15 (26)	14 (25)	16 (28)	16 (28)	
4411B	Black		40 (1)		19 (33)	17 (30)	19 (33)	17 (30)	19 (33)	18 (32)	
4412N	Neutral/Translucent		80 (2)		18 (32)	18 (32)	19 (33)	19 (33)	19 (33)	19 (33)	

† Adhesion promoters were used on peel Adhesion test substrates.

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3M™ Repulpable Tapes

To achieve true quality, a tape must meet all your needs. Outstanding strength is not enough. The tape must be easy to use, easy to choose, readily available and fully repulpable. We've built our reputation as an industry leader by being responsive to the increasingly complex needs of paper producers. Today, our customer base consists of clients who demand no less of their product than we demand of ours.

Product	Color	Comments	Tape Thickness mils (mm)	Tape Structure		Liner		Heat Resistance* °F (°C)	FDA Compliant†
				Backing/ Carrier	Adhesive	Type	Thickness mils (mm)		
Permanent Double Coated									
405	Lt. Green	Excellent for raw and starch-treated papers.	3.0 (0.08)	Tissue Carrier	Repulpable	UPVC	1.7 (0.04)	400 (200)	—
900	Blue	Recommended for light weight coated papers.	2.5 (0.06)	Tissue Carrier	Repulpable	Paper	3.2 (0.08)	400 (200)	Yes
900B	Blue	Recommended for supercalendared papers.	2.5 (0.06)	Tissue Carrier	Repulpable	Paper	3.2 (0.08)	400 (200)	Yes
Permanent Single Coated									
901	Lt. Green	Excellent for raw and starch-treated papers.	4.0 (0.10)	Paper	Repulpable	UPVC	1.7 (0.04)	400 (200)	—
910	Blue	Recommended for coated and uncoated papers and paperboard.	4.0 (0.10)	Paper	Repulpable	—	none	400 (200)	Yes
914	Blue	Recommended for high speeds, digital business forms, perforated splicing tape.	4.0 (0.10)	Paper	Repulpable	—	none	400 (200)	Yes
9103	Blue	Printable, coatable backing.	4.5 (0.11)	Paper	Repulpable	Paper	2.9 (0.07)	400 (200)	Yes
9114	Blue	The easiest way to make a butt splice. Printable.	4.5 (0.11)	Paper	Repulpable	Paper	2.9 (0.07)	400 (200)	Yes
9960	Blue	Thinnest butt splicing tape for light weight uncoated and coated and supercalandered papers.	2.2 (0.06)	Paper	Repulpable	Paper	2.9 (0.07)	350 (180)	Yes
9969	Blue/White	Very thin butt splicing/cover tape for uncoated, newsprint and most coated papers.	2.2 (0.06)	Paper	Repulpable	Paper	2.9 (0.07)	350 (180)	Yes
Adhesive Transfer Tape									
R3037	Blue	Thinnest, fiber reinforced adhesive transfer tape.	2.0 (0.05)	None	Repulpable	Paper	3.3 (0.08)	250 (120)	Yes
Temporary Double Coated									
906	Blue/White	Flying splice at the Off-Machine Coater (OMC).	3.0 (0.08)	Tissue Carrier	Repulpable	Paper	3.2 (0.08)	400 (200)	Yes
9038	Blue/White	General purpose plus flying splice for the 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)	—
9977	Blue	High strength tissue for flying splices where extra strength is needed.	4.0 (0.10)	Tissue Carrier	Repulpable	Paper	3.2 (0.08)	400 (200)	—
R3227	Blue/White	General purpose temporary splicing.	3.5 (0.09)	Tissue Carrier	Repulpable	Paper	3.2 (0.08)	400 (200)	Yes
R3257	White	Thin tissue, very high tack.	4.1 (0.11)	Tissue Carrier	Repulpable	Paper	3.2 (0.08)	400 (200)	Yes
R3287	White	Heavy tissue, very high tack.	5.5 (0.14)	Tissue Carrier	Repulpable	Paper	3.2 (0.08)	400 (200)	Yes
Temporary 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
Splittable Flying Splice (SFS)									
R3345	Blue	Thin SFS tape for flying splices through supercalendering operations, and permanent butt splices for light weight coated papers.	4.8 (0.12)	Paper	Repulpable	Paper	2.9 (0.07)	400 (200)	—
R3375	Blue	Strong SFS tape for flying splices on heavy papers and high tension web processing through supercalendering operations.	6.5 (0.16)	Paper	Repulpable	Paper	2.9 (0.07)	400 (200)	—
R3379	Blue	Repulpable SFS tape used for high speed splicing conditions when high tack is required and to compensate for roll profile issues.	7.5 (0.18)	Paper	Repulpable	Paper	2.9 (0.07)	400 (200)	—
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)	—
R9993	Blue	All in one tabbing and splicing tape for heatset printing applications.	5.0 (0.11)	Paper	Repulpable	Paper	2.9 (0.07)	400 (200)	—
R9996	Blue	Thinnest SFS tape for splicing applications in papermills and paper converting coating operations.	4.8 (0.12)	Paper	Repulpable	Paper	2.9 (0.07)	400 (200)	
R9999	Blue	Repulpable SFS tape for heavyweight papers in manual and automatic splicing equipment, with moderate speed.	6.7 (0.17)	Paper	Repulpable	Paper	2.9 (0.07)	400 (200)	

†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)

*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.

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

3M™ Protective Tapes

Nominal Results

Product	Tape Structure (Backing/Adhesive)	Total Thickness mils (mm)	Adhesion to Steel oz./in. width	Tack Level	Elongation at Break (%)	Application Ideas
Based on ASTM Test Method:		D-3652	D-3330		D-3759	
Co-Extruded "A" Tapes						
25A825	Co-Extruded/Acrylic	2.5 (0.06)	6	Medium	600	Semi-gloss painted metals and plastic surfaces. Automotive moldings.
25A826	Co-Extruded/Acrylic	2.5 (0.06)	7	Medium	600	Embossed, painted metal building panels. Molded fiberglass.
25A829	Co-Extruded/Acrylic	2.5 (0.06)	11	High	600	Satin or bronzed painted aluminum and brushed finished steel and aluminum, textured plastics.
25A87	Co-Extruded/Acrylic	2.5 (0.06)	13	High	600	Brushed aluminum and stainless. Hand applied to cultured marble (typically dusty surface).
25A88	Co-Extruded/Acrylic	2.5 (0.06)	15	High	600	Matte high-pressure laminates. For matte finished automotive plastic parts.
25A89	Co-Extruded/Acrylic	2.5 (0.06)	15	High	600	For non-UV applications requiring high elongation and excellent abrasion resistance compared to a traditional polyethylene film.
2A804	Co-Extruded/Acrylic	2 (0.05)	2	Very Low	600	Effective in many outdoor applications for up to 3 days.
2A825	Co-Extruded/Acrylic	2 (0.05)	7	Medium	600	Painted building panels. Automotive moldings and urethane fascias.
2A826	Co-Extruded/Acrylic	2 (0.05)	8	Medium	600	Painted, embossed, metal building panels, canopies and molded fiberglass.
2A829	Co-Extruded/Acrylic	2 (0.05)	12	Medium	600	Brushed aluminum. Textured, plastic automotive moldings. Offers excellent protection for mill finished aluminum and steel surfaces.
2A87	Co-Extruded/Acrylic	2 (0.05)	14	High	600	Matte decorative and vinyl laminates.
2A88	Co-Extruded/Acrylic	2 (0.05)	15	High	600	Matte decorative and vinyl laminates. Matte, plastic screen-printed nameplates.
2A89	Co-Extruded/Acrylic	2 (0.05)	15	High	600	Matte decorative and vinyl laminates; brushed and anodized aluminum.
5A829	Co-Extruded/Acrylic	5 (0.13)	10	High	600	Offers superior protection for mill finished aluminum and steel surfaces.
Carpet Tapes						
2E79	Polyethylene/Acrylic	2 (0.05)	20	High	600	Automotive carpeted areas, fabric seals and headliners.
2E93/EZ	Polyethylene/Acrylic	2 (0.05)	25	Very High	600	Automotive carpets, fabric seals and headliners.
2E95/EZ	Polyethylene/Acrylic	2 (0.05)	35	Very High	600	Automotive carpets, fabric seals and headliners.
2E97	Polyethylene/Acrylic	2 (0.05)	35	Very High	600	For automotive and industrial carpets and fabrics only.
2E98	Polyethylene/Acrylic	2 (0.05)	45	Very High	600	For marine carpet only.
4193/EZ	Polyethylene/Acrylic	4 (0.10)	25	Very High	600	Residential carpet tape.
5193EZ	Polyethylene/Acrylic	5 (0.13)	30	Very High	600	Residential carpet tape.
4195/EZ	Polyethylene/Acrylic	4 (0.10)	30	Very High	600	Higher adhesion for treated carpet.
4F94	Polyethylene/Acrylic	4 (0.10)	20	Very High	600	Flame retardant carpet tape.
Co-Extruded Tapes						
15CV804	Polyethylene/Acrylic	1.5 (0.04)	2	—	420	LCD screens, glass, polycarbonate, high gloss laminate.
15CV825	Polyethylene/Acrylic	1.5 (0.04)	7	Medium	420	Smooth semi-gloss cultured marble, high pressure laminate.
15CV826	Polyethylene/Acrylic	1.5 (0.04)	8	Medium	420	Smooth, satin gloss cultured marble, high pressure laminate.
Self Sealing Tapes						
3130	Polyethylene/Rubber	3 (0.08)	14*	—	450	Cohesive film used to package small machine parts, hand tools and literature.
4130	Polyethylene/Rubber	4 (0.10)	12*	—	450	

*Value measured as a cohesive bond strength in units.

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

3M™ Protective Tapes (cont.)

Nominal Results

Product	Tape Structure (Backing/Adhesive)	Total Thickness mils (mm)	Adhesion to Steel oz./in. width	Tack Level	Elongation at Break (%)	Application Ideas
Based on ASTM Test Method:		D-3652	D-3330		D-3759	
Laser Tapes						
4H81CPK	Polyolefin/Acrylic	4 (0.10)	12	Medium	270	Designed to be machine laminated using nip roll pressure. For best performance, apply 72 hours before laser cutting.
4H81WPK	Polyolefin/Acrylic	4 (0.10)	12	Medium	270	
4H85CPB	Polyolefin/Acrylic	4 (0.10)	17	High	270	Unique film construction offering extra protection during processing and allowing easy removal.
4H85WPB	Polyolefin/Acrylic	4 (0.10)	17	High	270	
Polyester Tapes						
1614	Polyester/Acrylic	1.3 (0.03)	1	Very Low	88	Low tack adhesive removes cleanly after exposures of up to 300°F (150°C).
1675	Polyester/Acrylic	1.3 (0.03)	2	Low	88	Low tack adhesive removes cleanly after exposures of up to 350°F (171°C).
Transit Films						
24S56W	Polypropylene/Acrylic	3 (0.08)	9	Medium	700	White tape for painted metals, plastic surfaces and automotive clearcoat paint finishes.
44S56W	Polypropylene/Acrylic	4 (0.10)	9	Medium	800	
64S58W	Polypropylene/Acrylic	6 (0.15)	9	Medium	630	Use on base, clearcoat and high gloss painted surfaces. Ideal for mutilation protection.
UV Tapes						
25M25X	Polypropylene/Acrylic	2.5 (0.06)	6	Medium	600	Black/White tape does not lift and removes cleanly after sunlight exposure.
25M26X	Polypropylene/Acrylic	2.5 (0.06)	8	Medium	600	
25X126	Polypropylene/Acrylic	2.5 (0.06)	6	Medium	850	Can withstand up to 30 days of outdoor exposure in applications oriented at 90 degrees to sunlight.**
2AU23B/UV	Co-extruded A	2 (0.05)	3	Low	600	For glass and window frames with a high-gloss surface, high-gloss painted metals and plastics.
2AU26B/UV	Co-extruded A	2 (0.05)	7	Medium	600	For flat finished vinyl and aluminum window frames, flat finished painted metals and plastics.
31U23/UV	Polyethylene/Acrylic	3 (0.08)	3	Low	450	For glass and window frames with a high-gloss surface, high-gloss painted metals and plastics.
31U26/UV	Polyethylene/Acrylic	3 (0.08)	7	Medium	450	For flat finished vinyl and aluminum window frames, flat finished painted metals and plastics.
31U82P	Polyethylene/Acrylic	2.8 (0.07)	12.5	Medium	450	Protects a variety of automotive wheels.
31U84P	Polyethylene/Acrylic	3.2 (0.08)	15.5	Medium/High	450	Protects a variety of automotive wheels.
3W25X	Co-Extruded Polyethylene/Acrylic	3 (0.08)	5	Medium	450	Black/White tape does not lift and removes cleanly after exposure to sunlight. Excellent UV resistance for up to 9 months.**
3W26X	Co-Extruded Polyethylene/Acrylic	3 (0.08)	6	Medium	450	
3W29X	Co-Extruded Polyethylene/Acrylic	3 (0.08)	7	Medium	450	
3W55X	Co-Extruded Polyethylene/Acrylic	3 (0.08)	5	Medium	450	

*Value measured as a cohesive bond strength in units.
**UV performance was generated from actual exposure in South Eastern USA on selected painted metal surfaces.

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3M™ Protective Tapes (cont.)

Nominal Results

Product	Tape Structure (Backing/Adhesive)	Total Thickness mils (mm)	Adhesion to Steel oz./in. width	Tack Level	Elongation at Break (%)	Application Ideas
Based on ASTM Test Method:		D-3652	D-3330		D-3759	
Polyethylene Tapes						
21804	Polyethylene/Acrylic	2 (0.05)	1	Very Low	450	Glass, CRT screens, LED and LCD screens.
21825	Polyethylene/Acrylic	2 (0.05)	5	Medium	450	Painted, embossed, architectural building panels. Semi-gloss laminates and acrylic sheets.
21826	Polyethylene/Acrylic	2 (0.05)	7	Medium	450	Slightly textured plastics, steel garage doors, metal extrusions and painted building panels.
2187	Polyethylene/Acrylic	2 (0.05)	14	Medium	450	For textured plastics and metals.
3179	Polyethylene/Acrylic	3 (0.08)	20	Very High	450	High-tack adhesive will adhere to most matte textured materials to help reduce rework.
31804	Polyethylene/Acrylic	3 (0.08)	1	Very Low	450	High-gloss coated metals. CRT and LCD screens.
31825	Polyethylene/Acrylic	3 (0.08)	5	Medium	450	Cut-to-length metal sheets in fabrication, shipping and storage. Semi-gloss, painted metals and plastic surfaces.
31826	Polyethylene/Acrylic	3 (0.08)	7	Medium	450	Embossed, painted, metal building panels. Mill-finished aluminum and stainless sheets or coils in fabrication and shipping.
31829	Polyethylene/Acrylic	3 (0.08)	11	Medium-High	450	Painted metal, gloss finish building panels.
3187	Polyethylene/Acrylic	3 (0.08)	11	High	450	Brushed aluminum and stainless. Hand applied to cultured marble (typically dusty surface).
3188	Polyethylene/Acrylic	3 (0.08)	13	High	450	Matte, high-pressure laminates. Matte plastics.
4167	Polyethylene/Acrylic	4 (0.10)	18	High	450	Textured decorative laminates and vinyl. Woodgrain laminates, matte plastics.
4179	Polyethylene/Acrylic	4 (0.10)	20	High	450	Dissimilar metals. Automotive kick plates.
41825	Polyethylene/Acrylic	4 (0.10)	5	Medium	450	Polished #3 and #4 finished stainless coils or sheets.
41826	Polyethylene/Acrylic	4 (0.10)	7	Medium	450	Molded fiberglass or acrylic tubs and spas. Automotive applications such as bumpers, fascias, body side molding paint protection, tail lights or window glass.
4187	Polyethylene/Acrylic	4 (0.10)	13	High	450	Cultured marble and molded fiberglass. Woodgrain vinyl decorative laminates.
4188	Polyethylene/Acrylic	4 (0.10)	15	High	450	Brushed anodized aluminum. Matte plastics or high-pressure laminates.
51825	Polyethylene/Acrylic	5 (0.13)	3	Low	450	Painted metal, gloss finish building panels. Coated metal automotive trim.
51826	Polyethylene/Acrylic	5 (0.13)	5	Medium	450	Mill finish aluminum and stainless coils and sheets. Molded fiberglass, polyester tubs and showers.
5187	Polyethylene/Acrylic	5 (0.13)	10	Medium	450	Cultured marble, textured plastics, matte painted metals.
5188	Polyethylene/Acrylic	5 (0.13)	15	High	450	Cultured marble, textured plastics, matte painted metals.
8179	Polyethylene/Acrylic	8 (0.21)	15	High	450	Dissimilar metals.
Other Protective Tapes						
335/Pink	Polyester/Rubber	1.5 (0.04)	13	Very Low	115	Low tack protective tape.
336/Clear	Polyester/Rubber	1.5 (0.04)	13	Very Low	115	Transparent, low tack protective tape. Good attachment to smooth surfaces.
346/Tan	Flat Paper Stock/Rubber	17 (0.42)	22	Very High	4	Heavy-duty protective tape.
9343/Black	Non-Woven/Acrylic	19.5 (0.50)	27	Very High	400	Conformable for irregular shaped parts.

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3M™ Polyurethane Protective Tapes (PPT) — Long-Term Protection

Nominal Results

Product	Tape Structure (Backing/Adhesive)	Color	Total Thickness mils (mm)	Adhesion to Steel oz./in. width	Tensile Strength lbs./in. (N/100 mm)	Elongation at Break (%)	Maximum Service Temp °F (°C)	Comments
Based on ASTM Test Method:			D-3652	D-3330	D-3759			
Indoor Type								
8547	Polyurethane/Acrylic	Transparent	13 (0.33)	14 (15)	75 (1313)	500	275 (135)	Flame resistant/low tack (passes NFPA 701).
8560	Polyurethane/Rubber	Transparent	14 (0.35)	18 (19.7)	76 (1313)	500	275 (135)	Indoor grade with quick grab adhesive.
8561	Polyurethane/Acrylic	Transparent	14 (0.35)	62 (67)	77 (1313)	500	275 (135)	Indoor grade.
8616	Polyurethane/Acrylic	Transparent	12 (0.30)	82 (90)	32 (560)	500	200 (93)	Excellent bond to plasticized vinyls.
8617	Polyurethane/Rubber	Transparent	12 (0.30)	105 (110)	32 (560)	500	150 (65)	Used as a patch on canvas, rubber, leather, and as a fabric joining tape.
8686	Polyurethane/Flame Ret.	Transparent	6 (0.15)	23 (25) Aluminum	32 (560)	500	150 (65)	Meets F.A.R. 25.853(a). Low tack adhesive.
Outdoor Type								
8663	Polyurethane/Acrylic	Transparent	18 (0.46)	100 (110)	117 (2049)	500	275 (135)	Excellent as a moisture barrier.
8671	Polyurethane/Acrylic	Transparent	14 (0.35)	86 (94)	80 (1400)	500	275 (135)	Durable erosion protection with paper liner.
8672	Polyurethane/Acrylic	Transparent	8 (0.25)	79 (83)	40 (700)	500	275 (135)	Thin durable erosion protection.
8673	Polyurethane/Acrylic	Transparent	14 (0.35)	86 (94)	80 (1400)	500	275 (135)	Durable erosion protection with best UV stability. RESTRICTED AVAILABILITY OVER 12" WIDE.
8674	Polyurethane/Acrylic	Transparent	8 (0.20)	60 (66) Aluminum	48 (842)	500	200 (93)	Durable erosion protection with best UV stability. Dual liner. RESTRICTED AVAILABILITY OVER 12" WIDE.
8681HS	Polyurethane/Acrylic	Matte Clear Military Gray	14 (0.35)	95 (104)	87 (1524)	500	275 (135)	Durable erosion protection with high shear adhesive.

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

3M™ EMI Shielding and Electrical Tapes

Backing Material	Product	Typical Performance Characteristics	Total Thickness (mils)	Adhesive Type	Master Size	Specs
Aluminum Foil	1120	For EMI shielding, static charge draining, grounding. Good for cable wrap. Easily die-cut.	4.0	Acrylic Conductive	27" x 36 yd	UL
	1170	For EMI shielding, static charge draining, grounding. Easily die-cut.	3.2	Acrylic Conductive	23" x 18 yd	UL
	1267	For EMI shielding, static charge draining, grounding. Solderable and easily die-cut.	5.0	Acrylic Non-conductive	23" x 18 yd	UL
Aluminum Foil/ Polyester Film	AL-36FR	Foil backing laminated with polyester film. Good resistance to oxidation, solvents and oils. Easily die-cut.	2.4	Acrylic Conductive	19.68" x 54.5 yd	UL
	AL-36NC	Same as AL-36FR.	2.2	Acrylic Non-conductive	19.68" x 54.5 yd	—
Antistatic Films	40	Antistatic tape generates less than 50 volts on unwind.	2.2	Acrylic	48" x 100 yd	—
	40PR	General use utility tape for electronic components and assemblies, 1-mil clear polyester film backing with preprinted static symbol.	2.2	Antistatic Polymer Conductive	24" x 100 yd	—
Copper Foil	1125	For EMI shielding on a wide range of electronic applications. Easily die-cut.	3.5	Acrylic Non-conductive	24" x 36 yd	UL
	1126	For EMI shielding, static charge draining when grounded. Easily die-cut.	3.5	Acrylic Conductive	24" x 36 yd	MIL
	1181	For EMI shielding, static charge draining, grounding. Easily die-cut.	2.6	Acrylic Conductive	23" x 18 yd	UL
	1182	Typically used to bond two surfaces, both physically and electrically. Also can provide EMI shielding, static charge draining, grounding. Easily die-cut.	3.5	Acrylic Conductive (both sides)	23" x 18 yd	UL
	1183	Oxidation resistant for long-term EMI shielding, static charge draining, grounding. Solderable and easily die-cut.	2.6	Acrylic Conductive	23" x 18 yd	UL
	1194	For EMI shielding, static charge draining, grounding. Easily die-cut.	2.6	Acrylic Non-conductive	23" x 36 yd	UL
	1245	For EMI shielding, static charge draining, grounding, solderable and easily die-cut.	4.0	Acrylic Non-conductive	23" x 18 yd	UL
	1345	Embossed tin-plated copper foil. Oxidation resistant for long-term EMI shielding, static charge draining, grounding.	4.0	Acrylic Non-conductive	23" x 18 yd	UL
Epoxy Film	1	Excellent handling properties, high dielectric strength, solvent and flagging resistant; for use as an outer wrap on wrap and fill capacitors, coil cover, interlayer insulation and wire harness. Printable.	3.5	Acrylic	23.75" x 100 yd	UL
	10	Thermosetting, flame retardant, no liner. Tough, conformable, resistant to solder damage, puncture resistant, good electrical properties, good handling properties. For use as coil cover, anchor, harnessing, banding and as core, layer and crossover insulation.	5.0	Rubber	15.5" x 100 yd	UL
	20	Reinforced, white acrylic adhesive, flame retardant, no liner, printable.	5.0	Acrylic	15.5" x 100 yd	UL
Glass Cloth	27	Rubber adhesive, thermosetting, printable, no liner. Edge-tear resistant, conformable, abrasion resistant.	7.0	Rubber	24.5" x 100 yd	UL
	69	Silicone adhesive, thermosetting, printable, no liner. Edge-tear resistant, conformable, high temp flame-retardant adhesive.	7.0	Silicone	24.5" x 100 yd	UL
	79	Edge-tear resistant, conformable, solvent-resistant. For use as coil cover, anchor, and as core, layer and crossover insulation. Printable.	7.0	Acrylic	24.5" x 100 yd	—
Metallized Cloth	2191FR	Lightweight, conformable, oxidation-resistant and high strength for EMI shielding and grounding. Easily die-cut.	5.5	Acrylic Conductive	19.68" x 21.8 yd	UL
	CN-3190	Thicker version of 2191FR.	7.0	Acrylic Conductive	41.3" x 54.5 yd	—
	X-7001	Typically used to bond two surfaces both physically and electrically. Can also provide EMI shielding, static charge draining and grounding.	4.3	Acrylic Conductive	10.24" x 10.9 yd	—

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3M™ EMI Shielding and Electrical Tapes (cont.)

Backing Material	Product	Typical Performance Characteristics	Total Thickness (mils)	Adhesive Type	Master Size	Specs
Polyester Film	5	Clear, acrylic adhesive, no liner. Solvent-resistant for use in coil and capacitor holding applications.	2.5	Acrylic	24" x 100 yd	UL
	44	Reinforced mat, rubber adhesive. Thermosetting, no liner.	5.5	Rubber	23.5" x 100 yd	UL
	54	Rubber adhesive, thermosetting, no liner. Used in fine wire coils where magnet wire serves to color code.	2.5	Rubber	22.5" x 100 yd	UL
	55	Thermosetting, no liner. Edge-tear, puncture and abrasion resistant for use as coil cover, lead pad and core, layer and crossover insulation.	7.5	Rubber	23.5" x 100 yd	UL
	56	Thermosetting, no liner. For use as layer insulation and coil cover in 130°F applications.	2.3	Rubber	15.5" x 100 yd	UL
	57	Thermosetting, no liner. Use as a coil cover, layer insulation and capacitor wrap where higher electrical strength is desirable.	3.3	Rubber	24" x 100 yd	UL
	58	Use as a coil cover, layer insulation and capacitor wrap where higher electrical strength is desirable.	3.3	Rubber	15.5" x 100 yd	UL
	74	Conformable. Provides good electrical strength for coil applications where space is at a premium.	0.8	Rubber	15.5" x 100 yd	UL
	75	Thermosetting, linered. For use in bonding applications requiring a positive insulation barrier.	3.8	Rubber	15.5" x 100 yd	UL
	1318-1	1 mil film; excellent flagging and solvent resistance. For use as an outer wrap on capacitors and coils; printable. Available in yellow, white and black.	2.5	Acrylic	24" x 100 yd	UL
	1318-2	Same as 1318-1 but with 2 mil film.	3.3	Acrylic	24" x 100 yd	UL
	1350F-1	1 mil film with flame-retardant adhesive. Excellent flagging and solvent resistance. For use as an outer wrap on capacitors and coils; printable. Available in yellow, white and black.	2.5	Acrylic	24" x 100 yd	UL
	1350F-2	Same as 1350-1 but with 2 mil film.	3.3	Acrylic	24" x 100 yd	UL
	1350T-1	1.5 mil, triple-layer, polyester film with flame-retardant acrylic adhesive. Excellent flagging and solvent resistance, with good wet grab and smooth, even unwind for use on automated equipment.	3.0	Acrylic	24" x 100 yd	UL
	1351-1	1 mil film with flame-retardant acrylic adhesive. Excellent flagging and solvent resistance. For use as inner layer and outer wrap insulation on coils. Smooth, even unwind for use on automatic equipment. Available in yellow and white.	2.5	Acrylic	24" x 100 yd	UL
	1351-2	Same as 1351-1 but with 2 mil film.	3.0	Acrylic	24" x 100 yd	UL
	1351T-1	Same as 1350T-1 but available in yellow and white.	3.0	Acrylic	24" x 100 yd	UL
Polyester Film/ Filament Reinforced	46	Good tensile strength and edge-tear resistance. For use in end-turn taping.	7.0	Rubber	23" x 100 yd	UL
	1046	Scrim filament reinforcement with good tensile strength, edge-tear resistance, and designed for end turn taping.	7.0	Rubber	23" x 60 yd	UL
	1076	Scrim filament reinforcement, solvent-resistant, high shear strength adhesive. Good tensile strength for holding in oil-filled transformer applications.	10.0	Acrylic	23" x 60 yd	UL
	1039	Scrim filament reinforcement, solvent-resistant, high shear strength adhesive. Good tensile strength and edge-tear resistance. For holding applications.	7.0	Acrylic	23" x 60 yd	—
	1339	Solvent-resistant, high shear strength adhesive. Good tensile strength and edge-tear resistance. For holding applications.	6.5	Acrylic	23" x 100 yd	UL

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3M™ EMI Shielding and Electrical Tapes (cont.)

Backing Material	Product	Typical Performance Characteristics	Total Thickness (mils)	Adhesive Type	Master Size	Specs
Paper	12	For banding coils and for cover on bobbin-wound coils.	5.5	Rubber	23.25" x 100 yd	—
	16	Conformable. For use as coil cover on bobbin-wound coils.	9.0	Rubber	23.25" x 100 yd	—
PTFE Film	60	Thermosetting, no liner. Use on high temperature coils, capacitors and wire harnesses.	4.0	Silicone	13.5" x 100 yd	UL
	61	Thicker version of 60.	7.0	Silicone	13.5" x 100 yd	UL
	62	Thermosetting, printable. Better bonding of resins and varnishes.	4.0	Silicone	13.5" x 100 yd	UL
	63	Solvent-resistant adhesive for use where chemical properties are more important than temperature resistance. No liner.	3.5	Acrylic	13.5" x 100 yd	UL
Vinyl	22	Heavy-duty insulation designed for general purpose use where greater mechanical strength and abrasion resistance are required.	10.0	Rubber	—	UL
	33	Provides moisture-tight electrical and mechanical protection; good resistance to abrasion, moisture, alkalis, acids and varying weather conditions (including ultraviolet exposure).	7.0	Rubber	—	UL
	33+	All-weather vinyl insulating tape. Conformable for cold weather applications. Excellent resistance to abrasion, moisture, alkalis, acids, UV rays and weather. Thicker for quicker buildup.	7.0	Rubber	—	UL
	35	Color-coding tape available in nine fade-resistant colors. Abrasion and weather resistant. For use in phase identification, color-coding leads and piping systems, and for marking safety areas. Resistant to moisture, alkalis, acids and copper corrosion.	7.0	Rubber	—	UL
	88	All-weather vinyl insulating tape. Conformable for cold weather applications. Excellent resistance to abrasion, moisture, alkalis, acids, and copper corrosion.	7.0	Rubber	—	UL
	1710	Good quality, economical general purpose insulating tape. Good resistance to abrasion, moisture, alkalis, acid, copper corrosion and varying weather conditions (including ultraviolet).	7.0	Rubber	—	UL
Magnetic/ Polymer Film	1380	Excellent high magnetic shielding at low frequency. Soft magnetic sheet sandwiched between layers of film. Thin, flexible, lightweight and easily die-cut.	11.8	Rubber	460mm x 610mm	—

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Reclosable Fasteners

Close It Right
— Again and Again

When your customers' products require multiple openings and closings, 3M reclosable fasteners offer solutions that improve product appearance and performance, while saving production time.

3M's line of easy-to-apply fasteners offers a clean, discreet hold for aesthetic improvements, lightweight alternatives to metal fasteners, a variety of strengths, the ability to join dissimilar materials without corrosion and contamination, vibration absorption and security and durability for repeated opening and closings.

3M™ Hook and Loop Reclosable Fasteners

Hooks on one side, loops on the other for secure, repeated closures

- Reliable PSA hold on contact with a variety of materials
- Low profile options, as much as 75% thinner than standard product
- Up to 5,000 closures for standard Hook and Loop

■ Best Suggested Product
● Performance Dependent on Selected Attachment Method
▲ Primer Recommended
□ Back-to-back fastener which can wrap around any type of surface or substrate

Product	Type	Adhesive	Closure Life	Product Material	Liner Description	Engaged Thickness	Temperature Resistance °F (°C)	Substrates: Metals (Al & SS)	Substrates: Glass	Substrates: Plastics(Acrylic, PC, ABS)	Substrates: Powder Coated Paints	Substrates: Low Surface Energy (PP, PE)	Use: Indoor/Outdoor	Markets: Aerospace & Rail	Markets: Furniture & Upholstery	Markets: General Industrial	Markets: Marine & Specialty Vehicle	Markets: POP, Display & Signage
Best																		
SJ3526N	Hook	High Performance Rubber	5,000	Nylon	White, 3 mil (0.08mm) Polyethylene film 3M Red Print	0.14 in. (3.6mm)	120 (49)	■		■	■	■	Indoor		■	■		■
SJ3527N	Loop																	
SJ3572	Hook	High Performance Acrylic	5,000	Nylon	Clear, 4 mil (0.10mm) Polypropylene film Embossed 3M logo	0.14 in. (3.6mm)	200 (93)	■	■	■	▲	▲	Indoor/ Outdoor		■	■	■	■
SJ3571	Loop																	
SJ3576	Hook		1,000	Polyester				■	■	■	▲	▲	Indoor/ Outdoor		■	■	■	■
SJ3577	Loop																	
Better																		
SJ3522	Hook	Plasticizer Resistant Acrylic	5,000	Nylon	Clear, 3.5 mil (0.08mm) Polyolefin film, No print	0.14 in. (3.6mm)	158 (70)	■		■			Indoor/ Outdoor		■	■	■	■
SJ3523	Loop																	
SJ3530	Hook	High Tack Rubber	5,000	Nylon	Yellow, 3 mil (mm) Polyethylene film No Print	0.14 in. (3.6mm)	90 (32)	■		■	■	■	Indoor		■	■		■
SJ3531	Loop																	
General Purpose																		
SJ30H	Hook	Rubber	5,000	Nylon	White, 3 mil (0.08mm) Polyethylene film No Print	0.14 in. (3.6mm)	100 (38)	■		■		■	Indoor			■		■
SJ30L	Loop																	
SJ60H	Hook	Acrylic	5,000	Nylon	Clear, 4mil (0.10mm) Polypropylene film Embossed 3M logo	0.125 in. (3.2mm)	180 (82)	■		■			Indoor/ Outdoor			■		■
SJ60L	Loop																	
SJ3401	Loop	None	5,000	Nylon	None	0.12 in. (3.0mm)	200 (93)	●	●	●	●	●	Indoor/ Outdoor		●	●		●
SJ3402	Hook																	
SJ3476	Hook		1,000	Polyester		0.13 in (3.3mm)		●	●	●	●	●	Indoor/ Outdoor		●	●	●	●
SJ3477	Loop																	
Low Profile/Thin																		
SJ3506	Hook	Acrylic	25	Polypropylene	Brown #83 Polykraft Green Print	0.034 in. (0.84mm)	158 (70)	■	■	■	▲	▲	Indoor/ Outdoor			■		■
SJ3507	Loop			Polyester														
SJ3000	Back-to-back hook and loop	None	10	Polypropylene/ Nylon	None	0.053 in. (1.3mm)	200 (93)	□	□	□	□	□	Indoor	□	□	□	□	□
Flame Resistant																		
SJ3519FR	Hook	Flame Resistant	5,000	FR Nylon	White, 3 mil (0.08mm) Polyethylene film 3M Red Print	0.14 in. (3.6mm)	158 (70)	■		■	■	■	Indoor	■	■	■	■	
SJ3518FR	Loop																	
SJ3586FR	Hook		1,000	FR Polyester		0.17 in. (4.3mm)		■		■	■	■	Indoor	■	■	■	■	
SJ3587FR	Loop																	
SJ3419FR	Hook	None	5,000	FR Nylon	None	0.12 in. (3.0mm)	200 (93)	●	●	●	●	●	Indoor/ Outdoor	●	●	●		
SJ3418FR	Loop																	
SJ3486FR	Hook		1,000	FR Polyester		0.13 in (3.3mm)		●	●	●	●	●	Indoor/ Outdoor	●	●	●	●	
SJ3487FR	Loop																	

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

3M™ Dual Lock™ Reclosable Fasteners

Holding power to replace screws, bolts and rivets

Durable enough to last through repeated opening and closing. Unique, interlocking mushroom-shaped heads snap shut and stay locked.

- Durable—up to 1,000 openings and closings before losing 50% of original tensile strength
- Helps reduce vibration
- Temperature, moisture and UV resistant
- Strong, pressure-sensitive adhesive bonds on contact
- Mushroom-shaped heads have **5X the tensile strength** of hook-and-loop products

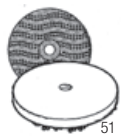
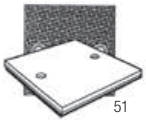
■ Best Suggested Product
● Performance Dependent on Selected Attachment Method
▲ Primer Recommended

Product	Stem Density (per sq/in)	Adhesive	Color	3M Liner	Engaged Thickness	Temperature Resistance °F (°C)	Substrates					Use	Markets						
							Metals (Al & SS)	Glass	Plastics (Acrylic, PC, ABS)	Powder Coated Paints	Low Surface Energy (PP, PE)	Indoor/Outdoor	Aerospace & Rail	Appliance & Electronics	Design & Construction	Furniture & Upholstery	General Industrial	Marine & Specialty Vehicle	POP, Display & Signage
SJ3540	250	Rubber	Black	White, 5 mil (0.13mm) Polyolefin	0.23 in (5.7mm)	120 (49)	■		■	■	■	Indoor				■	■		■
SJ3541	400																		
SJ3542	170																		
SJ3550	250	White Acrylic	Black	Clear, 4 mil (0.10mm) Polyolefin	0.23 in (5.7mm)	200 (93)	■	■	■	▲	▲	Indoor/ Outdoor	■	■	■	■	■	■	■
SJ3551	400																		
SJ3552	170																		
SJ3558	250	White Acrylic	Clear*	Clear, 4 mil (0.10mm) Polyolefin	0.23 in (5.7mm)	200 (93)	■	■	■	▲	▲	Indoor/ Outdoor		■	■	■	■	■	■
SJ3560	250	Clear Acrylic	Clear	Clear, 4 mil (0.10mm) Polyolefin	0.23 in (5.7mm)	220 (104)	■	■	■	▲	▲	Indoor/ Outdoor		■	■	■	■	■	■
SJ3561	400																		
SJ3562	170																		
SJ3550CF	250	Clear Acrylic	Black	Clear, 4 mil (0.10mm) Polyolefin	0.23 in (5.7mm)	220 (104)	■	■	■	▲	▲	Indoor/ Outdoor		■	■	■	■	■	■
SJ3551CF	400																		
SJ3552CF	170																		
SJ3870	250	Modified Acrylic	Black	Red, 4.5 mil (0.11mm) Polyolefin	0.24 in (6.1mm)	140 (60)	■		■	■	▲	Indoor/ Outdoor				■	■		■
SJ3871	400																		
SJ3872	170																		
SJ3782	250	Low Surface Energy Acrylic	Black	Brown, 83# Polykraft	0.16 in (4.1mm)	120 (49)	■		■	■	■	Indoor/ Outdoor		■		■	■		■
SJ3440	250	None	Black	No Liner	0.15 in (3.86mm)	220 (104)	●	●	●	●	●	Indoor/ Outdoor		●	●	●	●	●	●
SJ3441	400																		
SJ3442	170																		
SJ3443	400	Non-woven backing with no adhesive	Black	No Liner	0.28 in (7.1mm)	220 (104)	●	●	●	●	●	Indoor/ Outdoor		●	●	●	●	●	●
SJ3444	170																		
SJ3445	250																		
SJ3460	250	None	Clear	No Liner	0.15 in (3.86mm)	220 (104)	●	●	●	●	●	Indoor/ Outdoor		●	●	●	●	●	●
SJ3463	400	Piece Part Circle†	Black	No Liner	0.20 in** (5.1mm)	220 (104)	■		■	■	■	Indoor/ Outdoor		■	■	■	■	■	■
SJ3481	400	Rigid Strip†	Black	No Liner	0.20 in** (5.1mm)	220 (104)	●	●	●	●	●	Indoor/ Outdoor		●	●	●	●	●	●
SJ4570	Low Profile/ Thin	Low Surface Energy Acrylic	Clear	Brown, 83# Polykraft	0.098 in (2.489mm)	158 (70)	■		■	■	■	Indoor/ Outdoor		■	■	■	■		■
SJ4575			Black																
SJ4580		Clear Acrylic	Clear	Red, 4.5 mil (0.11mm) Polyolefin	0.12 in (3.0mm)	200 (93)	■	■	■	▲	▲	Indoor/ Outdoor		■	■	■	■	■	■

*Clear fastener utilizes a white adhesive giving the product a white appearance **Single thickness; not engaged †No adhesive

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

3M™ Dual Lock™ — Piece Parts

	Product Number	Product Type[1]	Dimensions[2] L x W or Dia. inch (mm)	Functional Size/Area in. sq. (cm sq)	Engaged Thickness[3] inch (mm)	Counterbored Hole Dia. inch (mm)	Through Hole Dia.	Spacing Between Holes (on centers) inch (mm)	Comments
Circle with a Counterbored Center Hole									
 51	SJ3251	250	1-1/8 (28.5)	0.88 (5.68)	0.323 (8.20)	0.38 (9.5)	0.19 (4.9)	—	Attach using screws, rivets, etc. Circular profile reduces chance for edge lift.
	SJ3755	250		0.91 (5.87)	0.323 (8.20)	0.31 (7.9)	0.16 (4.1)	—	
	SJ3762	400		0.91 (5.87)	0.288 (7.31)	0.31 (7.9)	0.16 (4.1)	—	
	SJ3263	250	13/16 (20.6)	0.44 (2.84)	0.288 (7.31)	0.31 (7.9)	0.16 (4.1)	—	
	SJ3763	400						—	
	SJ3235	400	13/16 (20.6)	0.42 (2.71)	0.288 (7.31)	0.35 (9.0)	0.16 (4.1)	—	
	SJ3465	400	9/16 (14.3)	0.17 (1.10)	0.288 (7.31)	0.31 (7.9)	0.16 (4.1)	—	
Circle with No Hole									
	SJ3238	250	1-1/8 (28.6)	0.99 (6.39)	0.323 (8.20)	—	—	—	—
Rectangle with Two Counterbored Holes									
 51	SJ3252	400	1.5 x 1.5 (38.1 x 38.1)	2.08 (13.4)	0.288 (7.31)	0.33 (8.3)	0.16 (4.2)	1 (25.4)	—
	SJ3261			2.11 (13.6)	0.288 (7.31)	0.29 (7.5)	0.14 (3.6)	1 (25.4)	15 mils (0.4mm) thicker than SJ3767.
	SJ3767				0.273 (6.93)	0.29 (7.5)	0.14 (3.6)	1 (25.4)	15 mils (0.4mm) thinner than SJ3261.
Rectangle with No Holes									
52	SJ3204	250	1 x 1 (25.4 x 25.4)	1.0 (6.45)	0.288 (7.31)	—	—	—	—
	SJ3481	400	48 x 1 or 48 x 2 (1.22 x 25.4 or 1.22 x 50.8)	Dependent on final length	0.288 (7.31)	—	—	—	Excellent for custom cutting rectangular pieces. See SJ3766, SJ3768 or SJ3799 for ultrasonic attachment version.
Rectangular Slide-in (2 edges cut down forming a flange) for Mounting into a Bracket									
53	SJ3736	170	1 x 1.22 (25.4 x 30.7)	1.0 (6.45)	0.288 (7.31)	—	0.079 (2.0)	0.049 (1.25)	Allows quick and easy installation or replacement.
	SJ3717	400				—	0.079 (2.0)	0.049 (1.25)	
	SJ3227	250	5/8 x 1 (16 x 25.4)	0.48 (3.10)		—	0.098 (2.5)	0.079 (2.0)	
	SJ3700	170	25/32 x 25/32 (20 x 20)	0.43 (2.77)		—	0.098 (2.5)	0.079 (2.0)	
	SJ3228	400	25/32 x 25/32 (20 x 20)	0.43 (2.77)		—	0.098 (2.5)	0.079 (2.0)	
	SJ3229	250	1 x 1 (25.4 x 25.4)	0.76 (4.90)		—	0.098 (2.5)	0.079 (2.0)	
	SJ3750	400	(32 x 50)	1.95 (12.58)	0.303 (7.70)	—	0.079 (2.0)	0.049 (1.25)	
	SJ3248	250	1 x 1.1 (25.4 x 28)	0.79 (5.10)	0.298 (7.57)	—	0.137 (3.5)	0.52 (1.32)	
	SJ3249	400	1 x 1.1 (25.4 x 28)	0.79 (2.77)	0.298 (7.57)	—	0.137 (3.5)	0.52 (1.32)	

1 – Type 400 is not recommended to be engaged to other type 400 fasteners. As well, type 170 should not be engaged with type 170. Engagement strength is dependent upon the area engaged and number of stems engaged.

2 – The actual 3M™ Dual Lock™ area available for (dis)engagement may be less than the part dimension. This should be taken into consideration when designing how much 3M™ Dual Lock™ will be required for a specific application.

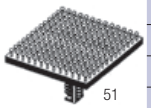
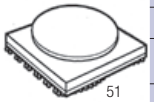
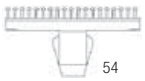
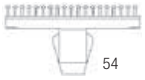
3 – Engaged thickness is for the shown product engaged to 3M™ Dual Lock™ Reclosable Fasteners SJ3781 (a type 250 Dual Lock™ with an acrylic adhesive backcoating). You can mix products with different backcoatings (standard pressure sensitive adhesives or via our 3M™ Dual Lock Mix and Match Program) to obtain a greater variety of engaged thicknesses. Any of these 3M™ Dual Lock™ Reclosable Fasteners can be engaged with 3M™ Scotchmate™ Reclosable Fasteners, providing a quick grab closure with high strength and limited life.

Notes:

- Suggest 4 square inches of fastener per pound of load as a starting point for evaluation of long term performance. Suggest Type 250 engaged to Type 250 as a starting point for evaluations. Tensile strength increases approximately in the following order: 170/250 <250/250 ≤ 170/400 < 250/400.
- The information provided is considered representative only for use in narrowing the possibilities of 3M™ Dual Lock™ piece parts to be considered for further evaluation, and should not be used for specification purposes.
- User is responsible for determining whether the 3M product is fit for the desired end use. Refer to specific product technical data sheets for more detailed product performance information.
- All 3M™ Dual Lock™ Piece parts are comprised completely of black polypropylene.

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

3M™ Dual Lock™ — Piece Parts with Functional Bases

	Product Number	Product Type[1]	Dimensions[2] L x W or Dia. (mm)	Functional Size/Area in. sq. (cm sq)	Engaged Thickness[3] inch (mm)	Comments
Pine Tree Shaped Push-in Stem (for insertion into wood and similar substrates over a range of thicknesses)						
 51	SJ3209	250	26 x 26	1.04 (6.7)	0.293 (7.44)	12mm (0.49") long base stem, designed to fit a 7.9mm to 8.4mm diameter hole.
	SJ3749	400				
	SJ3222	250	26 x 26	1.04 (6.7)	0.293 (7.44)	12mm (0.49") long base stem, designed to fit a 7mm to 7.5mm diameter hole.
	SJ3224	400				
	SJ3848	250	26 x 26	1.04 (6.7)	0.293 (7.44)	16.5mm long base stem, designed to fit a 7.9mm to 8.4mm diameter hole.
	SJ3748	400				
	SJ3266	170	26 x 26	1.04 (6.7)	0.293 (7.44)	12.74mm long base stem, designed to fit an 8.20mm to 8.50mm diameter hole.
	SJ3267	250				
	SJ3268	400				
	SJ3272	170	26 x 26	1.04 (6.7)	0.293 (7.44)	White version of SJ3266.
	SJ3273	250				White version of SJ3267.
	SJ3274	400				White version of SJ3268.
Single Round Cone-shaped Base (for sliding into a key hole slot)						
 51	SJ3743	170	20 x 20	0.62 (4.0)	0.293 (7.44)	Fits key hole slot 3.1mm to 3.25mm thick panel that is 18mm in diameter. The shaft (stem of the cone) is 3.25mm tall and 4mm wide.
	SJ3705	250				
	SJ3221	250	20 x 20	0.62 (4.0)	0.272 (6.91)	Fits key hole slot in a 2.65mm thick panel that is 18mm in diameter. The shaft (stem of the cone) is 2.65mm tall and 4mm wide.
	SJ3731	400				
	SJ3277	170	26 x 26	1.04 (6.7)	0.293 (7.44)	Fits key hole slot in a 3mm thick panel that is 14mm in diameter. The shaft (stem of the cone) is 3mm tall and 4mm wide.
	SJ3278	250				
	SJ3279	400				
Snap-in Base for 6.5mm x 10mm Rectangular Hole						
 54	SJ3704	250	26 x 26	1.04 (6.7)	0.293 (7.44)	Fits a 1.30mm to 1.59mm thick panel.
	SJ3713	400				
	SJ3825	170	26 x 26	1.04 (6.7)	0.283 (7.19)	Fits a 0.71mm to 0.91mm thick panel.
	SJ3826	250				
	SJ3827	400				
Snap-in Base for a Slotted Hole in a 0.70mm to 1.20mm Thick Panel						
 54	SJ3804	170	26 x 26	1.04 (6.7)	0.293 (7.44)	Fits a 0.70mm to 1.00mm thick sheet metal. 5.35 ± 0.05mm x 21.25 + .00/-.15mm slot.
	SJ3805	250				
	SJ3806	400				Fits a 1.00mm to 1.20mm thick sheet metal. 6.00 ± 0.05mm x 21.25 + .00/-.15mm slot.

1 – Type 400 is not recommended to be engaged to other type 400 fasteners. As well, type 170 should not be engaged with type 170. Engagement strength is dependent upon the area engaged and number of stems engaged.
2 – The actual 3M™ Dual Lock™ area available for (dis)engagement may be less than the part dimension. This should be taken into consideration when designing how much 3M™ Dual Lock™ will be required for a specific application.
3 – Engaged thickness is for the shown product engaged to 3M™ Dual Lock™ Reclosable Fasteners SJ3781 (a type 250 Dual Lock™ with an acrylic adhesive backcoating). You can mix products with different backcoatings (standard pressure sensitive adhesives or via our 3M™ Dual Lock Mix and Match Program) to obtain a greater variety of engaged thicknesses. Any of these 3M™ Dual Lock™ Reclosable Fasteners can be engaged with 3M™ Scotchmate™ Reclosable Fasteners, providing a quick grab closure with high strength and limited life.

Notes:
- Suggest 4 square inches of fastener per pound of load as a starting point for evaluation of long term performance. Suggest Type 250 engaged to Type 250 as a starting point for evaluations. Tensile strength increases approximately in the following order: 170/250 <250/250 ≤ 170/400 < 250/400.
- The information provided is considered representative only for use in narrowing the possibilities of 3M™ Dual Lock™ piece parts to be considered for further evaluation, and should not be used for specification purposes.
- User is responsible for determining whether the 3M product is fit for the desired end use. Refer to specific product technical data sheets for more detailed product performance information.
- All 3M™ Dual Lock™ Piece parts are comprised completely of black polypropylene.

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

Specialty Products

Protection Against
Noise, Scratches, Vibration, Slips and Falls

Life is full of risks, but you can offer your customers protection against some of them. 3M specialty products feature pressure-sensitive adhesives for long-lasting and fast-bonding protection where and when you need it.

3M™ Bumpon™ Protective Products — Resilient Rollstock Products

Product	Color	Tape Construction		Product Hardness ASTM D-2240	Adhesive		Liner		Adhesion to Steel oz./0.5 in.	Comments
		Backing Facestock	Caliper mils** (mm)		Type	Thickness mils (mm)	Type	Thickness mils (mm)		
5200 Series*										
SJ5208	Light Brown	Polyurethane Foam	125 (3.2)	25 Shore A	Synthetic Rubber (R-25)	2.0 (0.05)	PET Film Liner	4.0 (0.1)	55	UL 94HB recognized.
SJ5216	Light Brown	Polyurethane Foam	62 (1.6)	25 Shore A	Synthetic Rubber (R-25)	2.0 (0.05)	PET Film Liner	4.0 (0.1)	55	UL 94HB recognized.
5600 Series*										
SJ5616	Clear	Clear Polyurethane	62 (1.6)	70 Shore A	Acrylic (A-20)	1.0 (0.03)	PET Film Liner	4.0 (0.1)	25	Clear rollstock, great where invisible die-cuts are needed.
SJ5632	Clear	Clear Polyurethane	31 (0.8)	70 Shore A	Acrylic (A-20)	1.0 (0.03)	PET Film Liner	4.0 (0.1)	25	Clear rollstock, great where invisible die-cuts are needed.
5800 Series*										
SJ5808	Black, Brown	Polyurethane	125 (3.2)	70 Shore A	Natural Rubber (R-30)	3.6 (0.09)	PET Film Liner	4.0 (0.1)	22	UL 94HB recognized.
SJ5816	Black, Brown	Polyurethane	62 (1.6)	70 Shore A	Natural Rubber (R-30)	3.6 (0.09)	PET Film Liner	4.0 (0.1)	22	UL 94HB recognized.
SJ5832	Black, Brown	Polyurethane	31 (0.8)	70 Shore A	Natural Rubber (R-30)	3.6 (0.09)	PET Film Liner	4.0 (0.1)	22	UL 94HB recognized.
5900 Series*										
SJ5904	Black	Polyurethane Foam	250 (6.4)	36 Shore A	Acrylic (A-20)	4.8 (0.12)	PET Film Liner	4.0 (0.1)	25	UL 94HB recognized.
SJ5908	Black	Polyurethane Foam	125 (3.2)	36 Shore A	Acrylic (A-20)	4.8 (0.12)	PET Film Liner	4.0 (0.1)	25	UL 94HB recognized.
SJ5916	Black	Polyurethane Foam	62 (1.6)	36 Shore A	Acrylic (A-20)	4.8 (0.12)	PET Film Liner	4.0 (0.1)	25	—
6000 Series*										
SJ6005	Black,White	Polyurethane	197 (5.0)	70 Shore A	Acrylic (A-20)	4.8 (0.12)	PET Film Liner	4.0 (0.1)	25	UL 94HB recognized.
SJ6008	Black, Brown	Polyurethane	125 (3.2)	70 Shore A	Acrylic (A-20)	4.8 (0.12)	PET Film Liner	4.0 (0.1)	25	UL 94HB recognized.
SJ6016	Black, Brown	Polyurethane	62 (1.6)	70 Shore A	Acrylic (A-20)	4.8 (0.12)	PET Film Liner	4.0 (0.1)	25	UL 94HB recognized.
SJ6032	Black, Brown	Polyurethane	31 (0.8)	70 Shore A	Acrylic (A-20)	4.8 (0.12)	PET Film Liner	4.0 (0.1)	25	UL 94HB recognized.
6200 Series*										
SJ6208	Black	Polyurethane	125 (3.2)	70 Shore A	Synthetic Rubber (R-25)	2.0 (0.05)	PET Film Liner	4.0 (0.1)	55	Fast bonding, permanent adhesion. UL 94HB recognized.
SJ6216	Black	Polyurethane	62 (1.6)	70 Shore A	Synthetic Rubber (R-25)	2.0 (0.05)	PET Film Liner	4.0 (0.1)	55	Fast bonding, permanent adhesion. UL 94HB recognized.
SJ6232	Black	Polyurethane	31 (0.8)	70 Shore A	Synthetic Rubber (R-25)	2.0 (0.05)	PET Film Liner	4.0 (0.1)	55	Fast bonding, permanent adhesion. UL 94HB recognized.

*Service Temperature Range: -30°F (-34°C) to 150°F (66°C) and up to 225°F (107°C) intermittent exposure.
**1 mil = .001 inches

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

3M™ Bumpon™ Protective Products — Resilient Rollstock

Resilient Rollstock Features	5800 Series	5600/5900/6000 Series	6200 Series
Adhesive	Natural Rubber (R-30)	Acrylic (A-20)	Synthetic Rubber (R-25)
Adhesion (Peel)			
Low Surface Energy	Good	Poor	Excellent
High Surface Energy	Good	Good	Excellent
Static Shear			
75°F	Excellent	Excellent	Excellent
120°F	Fair	Excellent	Good
158°F	Poor	Excellent	Fair
Initial Adhesion			
Low Surface Energy	Good	Poor	Excellent
High Surface Energy	Good	Fair	Excellent
Adhesion Buildup	Some	Gradual	Some
Solvent Resistance	Good	Excellent	Good
Age Life	Good	Excellent	Good

Product	Tape Construction		Color	Comments	Adhesive		Liner		Product Hardness oz./0.5 inch ASTM-D 2240	Adhesion to Steel oz./0.5 in.	Master Size	Specs
	Caliper (Mils)	Backing Facestock			Type	Thickness (Mils)	Type	Thickness (Mils)				
5600 Series — Acrylic												
SJ5632	31	Polyurethane	Clear	"Clear" Rollstock great where "invisible" die cuts are needed.	Acrylic A-20	1	PET Liner	4	70 Shore A	25	9" x 72 yd 9" x 36 yd	UL
SJ5616	62											
SJ5608	125											
5800 Series — Natural Rubber												
SJ5832	31	Polyurethane	Black, Brown, White	UL 94HB recognized.	Natural Rubber R-30	2	PET Liner	4	70 Shore A	22	13.5" x 72 yd 13.5" x 36 yd	UL
SJ5816	62											
SJ5808	125											
5900 Series — Acrylic												
SJ5916	62	Polyurethane Foam	Black	UL 94HB recognized, except for SJ5916.	Acrylic A-20	2	PET Liner	4	36 Shore A	25	13.5" x 36 yd 13.5" x 18 yd	UL
SJ5908	125											
SJ5904	250											
6000 Series — Acrylic												
SJ6032	31	Polyurethane	Black, White	UL 94HB recognized.	Acrylic A-20	2	PET Liner	4	70 Shore A	25	13.5" x 72 yd 13.5" x 36 yd	UL
SJ6016	62											
SJ6008	125											
SJ6004	198											
6200 Series — Synthetic Rubber												
SJ6232	31	Polyurethane	Black, White, Gray	Fast bonding, permanent adhesion. UL 94HB recognized.	Synthetic Rubber R-25	2	PET Liner	4	70 Shore A	55	9" x 72 yd 9" x 36 yd	UL
SJ6216	62											
SJ6208	125											

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3M™ Bumpon™ Protective Products — Molded Products

Product	Color	Adhesive[1]	Shape	Width in. (mm)	Height in. (mm)	Hardness (Shore A)	Comments
Quiet Clear							
SJ6506	Clear	R-25	Hemisphere	0.375 (9.5)	0.150 (3.8)	55	Clear, sound damping properties.
SJ6512	Clear	R-25	Cylindrical	0.500 (12.7)	0.140 (3.5)	55	
SJ6553	Clear	R-25	Hexagonal Cone	0.433 (11.0)	0.120 (3.1)	55	
SJ6561	Clear	R-25	Hexagonal Hemisphere	0.433 (11.0)	0.150 (3.8)	55	
Cylindrical							
SJ5001	Black	R-30	Cylindrical	0.500 (12.7)	0.145 (3.6)	70	Concave top; Good load bearing capacity.
SJ5012	White, Gray, Brown, Black	R-30	Cylindrical	0.500 (12.7)	0.140 (3.6)	70	Versatile foot style for use on high-energy surfaces.
SJ5076	Black	R-30	Cylindrical	0.315 (8.0)	0.110 (2.8)	70	Flat top, nonskid for appliances and electronics.
SJ5312	Transparent	A-20	Cylindrical	0.500 (12.7)	0.140 (3.6)	75	Universal color matching. Nonslip. Ideal for picture framing.
SJ5744	Black	R-30	Cylindrical	0.750 (19.1)	0.160 (4.1)	70	Excellent load bearing capacity.
SJ6112	Black	A-25	Cylindrical	0.500 (12.7)	0.140 (3.6)	70	Versatile foot style, best for low-energy materials.
Hemisphere							
SJ5003	White, Gray, Brown, Black	R-30	Hemisphere	0.440 (11.2)	0.200 (5.1)	70	Good energy absorption on impact.
SJ5009	White, Gray, Brown, Black	R-30	Hemisphere	0.880 (22.4)	0.400 (10.2)	70	Protects wall from door knob.
SJ5017	White, Gray, Brown, Black	R-30	Hemisphere	0.750 (19.1)	0.380 (9.7)	70	Recessed center, like screw-in bumper.
SJ5027	Black, Gray, Brown	R-30	Hemisphere	0.630 (16.0)	0.312 (7.9)	70	Cushions heaver items like glass or liftgate.
SJ5302	Transparent	A-20	Hemisphere	0.312 (7.9)	0.085 (2.2)	75	For feet on small electronics.
SJ5306	Transparent	A-20	Hemisphere	0.375 (9.5)	0.150 (3.8)	75	Smaller, energy absorbing with small contact point.
SJ5382	Transparent	A-20	Hemisphere	0.250 (6.4)	0.075 (1.9)	75	Smaller contact point for energy absorption.
SJ5532	White, Black	R-30	Hemisphere	1.880 (47.8)	0.660 (16.8)	70	Large, ideal for door stops.
Hexagon							
SJ5077	Black	R-30	Hexagonal Width Flat Top	0.750 (19.1)	0.160 (4.1)	70	Smallest hemisphere for appliances and electronics feet use.
SJ5201	Light Brown	R-25	Hexagon Die-Cut	0.433 (11.0)	0.125 (3.2)	25	Unique with round flat top.
SJ5202	Light Brown	R-25	Hexagon Die-Cut	0.433 (11.0)	0.063 (1.6)	25	Soft foam with quick stick R-25 adhesive for cabinets.
Square							
SJ5007	White, Black	R-30	Tapered Square	0.413 (10.4)	0.098 (2.5)	70	Nested on pad for fast removal.
SJ5008	White, Gray, Brown, Black, Transparent	R-30	Tapered Square	0.500 (12.7)	0.125 (3.1)	70	Popular, thin nonskid for appliances or electronics.
SJ5018	White, Gray, Brown, Black	R-30	Tapered Square	0.500 (12.7)	0.230 (5.8)	70	Larger height, smaller top surface for heat dissipation.
SJ5023	White, Gray, Brown, Black	R-30	Tapered Square	0.812 (20.6)	0.300 (7.6)	70	For larger appliances and electronics.
SJ5514	White, Gray, Brown, Black	R-30	Tapered Square	0.812 (20.6)	0.520 (13.2)	70	Larger, high profile for heat dissipation.
SJ5705	Black	R-30	Tapered Square	1.280 (32.4)	0.250 (6.4)	70	Larger, low profile for heavier appliances.
Printed Circuit Board Spacers							
SJ61A1	Black	R-25	Cylindrical	0.312 (7.9)	0.200 (5.1)	70	Shape for PCB spacer applications.
SJ61A3	Black	R-25	Cylindrical	0.375 (9.5)	0.250 (6.35)	70	
SJ61A4	Black	R-25	Cylindrical	0.375 (9.5)	0.311 (7.9)	70	
SJ61A8	Black	R-25	Cylindrical	0.375 (9.5)	0.135 (3.4)	70	
Top-Hat							
SJ6115	Black	R-25	Cylindrical	0.625 (15.9)	0.187 (4.75)	70	Flat top use for recesses.
SJ6125	Black	R-25	Hemisphere	0.625 (15.9)	0.250 (6.35)	70	Resists shear and removal.
Easy Slide							
SJ6344	Black	R-25	Cylindrical	0.750 (19.0)	0.160 (4.0)	80	Use for low friction.

1 – **A-20: Acrylic** High strength adhesion to high energy surface.
R-25: Synthetic Rubber Ideal for low surface energy substrates.
R-30: Natural Rubber Excellent adhesion to a wide variety of surfaces.

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

3M™ Viscoelastic Damping Polymers

Vibration and Shock Solutions

3M™ Viscoelastic Damping Polymers have been proven to reduce vibration in automobiles, disk drives and aircraft. Through continuous improvement, 3M can now offer you a choice of standard damping polymers or ultra-pure damping polymers to expand application possibilities to include the following:

Cover constrained layer dampers; multi-layer laminates using metal or polymeric films; free layer dampers; suspension dampers; isolators; panel, pipe, and wing dampers; and more.

Market Application Ideas

- Automotive including body panels and under the hood
- Aerospace including space craft and commercial aircraft
- Electronics including disk drives
- Sporting goods including golf clubs and tennis racquets
- Appliances including washing machines

Performance Versatility

- Choice of enhanced acrylic polymer for improved vibration damping or ultra-pure polymer for improved vibration damping, plus low out gassing and ionics
- Choice of good to excellent thermal stability for long term applications at moderate temperatures, or short term high temperature exposure
- Damping in temperatures ranging from as low as 0°C (32°F) to as high as 105°C (221°F)
- Select Loss Factor and Storage Modulus values to meet requirements

Construction Availability

Polymer	Thickness	Liner	Typical Performance Characteristics
Standard Viscoelastic Damping Polymer			
110	2 and 5 mil	Paper	Good damping performance at higher temperature: 40–105ºC (104–221°F). Heat and pressure needed for bonding.
112	1, 2 and 5 mil	Paper	Good damping performance at 0–65°C (32–142°F). Pressure only for adequate bonding at room temperature (21°C/70°F) for many applications.
130	2 and 5 mil	Polyester	Good damping performance at moderate temperature range of 20–90°C (68–194°F). Pressure only for adequate bonding at room temperature (21°C/70°F) for some applications.
Ultra-Pure Viscoelastic Damping Polymer			
242	1 and 2 mil	Polyester	Good damping performance at 0–65°C (32–142°F). Low outgassing by GC/MS (Modified ASTM 4526). Low ionics.

3M™ Safety-Walk™ Slip Resistant Materials

Product	Product Characteristics	Type	Adhesive	Color	Master Roll Size
220	Non-mineral fine texture, for barefoot traffic.	Fine Resilient	Acrylate	Clear	48" x 120 ft
280	Non-mineral fine texture, for barefoot traffic.	Fine Resilient	Acrylate	White	48" x 120 ft
310	Non-mineral, medium texture, for barefoot or light traffic.	Medium Resilient	Synthetic Rubber	Black	48" x 120 ft
370	Non-mineral, medium texture, for barefoot or light traffic.	Medium Resilient	Synthetic Rubber	Gray	48" x 120 ft
510	Mineral coated, foil backing for conformability.	Conformable	Synthetic Rubber	Black	48" x 120 ft
530	Mineral coated, foil backing for conformability.	Conformable	Synthetic Rubber	Yellow	48" x 120 ft
610	Mineral coated, heavy texture for light to heavy traffic.	General Purpose	Synthetic Rubber	Black	48" x 120 ft
620	Mineral coated, heavy texture for light to heavy traffic.	General Purpose	Synthetic Rubber	Clear	48" x 120 ft
660	Mineral coated, heavy texture for light to heavy traffic.	General Purpose	Synthetic Rubber	Brown	48" x 120 ft
710	Mineral coated, coarse texture for extreme traffic.	Course	Synthetic Rubber	Black	48" x 120 ft
2141	**Primer** prepares rough or porous surfaces for proper adhesion.	—	—	—	—
5569	**Edge Sealing Compound** to provide extra protection from liquids.	—	—	—	—
903	**Rubber Hand Roller** to help provide a firm bond.	—	—	—	—

Custom adhesives available on 300, 500, 600 series products.
Custom colors available on 300 series products.

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

3M™ Premium Polyurethane Foam Tapes

Product	Color	Adhesive	Approximate Thickness in. (mm)	Roll Size	Density lb/cu ft (kg/cu m)	Tensile Strength (psi (kPa)	Tensile Elongation % min.	Tear Strength min. pli (kN/m)	Compression Deflection @23°C, psi (kPa)	Temperature Tolerance	
										Short-Term	Long-Term
Medium Density Series											
12026	Black	With* or without**	1/16 (1.6)	54" x 300 ft	15 (239)	50 (345)	90	4.0 (0.7)	305–6.5 (24–45)	250°F (121°C)	150°F (66°C)
12032	Black		3/32 (2.4)	54" x 225 ft							
12028	Black		1/8 (3.2)	54" x 160 ft							
12036	Black		3/16 (4.8)	54" x 100 ft							
12034	Black		1/4 (6.4)	54" x 80 ft							
12038	Black		3/8 (9.5)	54" x 60 ft							
12030	Black		1/2 (12.7)	54" x 40 ft							
High Density Series											
12046	Black	With* or without**	1/16 (1.6)	54" x 300 ft	20 (320)	75 (517)	100	7.0 (1.2)	8–12 (55–83)	250°F (121°C)	150°F (66°C)
12062	Black		3/32 (2.4)	54" x 225 ft							
12048	Black		1/8 (3.2)	54" x 160 ft							
12056	Black		3/16 (4.8)	54" x 100 ft							
12054	Black		1/4 (6.4)	54" x 80 ft							
12049	Black		3/8 (9.5)	54" x 60 ft							
12050	Black		1/2 (12.7)	54" x 40 ft							

*Adhesive Selection
**Non Adhesive foams are UL 94HBF, File E61941 Recognized Components.

Product	Adhesive Family	Adhesive Thickness (mils)	Carrier	Liner	Liner Thickness (mils)
6035PC	300MP	5.0	None	58# PCK	4.2
9772WL	300MP	2.0	None	96# PCK	7.0
9775WL	300MP	5.0	None	96# PCK	7.0
9832	300MP	4.8	PET	58# PCK	4.2
97053	Special	3.0	Scrim	50# DK	3.2

Automotive Specifications for Non-adhesive Foams

Manufacturer	Specification #	Medium Density Foams Type/Class	High Density Foams Type/Class
Chrysler®	MS-AY549	A2	A1
Ford®	WSS-M2D496	A4	A5
GM®	6098M	Type 1	Type 2
GMW	14196	Type 2	Type 3

Automotive Specifications for Adhesive Foam Combinations

Manufacturer	Specification #	Foam Series	Adhesive #
Chrysler®	MS-AY 522	Medium and high density foam series laminated to the adjacent 3M Adhesive Tapes.	6035PC
Ford®	WSA-M11P19		9832
GM®	3622		97053

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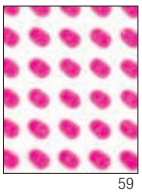
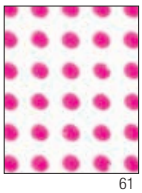
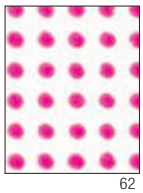
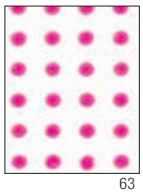
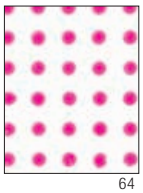
Ensure Superior Print Quality

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

3M offers a wide selection of adhesives, foams and thickness for the superior print quality your customers demand.

3M™ Flexographic Mounting Systems

3M™ Combination Printing Tapes							3M™ Process Printing Tapes
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							
57	58	 59	60	 61	 62	 63	 64
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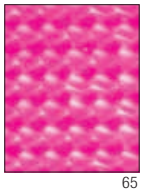
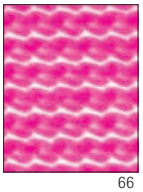
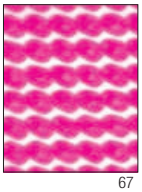
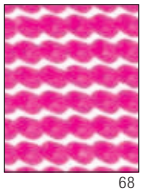
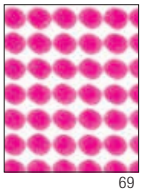
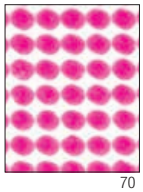
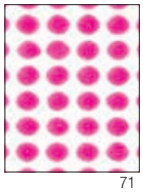
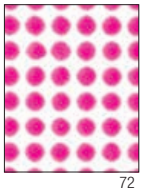
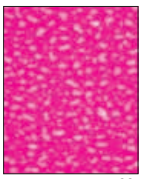
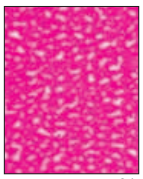
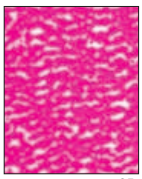
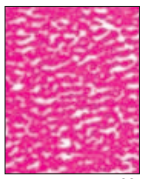
 65	 66	 67	 68	 69	 70	 71	 72
Reverse							
73	74	75	76	77	78	79	80
100% Solid							
81	 82	83	 84	 85	 86	87	88
Quality results when plate contains mostly solids in a combination of solid and halftone images.	Quality results when plate contains slightly more solids in a combination of solid and halftone images.	Quality results for high speed printing with fine type reverses and expanded color gamut.	Quality results when solid and halftone areas are equally important.	Quality results for high speed printing of combination work when halftone areas exceed solid.	Soft support improves tone reproduction when process and halftone images predominate.	Low density maximizes dot reproduction high quality process work and screen printing.	Low density maximizes dot reproduction for high quality process work and screen printing.
E1815, E1815H, 1815M **E1820, E1820H, 1820M** **E1840H, E1860H**	**E1715, E1715H** **E1720, E1720H, 1720M**	**E1515, E1515H** **E1520, E1520H**	**E1015, E1015H, 1015, 1015M** **E1020, E1020H, 1020, 1020M, 1020R** **E1040, E1040H, 1040** **E1060, E1060H, 1060**	**E1315, E1315H** **E1320, E1320H**	**E1915, E1915H, 1915M , E1915S, E1915HS** **E1920, E1920H, 1920M, E1920S, E1920HS, 1920S,**	**E1215, E1215H** **E1220, E1220H**	**E1115, E1115H, 1115** **E1120, E1120H, 1120**

E – Air Release Medium Plate Side Adhesion **EH –** Air Release High Plate Side Adhesion **S –** High Sleeve Side Adhesion for Urethane Sleeves **M –** Modified Plate Side Adhesion
DL – Double Liner **R –** Rubber Plates **K –** High sleeve side adhesion for composite sleeves

Additional calipers available for specialized applications.

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

3M™ Flexographic Mounting Systems (cont.)

	Product Number	Application Thickness in. (mm)	Manufactured Target Thickness in. (mm)	Description	Plates	Cylinders	Color	Features
Solid Printing Tapes	**3M™ Flexomount™ Solid Plate Mounting Tapes**							
	411DL	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/S/K	Gray	Gray vinyl tapes with high adhesion. Helps reduce edge lifting. Helps minimize pin holing on solid work.
	412DL	0.020 (0.51)	0.020 (0.51)		P/R	SS/S/K	Gray	
	447DL	0.010 (0.25)	0.010 (0.25)		P/R	SS/S/K	Gray	
	413DL	0.015 (0.38)	0.015 (0.38)	Black double coated tape with a firm rubber adhesive on each side of a vinyl carrier. Available only in double liner.	P/R	SS/S/K	Black	Black vinyl — lower adhesion. Higher temperature and solvent resistance. Helps minimize pin holing on solids.
	414DL	0.020 (0.51)	0.020 (0.51)		P/R	SS/S/K	Black	
Combination Printing Tapes	**18 Series 3M™ Cushion-Mount™ Plus Firm Combination Plate Mounting Tapes**							
	E1815H, E1815, 1815M	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/S/K	Blue	Better solid ink density than the standard combination printing tapes. Clean removal from plate and print cylinder.
	E1820H, E1820, 1820M	0.020 (0.51)	0.022 (0.56)		P	SS/S/K	Blue	
	E1840H, E1860H	0.040 (1.02) 0.060 (1.52)	0.042 (1.07) 0.062 (1.57)		P	SS/S/K	Blue	
	17 Series 3M™ Cushion-Mount™ Plus Medium Firm Combination Plate Mounting Tapes							
	E1715H, E1715	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/S/K	Teal	Quality results when plate contains slightly more solids in a combination of solid and halftone images.
	E1720H, E1720, 1720M	0.020 (0.51)	0.022 (0.56)					
	15 Series 3M™ Cushion-Mount™ Plus Medium Combination Plate Mounting Tapes							
	E1515H, E1515	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/S/K	Purple	High quality, medium combination print.
	E1520H, E1520	0.020 (0.51)	0.022 (0.56)		P	SS/S/K	Purple	
	10 Series 3M™ Cushion-Mount™ Plus Standard Combination Plate Mounting Tapes							
	E1015H, E1015, 1015, 1015M	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/S/K	White	Most versatile 3M™ Cushion-Mount™ Plus Tapes. Effectively prints most types of flexographic printing.
	E1020H, E1020, 1020, 1020M, 1020R	0.020 (0.51)	0.022 (0.56)		P	SS/S/K	White	
					P/R	SS/S/K	White	
	E1040, 1040, E1040H	0.040 (1.02)	0.042 (1.07)		P	SS/S/K	White	
	E1060, 1060, E1060H	0.060 (1.52)	0.062 (1.57)		P	SS/S/K	White	
	13 Series 3M™ Cushion-Mount™ Plus Medium Soft Combination Plate Mounting Tapes							
	E1315H, E1315	0.015 (0.38)	0.017 (0.43)	Differential acrylate adhesive system.	P	SS/S/K	Yellow	High quality, medium-soft combination print.
	E1320H, E1320	0.020 (0.51)	0.020 (0.51)		P	SS/S/K	Yellow	
	19 Series 3M™ Cushion-Mount™ Plus Light Medium Combination Plate Mounting Tapes							
	E1915H, E1915, E1915HS, 1915M, E1915S	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/S	Pink	Soft support improves tone reduction when process and halftone images predominate.
	E1920H, E1920, 1920M	0.020 (0.51)	0.022 (0.56)		P	SS/S	Pink	
	E1920S, 1920S, E1920HS	0.020 (0.51)	0.022 (0.56)		P	S/K	Pink	
	12 Series 3M™ Cushion-Mount™ Plus Light Combination Plate Mounting Tapes							
	E1215H, E1215	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/S	Orange	—
	E1220H, E1220	0.020 (0.51)	0.022 (0.56)		P	SS/S	Orange	
Process Printing	**11 Series 3M™ Cushion-Mount™ Plus Process Plate Mounting Tapes**							
	E1115H, E1115, 1115	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/S	Tan	Better tone reproduction than the standard combination printing tapes. Clean removal from plate and print cylinder.
	E1120H, E1120, 1120	0.020 (0.51)	0.022 (0.56)		P	SS/S	Tan	

E – Air Release Liner **M –** Modified Plate Side Adhesion **DL –** Double Liner **S –** Urethane Sleeve **K –** High sleeve side adhesion for composite sleeves
SS – Stainless Steel Cylinder **R –** Rubber Plates **P –** Photopolymeric Plates **EH –** High Plate Side Adhesion

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E-Series Tapes with Easy Mount Adhesive

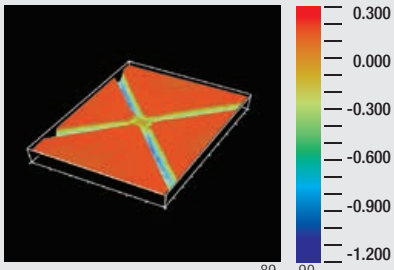
On Easy with Reduced Air Entrapment

Unlike flat or pebbled liners, E-Series liners are cross-hatched on both sides with unique microchannels that allow air to flow throughout the adhesive. Improved airflow virtually eliminates air bubble problems for easier application. Air releases 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.

EH-Series Adhesive to Hold the Edge on Small Diameter Cylinders

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

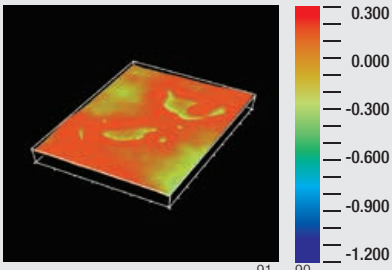
Microscopic View of Adhesive Surface Measured with Interferometer



Easy Mount Adhesive

Stays On With Reduced Edge-Lifting

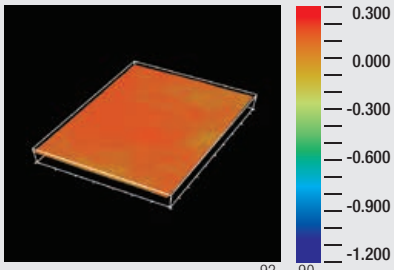
Exclusive 3M plate-side adhesive maintains tight contact between tape and plate to dramatically reduce edge lifting. Saves the prep time, downtime, and labor of sealing plate edges.



Pebbled Liner

Peels Off Easily to Reduce Plate Damage

E-series tapes grip tightly but peel off so easily you can virtually eliminate plate back treatment. You're less likely to damage plates, so you can save time, labor and money.



Flat Liner

Bubble-Free Print Quality

Prevent blemishes in screen and process printing, and help assure proper registration.

3M™ Thin Tapes

When cushioning is unnecessary, these tapes can mount both rubber and photopolymer plates. Some are also repositionable.

Product Number	Tape Thickness Inch (mm)	Description	Compressible Sleeves	Corrugated	Rotary Letterpress	Make Ready	Features
415	0.004 (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.
442KW	0.004 (0.10)	Double coated tape with a firm rubber adhesive on each side of a polyester carrier.		■	■		Plate mounting applications requiring a thin tape to bond rubber or photopolymer plates to metal cylinders.
443	0.005 (0.13)	Double coated tape with a soft rubber adhesive on each side of a polyester carrier.		■	■		Mounting applications requiring a thin tape to bond polyester, fiberglass and other surfaces.
465	0.002 (0.05)	Acrylic adhesive transfer tape.		■		■	Small area plate build-up or make-ready. Also used to mount primed rubber plates.
927	0.002 (0.05)	Acrylic adhesive transfer tape.		■		■	Corrugated plate mounting applications where repositionability and removability are not required.
950	0.005 (0.13)	Acrylic adhesive transfer tape.		■			
2205	0.005 (0.13)	Double coated film tape with differential acrylic adhesive with a polyester film carrier on a kraft paper liner.	■	■			For the corrugated printing industry to hold flexographic print plates to PVC saddles/carriers. Removes cleanly.
2205FL	0.005 (0.13)	Double coated film tape with differential acrylic adhesive with a polyester film carrier on a film liner.	■	■			Adhesives designed specifically for corrugated flexo mounting. Removes cleanly and easy to reposition.
9500PC	0.005 (0.13)	High performance acrylic adhesive on each side of a polyester carrier.	■		■		Thin tape plate mounting applications requiring higher performance than 442KW Tape.

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

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3M™ Flexographic Mounting Aids

Product	Description
3M™ Cylinder Mount Build-Up Tape 1640	For use with any 3M flexographic tape to add 0.040 in. thickness.
3M™ Primer 94	Helps hold the leading and trailing edges of the plate to prevent edge lifting.
3M™ Scotch-Weld™ Adhesives 3762LM, 3776LM or 3792LM	Use with **3M™ Polygun™ LT Applicator** to seal plate edges against ink and solvent penetration that causes edge lifting.
3M™ Aluminum Foil Tape 425	Seals plate edges against ink and solvent penetration that can cause edge lifting.
3M™ Vinyl Tape 471	
3M™ Polyester Film Tape 850	
Scotch® Magic Tape 810	Secures proofing paper to a proofer/mounter with good adhesion but simple removal from the proofing cylinder.

3M™ Non-Repulpable Splicing Tapes

Go To Products	Product Description	Tape Thickness mil (mm)	Carrier Thickness mil (mm)	Carrier Type	Color	Adhesion oz/in (N/25 mm)	High Temp (Short-term) °F (°C)	Go-To Application*	
								Zero Speed	Flying Speed
Based on ASTM Test Method:		**D-3652**	**D-3652**			**D-3330**			
Adhesive Transfer Tapes									
465	High tack. Excellent adhesion to most paper stocks. Flexible to -60°F (-51°C).	2.0 (0.05)	—	No Carrier	Clear	25 (6.8)	250 (121)		
9498/9464	Low temperature splicing.	2.0 (0.05)	—	No Carrier	Clear/Red	20 (6.0)	250 (121)	■	
9499/9497	High temperature splicing.	2.0 (0.05)	—	No Carrier	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/ Yellow	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 temperature with extremely wide range. 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)		

*All tapes in this chart can be considered for zero speed or flying speed splices.

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Bringing better ideas to the surface.

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3M Masking and Specialty Products

Design & Production Guide

Bringing Better Ideas to the Surface through Science & Innovation

In the 3M Industrial Adhesives and Tapes Division, we apply the science of adhesion to deliver innovative solutions that improve the design and manufacturing processes of companies around the world. In the end, our technologies help customers like you deliver competitive products to the market faster and more efficiently.

Whether you're looking to protect, mask, enhance or otherwise modify surfaces to improve the appearance, function or productivity of your products or processes, this guide will show you what you need to get the job done right.

Solutions through Service

3M sales representatives are located across the globe. For technical service, a highly trained team can help you evaluate tapes for specific applications. In addition, our national authorized distributor network provides sales assistance and local product availability. Authorized converters can also help you adapt 3M tapes to meet your special requirements.

3M Masking and Specialty Products

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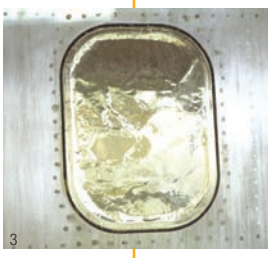

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Selecting the Right Product for the Job

To help you make sure you find the optimum 3M tape or other adhesive-backed product for your particular application, you'll want to consider several factors:

- Backing material
- Adhesive type
- Application time and temperature
- Surface characteristics (e.g., roughness, surface energy, contours, etc.)
- End use conditions (e.g., temperature, UV exposure, abrasion, etc.)

The following selection guides integrate those factors to help you narrow your selection to fewer products for a more in-depth evaluation.

3M Backing Materials

In many applications, 3M backings add a second surface that affects how the underlying surface relates to the environment. To optimize that relationship, 3M backings offer a wide choice of performance and handling characteristics.

PAPER BACKING	Crepe	Conformable, easy tear
	Flatback	Strong, smooth, good for straight line masking
	Kraft	Strong, some versions are repulpable
	Tissue	Thin, porous to allow adhesive penetration of sheet
PLASTIC BACKING	Polyester	Strong even when thin, chemical resistant, high temperature resistance
	Polypropylene	Resistant to most solvents, conformable, tear resistant
	Polyethylene	Conformable, easy to stretch, chemical/acid/moisture resistant, economical
	Polyethylene/Polypropylene Co-polymer	Conformable, chemical/acid/moisture resistant
	UHMW-PE	High abrasion resistance, low coefficient of friction, anti-stick surface easy to clean
	Polyvinyl Chloride (Vinyl)	Conformable, abrasion resistant, resistant to most chemicals
	Polyimide	High temperature resistance, excellent dimensional stability, good chemical resistance
	Polyamide (Nylon)	High temperature resistance, high strength and toughness, good chemical resistance but can absorb moisture
	Polytetrafluoroethylene (PTFE)	Low coefficient of friction, excellent high temperature and chemical resistance, anti-stick/release properties
	Polyvinyl Alcohol (PVA)	Water-soluble, organic solvent resistant, high temperature resistance
	Polyurethane	Abrasion/scratch resistant, impact/puncture resistant, UV and corrosion resistant
	Polyvinyl Fluoride	Excellent weather resistance, excellent long-term UV resistance, thin yet stiff feel
CLOTH BACKING	Cotton	Strong, easy tear by hand, soft and drapable
	Glass Cloth	Strong, high temperature resistance, flame-resistant
	Vinyl Coated	Strong yet hand tearable, abrasion resistant, water-resistant, conformable
NON-WOVEN BACKING	Fiber	Air permeable, strong enough to hold expanding foams
METAL BACKING	Aluminum	Heat and light reflective, moisture and chemical resistant, flame-resistant, outdoor weather resistant, conformable
	Copper	EMI/RFI shielding
	Lead	Electrically conductive, acid resistant, high conformability, x-ray opacity
	Stainless Steel	Corrosion resistant
RUBBER BACKING	Neoprene	Abrasion resistant, die-cuttable
COMBINATION (LAMINATES) BACKING	Paper/Polyethylene	Weather and chemical resistant, hand tearable, stretch resistant
	Metalized/Polyester	Reflective, decorative
	Glass Cloth/PTFE	High temperature resistance, high strength
	Glass Cloth/Aluminum	Very high temperature resistance, high strength
	Non-Woven/Aluminum	High heat and cold resistance
	Polyethylene Over Cloth	Strong yet hand tearable, abrasion resistant, water resistant and conformable.

3M Pressure Sensitive Adhesives

Most of the products in this guide feature a 3M pressure sensitive adhesive that bonds the backing to another surface on contact. Each adhesive has different characteristics that affect production and end use performance.

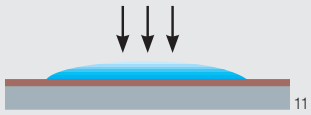
RUBBER ADHESIVE	STANDARD ACRYLIC ADHESIVE	MODIFIED ACRYLIC ADHESIVE	SILICONE ADHESIVE
High initial bond	Moderate initial bond	Bonds to wider variety than standard acrylic	Fair initial bond
Softer	Firmer	Softer	Very firm
Widest variety of surfaces including low surface energy materials*	High surface energy*	Many surfaces	Fewer surfaces
Up to 350°F (177°C)	Up to 450°F (232°C)	Up to 300°F (149°C)	Up to 600°F (316°C), excellent low temperature performance
Fair chemical resistance	Excellent chemical resistance	Good chemical resistance	Excellent chemical resistance
Fair UV resistance	Excellent UV resistance	Moderate UV resistance	Excellent UV resistance
Poor aging	Excellent aging	Durable	Excellent aging
Removable	Permanent	Various	Removable
Good solvent resistance	Excellent solvent resistance	Good solvent resistance	Excellent solvent resistance

***Surface energy** ranges from high to low. To illustrate the concept of surface energy, think of water on the unwaxed hood of a car. The unwaxed hood has high surface energy and water on the hood flows into puddles. In comparison, a waxed hood has low surface energy and the water beads up rather than flows out. Similar to water, adhesive on a high surface energy surface flows and "wets out" the surface. "Wetting out" is required to form a strong bond.

As a rule of thumb, the higher the surface energy, the greater the strength of adhesion. Specially formulated adhesives are available for low surface energy surfaces. Regardless of surface energy, the substrate must be unified, dry, and clean to maximize adhesive contact.

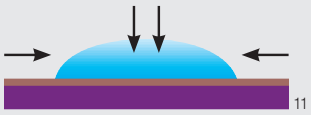
The following illustrations and surface rankings give you an idea of relative surface energy.

Metal Surfaces (High Surface Energy)



mJ/m²	Surfaces
1103	Copper
840	Aluminum
753	Zinc
526	Tin
458	Lead
700–1100	Stainless Steel
250–500	Glass

High Surface Energy Plastics (HSE)



mJ/m²	Surfaces
50	Polyimide Industrial Film
47	Phenolic
46	Nylon
45	Alkyd Enamel
43	Polyester
43	Epoxy Paint

mJ/m²	Surfaces
43	Polyurethane Paint
42	ABS
42	Polycarbonate
39	PVC Rigid
38	Modified PPE Resin
38	Acrylic

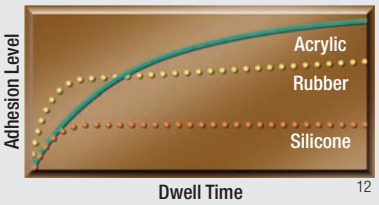
Low Surface Energy Plastics (LSE)

mJ/m²	Surfaces
37	PVA
36	Polystyrene
36	Acetal
33	EVA
31	Polyethylene
29	Polypropylene
28	Polyvinyl Fluoride Film
18	PTFE Fluoropolymer

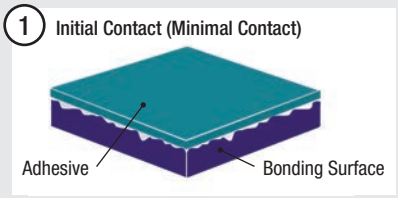
Note: These values are provided as a guide. Formulation modifications can substantially alter surface energies.

Adhesive Surface Contact

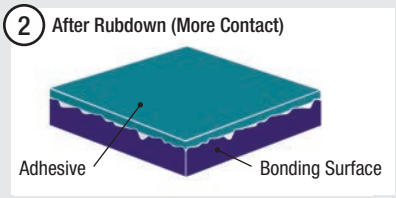
Applying firm pressure to the bond increases adhesive flow and contact for more secure bonding. Time and temperature will typically further increase contact and adhesion values.



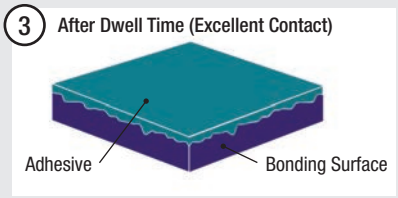
1 Initial Contact (Minimal Contact)



2 After Rubdown (More Contact)



3 After Dwell Time (Excellent Contact)



3M™ Specialty Tapes Backing and Adhesive Selection Guide

To help select the **TAPE BACKING** for your application, consult the following charts.
Each backing is rated in eight critical categories.

Key to Charts 1–8

- PVC=Polyvinylchloride
- PE=Polyethylene
- PET=Polyester
- MF=Metal Foil
- PTFE=Polytetrafluoroethylene
- GC=Glass Cloth

Chart 1. Backings Thickness (Caliper)

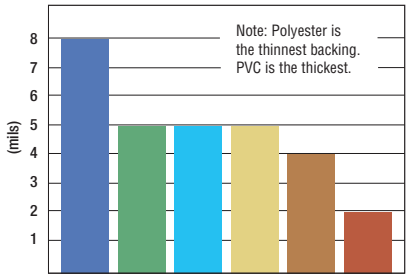


Chart 2. Temperature Range of Tape Backings

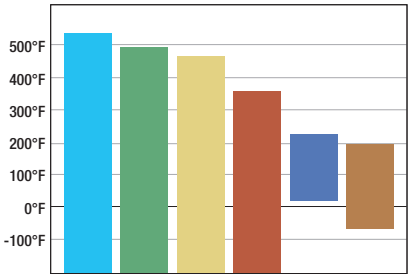


Chart 3. Conformability of Backings

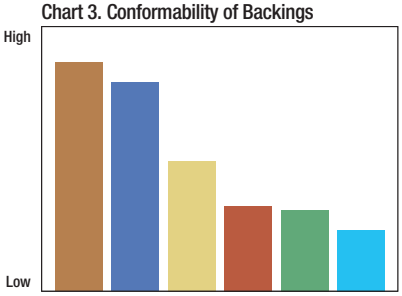


Chart 4. Backing Cost

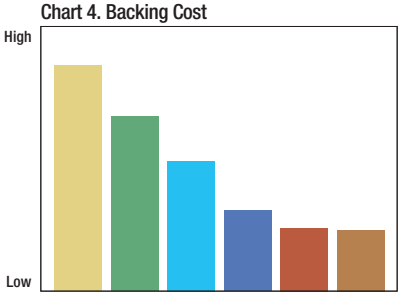


Chart 5. Backings as Moisture Barriers

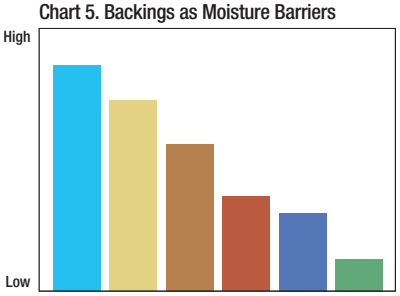


Chart 6. Chemical Resistance of Backings

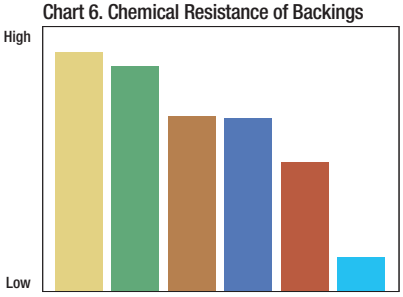


Chart 7. Solvent Resistance of Backings

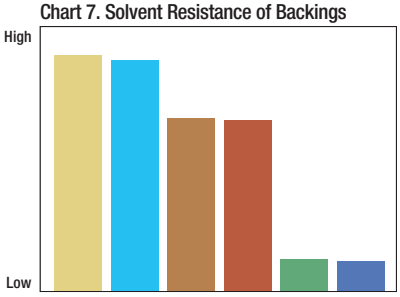
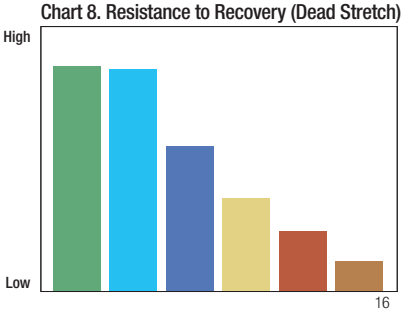


Chart 8. Resistance to Recovery (Dead Stretch)



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To help select the **ADHESIVE** for your application, consult the charts below.
Each adhesive is rated in five critical categories.

Key to Charts 9–13

- R=Rubber Adhesive
- A=Acrylic Adhesive
- S=Silicone Adhesive

Chart 9. Initial Tack

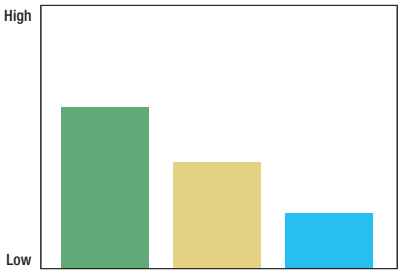


Chart 10. Ultimate Adhesion to Steel

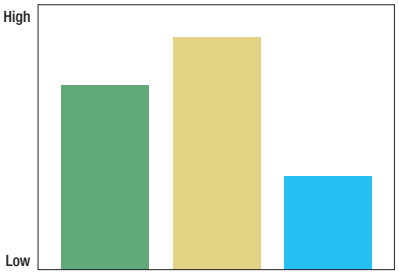


Chart 11. Temperature Ranges of Adhesives

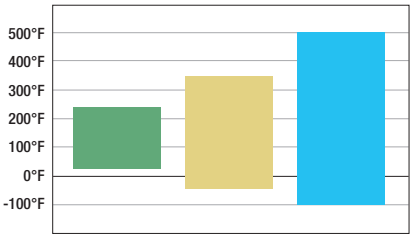


Chart 12. Long-Aging Capabilities

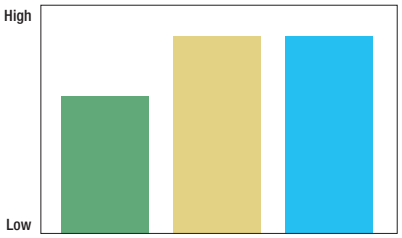
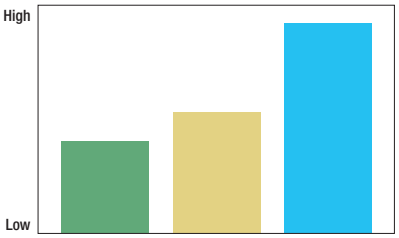


Chart 13. Cost of Adhesives



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

Practical tape solutions.

Tapes that hold firm, yet remove easily.

To get the job done right the first time, you need to use the right tools. That's why we offer a full lineup of industrial tapes with unmatched dependability. From tapes that withstand extreme temperatures to tapes that remove cleanly in UV conditions, you can trust 3M to help you get the job done right.

3M™ Industrial Masking Tapes

Now It's Easy to Choose the Best Tape to Get the Job Done Right

To win in today's highly competitive marketplace, you need the right tools. And that includes your masking tapes. So 3M has created a simple, 5-tape system to help you choose the right tape for your job.

Five tapes, built on increasing levels of performance and a common goal of helping you finish jobs worth finishing.

It's industrial masking made simple.

3M™ Masking Tapes 101+, 201+, 301+, 401+ and 501+.

Consider 301+ for general purpose, low to medium temperature applications up to 225°F (107°C).

Consider 401+ for critical masking applications with temperatures up to 250°F (121°C).

Consider 501+ for bake temperatures up to 300°F (149°C) or for multiple bake cycles.

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				
101+	Tan	Rubber	Crepe Paper	5.1 (0.13)	34 (37)	22 (385)	9	150 (66)	30	—	Indoor use. Light-duty applications.
201+	Tan	Solvent-Free Rubber	Crepe Paper	4.4 (0.11)	25 (27)	19 (333)	8	200 (93)	30	—	General indoor use. Light-to-medium duty. Clean removal.
301+	Yellow	Solvent-Free Rubber	Crepe Paper	6.3 (0.16)	30 (33)	22 (385)	12	225 (107)	30	—	Good conformability to irregular surfaces. Good paint lines.
401+	Green	Solvent-Free Rubber	Crepe Paper	6.7 (0.17)	36 (39)	25 (438)	10	250 (121)	30	—	Highly conformable to many surfaces. Superior adhesion to metal, rubber, glass and plastic. Great paint lines.
501+	Tan	High Temperature Rubber	Crepe Paper Treated with a Heat Resistant Saturant	7.3 (0.19)	36 (39)	26 (455)	10	300 (149)	30	ASTM D 6123	Exceptionally conformable to irregular surfaces. Superior adhesion to metal, rubber, glass and plastic. Removes cleanly in one piece with no residue. Great paint lines.
501+	Purple	High Temperature Rubber	Crepe Paper Treated with a Heat Resistant Saturant	7.3 (0.19)	37 (40)	31 (543)	11	300 (149)	30	—	Exceptionally conformable to irregular surfaces. Superior adhesion to metal, rubber, glass and plastic. Removes cleanly in one piece with no residue. Great paint lines.

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

Scotch® Fine Line Masking Tapes

Line Sharpness and Removal the Way You Want

With a core capability of coating technology, 3M combines paper or film backings with different adhesives for demanding applications.

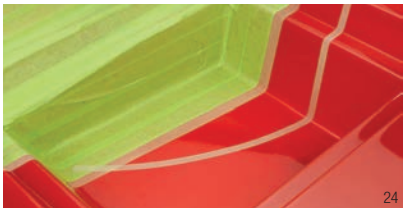
- Sharpest possible paint lines
- Conformability to stretch and adhere around sharp curves
- Film or vinyl backings flex easily for creating curved paint edges
- Resist edge lifting

22

With blue vinyl backing and rubber adhesive, Scotch® Fine Line Masking Tape 4737T offers best-in-class conformability and line sharpness for curves in high value processes.

23

A combination of Scotch® Fine Line Masking Tape and 3M™ Crepe Masking Tape helps to create sharp, high-impact paint lines on an in-mold application in the marine industry.



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Also consider Scotch® Fine Line Tape 265 for difficult to stick to surfaces, such as semi-perm mold release surfaces.

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 (minutes)	Comments
Based on ASTM Test Method:				D-3652	D-3330	D-3759	D-3759			
215	Blue	Rubber	Polyethylene/ Polypropylene Co-polymer	4.8 (0.12)	43 (47)	15 (263)	1150	250 (121)	30	Medium temperature. Excellent conformability.
218	Green	Rubber	Polypropylene	5.0 (0.13)	37 (40)	13 (228)	720	250 (121)	30	Good for long, straight lines.
265	Green	Rubber/ Silicone	Polypropylene	5.1 (0.13)	21 (23)	21 (368)	881	200 (93)	30	In-mold composite masking where sharp, clean, gel-coat color separation lines are desired.
2460	Gold	Acrylic	Flatback Paper	3.3 (0.08)	8 (8.7)	17 (297)	5	300 (149)	30	For paint bake operations at temperatures up to 300°F (149°C). 21 days outdoor.
4735	Orange	Rubber	Vinyl	5.4 (0.14)	9.5 (10.4)	14 (245)	130	300 (149)	30	Highly conformable, high temperature vinyl fine line tape for fascia panels, two-tone and other multiple color applications where critical paint break lines are required.
4737T	Translucent Blue	Rubber	Vinyl	5.4 (0.14)	10.5 (11.5)	16 (280)	115	300 (149)	30	Conformable, high temperature vinyl fine line tape for fascia panels, two-tone and other multiple color applications where critical paint break lines are required.
4737S	Solid Blue	Rubber	Vinyl	5.4 (0.14)	10.5 (11.5)	16 (280)	115	300 (149)	30	Highly visible backing version of 4737T.
4737TL	Blue	Rubber	Vinyl	5.4 (0.14)	10.5 (11.5)	16 (280)	115	325 (163)	30	Linered version of 4737T.

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

3M™ Masking Tapes — Crepe Paper

Holding Power and Removal the Way You Want

In this simplified line, you will find a range of such characteristics as adhesive holding power, line sharpness, and clean removal to meet different application requirements for virtually every industrial and consumer application. 3M products also feature:

- Instant adhesion at a touch
- Easy tear without stretching or pulling
- Controlled unwind...not too easy or too hard
- Conformability to stretch and adhere around curves

26

25

With the wide variety of 3M™ Masking Tapes, you can select from a variety of backings, adhesion strengths, clean removal properties, and temperature range performance.

27

Use 3M™ Value Masking Tape 101+ for light-duty attaching.

28

Use 3M™ General Masking Tape 201+ to quickly bundle parts.

29

3M™ Performance Yellow Masking Tape 301+ is ideal for labeling and identifying applications.

3M™ Masking Tapes — Crepe Paper

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	Cross Reference	Comments
ASTM Test Method:				D-3652	D-3330	D-3759	D-3759					
Industrial Masking Tapes												
101+	Tan	Rubber	Crepe Paper	5.1 (0.13)	34 (37)	22 (385)	9	150 (66)	30	—	—	Indoor use. Light-duty applications.
201+	Tan	Solvent-Free Rubber	Crepe Paper	4.4 (0.11)	25 (27)	19 (333)	8	200 (93)	30	—	—	General indoor use. Light-to-medium duty. Clean removal.

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

3M™ Masking Tapes — Crepe Paper

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	Cross Reference	Comments
ASTM Test Method:				D-3652	D-3330	D-3759	D-3759					
Industrial Masking Tapes												
301+	Yellow	Solvent-Free Rubber	Crepe Paper	6.3 (0.16)	30 (33)	22 (385)	12	225 (107)	30	—	—	Good conformability to irregular surfaces. Good paint lines.
401+	Green	Solvent-Free Rubber	Crepe Paper	6.7 (0.17)	36 (39)	25 (438)	10	250 (121)	30	—	—	Highly conformable to many surfaces. Superior adhesion to metal, rubber, glass and plastic. Great paint lines.
501+	Tan	High Temperature Rubber	Crepe Paper Treated with a Heat Resistant Saturant	7.3 (0.19)	36 (39)	26 (455)	10	300 (149)	30	ASTM D 6123	—	Exceptionally conformable to irregular surfaces. Superior adhesion to metal, rubber, glass and plastic. Removes cleanly in one piece with no residue. Great paint lines.
501+	Purple	High Temperature Rubber	Crepe Paper Treated with a Heat Resistant Saturant	7.3 (0.19)	37 (40)	31 (543)	11	300 (149)	30	—	—	Exceptionally conformable to irregular surfaces. Superior adhesion to metal, rubber, glass and plastic. Removes cleanly in one piece with no residue. Great paint lines.
General Purpose Masking Tapes												
200	Tan	Rubber	Crepe Paper	4.4 (0.11)	25 (27)	19 (333)	8	200 (93)	30	—	201+	Good instant adhesion.
202	Tan	Rubber	Crepe Paper	6.3 (0.16)	37 (41)	27 (472)	8	250 (121)	30	ASTM D 6123; D 6123M-97	401+	Good holding power.
203	Beige	Rubber	Crepe Paper	4.7 (0.12)	28 (31)	22 (385)	8	200 (93)	30	—	201+	General purpose masking tape for holding, bundling, sealing and more.
213	Tan	Rubber	Crepe Paper	6.0 (0.15)	34 (37)	27 (480)	10	350 (177)	30	ASTM D 6123; D 6123M-97	—	Good on anodized aluminum.
214	Tan	Rubber	Crepe Paper	5.8 (0.15)	29 (32)	27 (480)	10	350 (177)	60	ASTM D 6123; D 6123M-97	—	Stain resistant.
225	Silver	Rubber	Crepe Paper	5.8 (0.15)	33 (36)	21 (368)	9	200 (93)	30	—	—	Outdoor use.
226	Black	Rubber	Polyethylene/ Crepe Paper	10.6 (0.27)	38 (42)	34 (595)	11	225 (107)	30	—	—	Outdoor use.
231/231A	Tan	Rubber	Crepe Paper	7.6 (0.19)	38 (41)	28 (490)	10	300 (149)	30	ASTM D 6123; D 6123M-97	501+	Best all-purpose paint masking tape.
232	Tan	Rubber	Crepe Paper	6.3 (0.16)	37 (41)	27 (472)	8	250 (121)	30	—	401+	Good paint lines.
234	Tan	Rubber	Crepe Paper	5.9 (0.15)	34 (37)	27 (472)	8	250 (121)	30	ASTM D 6123; D 6123M-97	401+	Excellent controlled unwind.
2214	Tan	Rubber	Crepe Paper	5.4 (0.14)	22 (24)	23 (403)	10	200 (93)	30	—	101+	Good for holding and bundling.
2307	Tan	Rubber	Crepe Paper	5.2 (0.13)	28 (31)	23 (403)	8	200 (93)	30	—	301+	Solvent-free construction, non-critical paint masking.
2308	Tan	Rubber	Crepe Paper	5.3 (0.13)	35 (38)	22 (385)	10	250 (121)	30	—	301+	Good transfer resistance.
2364	Tan	Rubber	Crepe Paper	6.5 (0.17)	31 (34)	24 (427)	10	300 (149)	30	ASTM D 6123; D 6123M-97	501+	High temperature, crepe paper masking tape for general masking application. Good holding power.
2380	Tan	Rubber	Crepe Paper	7.2 (0.18)	39 (43)	28 (498)	10	325 (163)	30	ASTM D 6123; D 6123M-97	501+	High temperature. Best holding to widest variety of surfaces.
2393	Tan	Rubber	Crepe Paper	7.6 (0.19)	32 (36)	28 (490)	11	325 (163)	30	ASTM D 6123; D 6123M-97	—	Smooth, heavy duty, high temperature masking tape.
2510	Black	Rubber	Crepe Paper	5.6 (0.14)	35 (37)	20 (350)	9	200 (93)	60	ASTM D 6123; D 6123M-97	—	General purpose masking tape for holding, bundling, sealing and general paint masking where a dark colored tape is required.
2693	Tan	Synthetic Rubber	Crepe Paper	7.9 (0.20)	40 (44)	29 (515)	10	325 (163)	30	ASTM D 6123; D 6123M-97	501+	Very aggressive holding; excellent for multi-bake paint cycles.
5501A	Tan	High Temperature Rubber	Crepe Paper Treated with a Heat Resistant Saturant	7.3 (0.19)	36 (39)	26 (455)	10	300 (149)	30	ASTM D 6123	501+	Exceptionally conformable to irregular surfaces. Superior adhesion to metal, rubber, glass and plastic. Removes cleanly in one piece with no residue. Great paint lines.

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

3M™ Duct Tapes and Cloth Tapes

Dependability and Versatility for Bundling, Sealing, Reinforcing and More

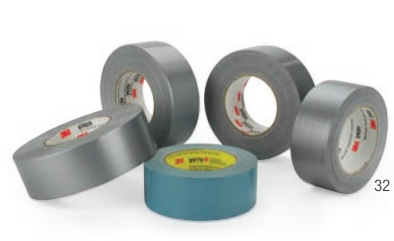
This family of rugged cloth and duct tapes adheres to most surfaces for applications ranging from bundling to moisture proofing, sealing to splicing, reinforcing to hanging poly drapes. Features include:

- Hand tearable
- High tensile strength
- Conformability

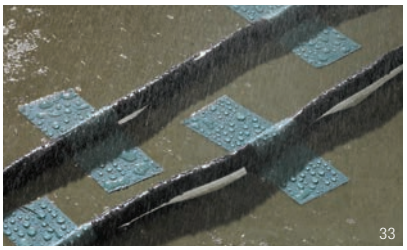
Latest innovation in the line — clean removal plus long life indoors and out

The line includes 3M™ Performance Plus Duct Tape 8979 and nuclear grade 8979N. The best performing 3M™ Duct Tapes under the sun:

- Remove cleanly for up to six months from most opaque surfaces even after exposure to sun and outdoor weathering
- Stay on for up to one year without deterioration
- Save time and hassle of removing sticky or dried-on residue
- Strong waterproof backing resists wear, abrasion, moisture, and weathering



3M™ Duct Tapes are available in a variety of colors for color coding. A range of widths provides choices in coverage from 24mm to 22 inches.



Waterproof backing of 3M™ Performance Plus Duct Tape 8979 resists moisture and rain for up to a year.

Write on the surfaces of many 3M™ Duct Tapes with pen or marker to leave a reminder or mark and identify works-in-progress, components, items bundled and more.

For a tight seal in many containment situations, 3M™ Performance Plus Duct Tape 8979 attaches heavy poly draping, closes cuffs, and then removes cleanly when the job is finished.

Strong backing of 3M™ Outdoor Masking and Stucco Tape 5959 pulls through stucco, EIFS and other heavy coatings in one piece.

For bundling a wide variety of items, 3M™ Duct Tapes with natural rubber adhesive and high tensile strength backings adhere on contact and hold securely.

3M™ Duct Tapes and Cloth Tapes

Product Number	Color	Adhesive Type	Backing Material	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)	Meets Specifications	Comments
Based on ASTM Test Method:				D-3652	D-3330	D-3759	D-3759			
Clean Removal Duct Tapes										
8979	Blue, Black, Olive	Rubber	Polyethylene Over Cloth Scrim	12.1 (0.31)	48 (53)	36 (630)	19	200 (93)	UL 723/ ASTM E84	Up to six months clean removal from most opaque surfaces indoors and outdoors.
8979N	Red, Blue	Rubber	Polyethylene Over Cloth Scrim	12.1 (0.31)	48 (53)	36 (630)	19	200 (93)	UL 723/ ASTM E84/ MIL-STD-2041D	Same features as 8979, plus low halogen and sulfur.
5959	Red	Rubber	Polyethylene Over Cloth Scrim	12.0 (0.30)	53 (58)	35 (613)	21	200 (93)	UL 723/ ASTM E84	High tensile strength backing protects against stucco, EIFS and other heavy coatings. 3 months outdoors.
5903	Red	Synthetic Rubber	Polyethylene	7.5 (0.19)	79 (87)	21 (368)	72	173 (78)	—	UV and weather resistant for outdoor masking, holding, patching, bundling, marking and more. 30 day removal.
Professional Grade Duct Tapes										
DT11	Silver, Black	Natural Rubber	Polyethylene Film Over Cloth Scrim	11.0 (0.27)	58 (63.4)	35 (613)	12	200 (93)	—	Provides easy tear and good conformability. Great for holding, sealing and packaging.
2979	Silver	Synthetic Rubber	Polyethylene Over Cloth Scrim	7.4 (0.29)	79 (86)	24 (430)	21	200 (93)	—	Use for a variety of duct tape applications.
3900	Black, Blue, Olive, Red, Silver, White, Yellow	Rubber	Polyethylene Over Cloth Scrim	7.6 (0.19)	53 (58)	28 (490)	19	200 (93)	—	General purpose duct tape, temporary repairs, color-coding.
3939	Silver	Rubber	Polyethylene Over Cloth Scrim	8.6 (0.22)	55 (60)	25 (438)	17	200 (93)	UL 723/ ASTM E84	Use for demanding duct tape applications.
3979	Silver	Synthetic Rubber	Polyethylene Over Cloth Scrim	7.9 (0.31)	68 (74)	32 (560)	26	200 (93)	—	Use for a variety of duct tape applications.
6969	Olive, Silver, Black	Rubber	Polyethylene Over Cloth Scrim	10.0 (0.25)	51 (56)	34 (595)	16	200 (93)	UL 723/ ASTM E84	Industrial grade duct tape, thick adhesive layer sticks to rough surfaces.
Utility Duct Tapes										
DT8	Silver	Synthetic Rubber	Polyethylene Film Over Cloth Scrim	8.0 (0.2)	100 (109.4)	31 (542)	21	200 (93)	—	Provides easy tear and good conformability. Great for sticking to metal, glass, plastic and sealed concrete.
3903	Black, Blue, Gray, Green, Red, White, Yellow	Rubber	Vinyl	6.5 (0.16)	15.4 (16.8)	12.6 (220)	134	200 (93)	—	General purpose tape for color coding and marking. Embossed vinyl backing.
2929	Silver	Rubber	Polyethylene Over Cloth Scrim	5.5 (0.14)	45 (49)	19 (333)	14	200 (93)	—	Utility grade duct tape for temporary repairs, sealing, holding and marking.
1900	Silver	Synthetic Rubber	Polyethylene Over Cloth Scrim	5.8 (0.15)	62 (68)	19 (333)	15	200 (93)	—	Economical choice for sealing, holding and marking.
Specialized High Strength Duct Tapes										
DT17	Black	Natural Rubber	Polyethylene Film Over Cloth Scrim	17.0 (0.43)	69 (75.5)	41 (718)	13	150 (65)	—	Provides easy tear and good conformability. Great for seaming applications, repairing bottom boards and protecting various surfaces.
390	Silver, Olive	Rubber	Polyethylene Over Cloth Scrim	11.7 (0.30)	114 (125)	48 (841)	12	200 (93)	—	Highest tensile for most demanding jobs, olive for military duct tape requirements.
393	Silver	Rubber	Polyethylene Over Cloth Scrim	12.0 (0.30)	95 (104)	36 (632)	8	200 (93)	—	High adhesion, easy tear, for moisture proofing and insulation sealing.
6910	Silver, Black	Rubber	Vinyl Coated Cloth	12.0 (0.30)	45 (49)	45 (788)	5	200 (93)	—	Excellent grip/gaffer's tape. Matte finish tape for low light reflectance.
GT1/GT2/ GT3	White, Grey, Black, Brown, Blue, Burgundy, Green, Purple, Tan, Red, Teal, Yellow, Electric Blue, Olive Drab, FL Blue, FL Green, FL Orange, FL Yellow, FL Pink	Synthetic Rubber	Cotton Cloth	11.0 (0.27)	72 (78.8)	56 (980)	6	200 (93)	—	High strength and conformable to irregular surfaces. Good for taping down cords and wires, bundling, holding, splicing and marking.

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

Scotch® Flatback Tapes

With a core capability of coating technology, 3M offers 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

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.
256	White, Red, Green	Rubber	Flatback Paper	6.7 (0.17)	25 (27)	20 (350)	5	200 (93)	60	ASTM D 6123; D 6123M-97	Printable, accepts marking inks.
2515*	Tan	Rubber	Kraft Paper	6.9 (0.18)	58 (63)	40 (700)	9	200 (93)	30	—	General purpose splicing, holding and bundling applications.
2517	Medium Brown	Rubber	Kraft Paper	6.5 (0.15)	78 (85)	35 (543)	2	300 (149)	30	ASTM D 6123; D 6123M-97	Excellent splicing, holding and bundling applications.
2519**	Brown	Rubber	Unblended Kraft Paper	7.1 (0.18)	47 (51)	47 (823)	8	200 (93)		ASTM D 6123; D 6123M-97	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)	60	—	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).

3M™ Masking Films

Product Number	Color	Adhesive Type	Backing Material	Total Thickness mils (mm)	Tensile Strength lb/in (N/100 mm)	Elongation at Break %	Maximum Operating Temperature °F (°C)	Time at Maximum Temperature (mins.)	Comments
Based on ASTM Test Method:				D-3652	D-3759	D-3759			
7260M	Translucent	n/a	Polypropylene	1.8 (0.04)	5 (88)	700	315 (157)	60	Designed for masking cars and light trucks during OEM painting and for industrial paint masking applications such as truck, bus, RV heavy equipment and aircraft. Large area bags and sheets.
7300	Translucent	n/a	Polypropylene	3.4 (0.09)	7.4 (130)	680	310 (155)	60	High performance, high temperature masking film that is soft flexing for good drape and conformability. Single wound slit rolls in a variety of widths.

Protection where you need it.

Innovative 3M tapes and films can protect surfaces by resisting abrasion, UV, heat and punctures. Our surface protection products adhere and conform to numerous surfaces for maximum protection, and then remove easily. When your products need protection, you can trust 3M for practical solutions.

3M™ Clean-View Pads

Reliable Protection Against Paint Overspray

This clear multi-sheeted adhesive system protects paint booth windows and light fixtures from overspray. You reduce the labor expense, downtime, and amount of chemicals used for cleanup.

- Clear polyethylene keeps paint out and lets light through to help brighten the work area
- Individually tabbed sheets for easy removal from the pad
- Eliminates re-application of single layer protection films
- Acrylic adhesive system for adhesion to glass surfaces

Reliable protection is easy with 3M™ Clean-View Pads. Simply remove the clear protective liner to expose adhesive. Adhere the top adhesive edge to a dry, clean surface and squeegee over the bond area. When the sheet becomes contaminated, peel away to reveal a fresh, ready-to-use sheet.

For large and small painting operations, 3M™ Clean-View Pads protect windows and light fixtures from overspray.

3M™ Clean-View Pads help reduce the cost, downtime, and chemicals used in conventional cleanup.

Product Number	Quantity	Sizes Inches (mm)	Pad/Adhesive	Color	Total Layer Thickness mils (mm)	Backing Layer Thickness mils (mm)	Adhesive Layer Thickness mils (mm)	Adhesion to Steel oz./in. (N/100 mm)	Comments
5850	20 sheets/pad 6 pads/case	13 x 51 (330 x 1295)	Polyethylene/ Acrylic	Clear	1.83 (0.05)	1.2 (0.03)	0.63 (0.02)	8.0 (9.0)	Ideal for paint booth operation. Protects from paint overspray.
	20 sheets/pad 6 pads/case	18 x 46 (457 x 1168)	Polyethylene/ Acrylic	Clear	1.83 (0.05)	1.2 (0.03)	0.63 (0.02)	8.0 (9.0)	
	20 sheets/pad 6 pads/case	24 x 50 (609 x 1270)	Polyethylene/ Acrylic	Clear	1.83 (0.05)	1.2 (0.03)	0.63 (0.02)	8.0 (9.0)	
	20 sheets/pad 6 pads/case	24 x 36 (609 x 914)	Polyethylene/ Acrylic	Clear	1.83 (0.05)	1.2 (0.03)	0.63 (0.02)	8.0 (9.0)	

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3M™ Scotchgard™ Multi-Layer Protective Film

Easy, Cost-Effective Graffiti Removal

Transit authorities can spend millions annually to maintain and repair interior windows and glass. Specialized labor for replacing glass and material costs add up quickly.

On interior windows you can simply peel away graffiti with 3M™ Scotchgard™ Film.

Choices with **multi-layer protection** save you time and money while maintaining windows that are free from scratches, graffiti and acid-etched marks. When one layer is defaced, simply peel it away to refresh the window quickly and easily.

- Peels in minutes to return surfaces to service quickly
- Clean removal of each layer with no adhesive residue
- Protection from acid, scratches, permanent marker and hard water stains
- Minimal training to install
- Optically transparent view for glass-like clarity

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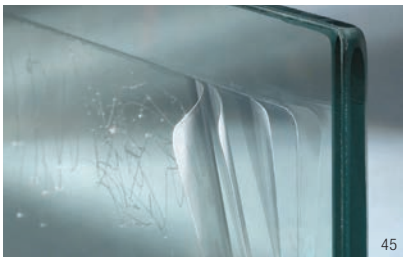
Easy-to-apply 3M™ Scotchgard™ Multi-Layer Protective Film adheres to any flat glass that is free of dirt, debris and oils. Four layers are as clear as glass to see through.



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With 3M™ Scotchgard™ Multi-Layer Protective Film on the inside of public transportation windows, vandals deface one layer of four protective layers not the glass. The defaced layer is simply and cleanly removed to reveal a new layer of protection. 3M optimized adhesives provide long-term adhesion and clean, easy removal between each layer and the last layer from the glass.

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Simply pick and lift the corner, then peel off the defaced sheet.

	3M™ Scotchgard™ Multi-Layer Protective Film 1004 For clean removal on surfaces such as glass, mirrors, polished stainless steel and other smooth surfaces.	3M™ Scotchgard™ Multi-Layer Protective Film 1004MS Series More aggressive adhesive system for polycarbonates, acrylics, brushed stainless steel and other slightly porous surfaces.	
Product #	**1004**	**1004MS**	**1001MS**
Layers/Sheet	4	4	1
Quantity	20 sheets/case	20 sheets/case and 200 sheets/case	1 roll/case
Size	60" x 72" or 60" x 60" (Custom cut sizes available based on volume)	60" x 72" or 60" x 60" (Custom cut sizes available based on volume)	58.5" x 100 ft. roll

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3M™ Sandblast Stencil Products and Impact Stripping Tapes

Thick, Durable Rubber Backing for Demanding Surface Protection

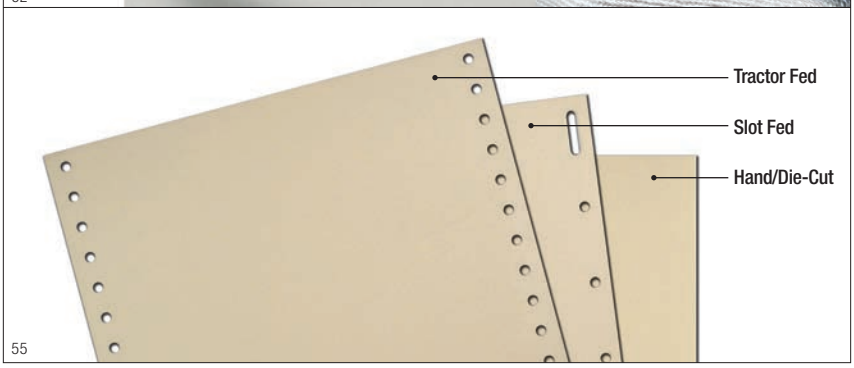
Combining 34–82 mil thick rubber backing with aggressive pressure sensitive adhesive, these products meet the rigors of two tough masking applications:

3M™ Sandblast Stencil Products

- Rubber backing thickness ranging from 32–40 mils withstand the heavy blasting used to create crisper, deeper images in stone, wood, and other surfaces
- Uniform backing thickness helps ensure efficient plotter cutting
- Clean, visible cut marks reduce picking and weeding time
- Adhesive adheres to numerous surfaces and removes cleanly
- Advanced rubber backing formulation prevents stretching and design distortion

3M™ Impact Stripping Tapes

- Choice of rubber backing for surface protection during media stripping processes



For cost-effective production and consistent professional results, 3M Sandblast Stencil products are available with single or double liners for friction, slot and tractor fed plotters as well as hand and die-cutting. Single liners maintain design integrity with either computer or stencil press equipment. Double liners provide support for "islands" eliminating the need for application tape.

Uniform stencil thickness and quality hole punch allow smooth and productive design cutting.

For clean, intricate designs, cut marks are clean and visible for easy and precise picking and weeding.

Easy to see yellow liner, enhances the monument process by providing more precise picking power for greater productivity, blasting accuracy and liner residue cleanup. The advantage of yellow versus a clear liner is especially important when working with intricate details.

3M™ Performance Plus Duct Tape 8979 is ideal for field blasting to help protect surrounding granite surface from blasting impact and rebound damage. Aggressive adhesive stays in place yet removes cleanly without residue.

Abrasion-resistant rubber backing and acrylic adhesive of 3M™ Impact Stripping Tapes protect surfaces during plastic media blasting.

3M™ Sandblast Stencil Products and Impact Stripping Tapes

Product Number	Color	Total Thickness (mils)	Adhesive Type	Release Liner Thickness	Release Liner Type	Secondary Liner Thickness	Secondary Liner Type	Product Formats: Gerber Compatible (Slot Fed)	Product Formats: IBM Compatible (Tractor Fed)	Product Formats: Friction Fed and/or Flatbed	Product Formats: Hand-Cut and/or Die-Cut	Adhesion Level	Comments
Double Liner													
519Y	Tan	44	Rubber	2.0	Polypropylene	1.5	Polyester			■	■	Medium	Yellow, translucent polyester inner liner, white polypropylene outer liner.
519YS	Tan	44	Rubber	2.0	Polypropylene	1.5	Polyester	■				Medium	
519YT	Tan	44	Rubber	2.0	Polypropylene	1.5	Polyester		■			Medium	
519YP2	Tan	45	Rubber	2.0	Polyester	1.5	Polyester			■	■	High	Yellow, translucent polyester inner liner. Extra thick, translucent polyester outer liner. Highest adhesion level for double linered products. Wide format available.
519YP2S	Tan	45	Rubber	2.0	Polyester	1.5	Polyester	■				High	
519YP2T	Tan	45	Rubber	2.0	Polyester	1.5	Polyester		■			High	
519YP	Tan	45	Rubber	4.0	Polyester	1.5	Polyester			■		Medium	Translucent, polyester inner liner. Extra thick, translucent polyester outer liner. Wide format available.
519YPS	Tan	45	Rubber	4.0	Polyester	1.5	Polyester	■				Medium	
519YPT	Tan	45	Rubber	4.0	Polyester	1.5	Polyester		■			Medium	
Single Liner													
507	Green	43	Rubber	2.0	Polyethylene	—	—			■	■	Low	Green, high release liner. Butter cut. Ideal for letter press operations.
510	Green	43	Rubber	2.0	Polyester	—	—			■	■	Low/Med	Translucent, easy liner release. Use on wood and painted surfaces.
520	Tan	43	Rubber	2.0	Polyester	—	—			■	■	Med/High	Translucent, high liner release. Best blast resistance for single liner products.
520S	Tan	43	Rubber	2.0	Polyester	—	—	■				Med/High	
520T	Tan	43	Rubber	2.0	Polyester	—	—		■			Med/High	
520ETL	Tan	43	Rubber	4.0	Polyester	—	—			■	■	Med/High	Extra thick, translucent liner.
1532	Green	34	Rubber	4.0	Polyester	—	—			■	■	Medium	Extra thick, translucent, high liner release. Highest adhesion for single liner products. Excellent for intricate designs. Conformable for use on irregular surfaces.
1532S	Green	34	Rubber	4.0	Polyester	—	—	■				Medium	
1532T	Green	34	Rubber	4.0	Polyester	—	—		■			Medium	

Product Number	Backing Material	Color	Adhesive Type	Total Thickness mils (mm)	Adhesion to Steel oz./in. (N/100 mm)	Elongation at Break %	Liner Type	Comments
ASTM Test Method				D-3652	D-3330	D-3759		
Impact Stripping Tapes								
500	Rubber	Green	Acrylic	36 (0.9)	29 (31)	85	Paper	Good for small lettering. Acrylic adhesive ideal for use during plastic media blasting.
528	Rubber	Tan	Acrylic	82 (2.1)	29 (31)	145	Paper	Thickest backed sandblast stencil product.

Product Number	Coating Base	Color	Consistency	Available Sizes	Comments
Fillers					
2	Rubber	Light Beige	Syrupy	Quart, Gallon	Designed for smooth and polished surfaces. More aggressive than filler #3.
3	Rubber	Light Beige	5 times more viscous than filler #2	Gallon	Typically used on axed or frosted surfaces.

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High strength. Super performance.

Bundling, reinforcing and securing solutions with reliable holding power.

When you need a tape as strong as your reputation, you can count on 3M's consistently reliable, market-leading high strength tapes that are engineered to meet virtually any strapping, bundling or reinforcing challenge.

Scotch® and Tartan™ High Strength Tapes

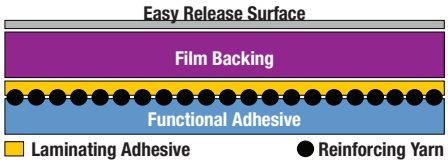
For Packaging and Non-Packaging Applications

Selection: Our range of high strength tape constructions can help balance your product performance and budget needs.

Save time and money: Let 3M's application and technical experts, backed by a robust lab testing capability, help match the right tape to your performance requirements.

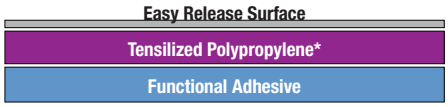
Peace of mind: Scotch® and Tartan™ brands are among the most innovative and trusted in the world. Our world-class tape manufacturing facilities churn out consistent and reliable products, roll after roll.

Filament Reinforced Tape



Reinforced Strapping Tape

Tensilized Polypropylene Tape



*A pre-stretched film to orient the backing for strength

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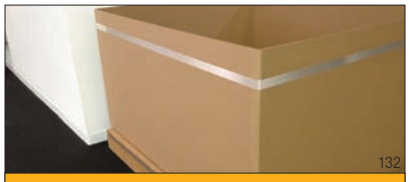
Streamlined Selection for Application Success

HOLDING
Up to **120** lbs./in.

Pallet Unitizing

Bundling for Shipping and Handling



Bulk Bin or Skid Box Banding

Product	Description	Tensile Strength*
8934	Glass yarn reinforced	100 lbs./in.
860	Tensilized polypropylene	110 lbs./in.
862	Reinforced strapping tape for strength AND high tape clarity	120 lbs./in.

BUNDLING
Up to **270** lbs./in.

Carpet Bundling

PVC Pipe Bundling

Rebar Bundling

Product	Description	Tensile Strength*
897	Glass yarn reinforced	170 lbs./in.
893	Glass yarn reinforced	300 lbs./in.
880	Polyester yarn reinforced	270 lbs./in.

CLOSING
Up to **600** lbs./in.

L- and U-Clip Closures

Stabilizing Loose Parts

Metal Coil Tabbing

Product	Description	Tensile Strength*
898	Glass yarn reinforced, first choice for L- or U-Clip closure of non-RSC boxes	380 lbs./in.
890MSR	Glass yarn reinforced, modified synthetic rubber adhesive for oily surfaces	600 lbs./in.
8899HP	Tensilized polypropylene, clean removal	170 lbs./in.

*ASTM Test Method D-3759

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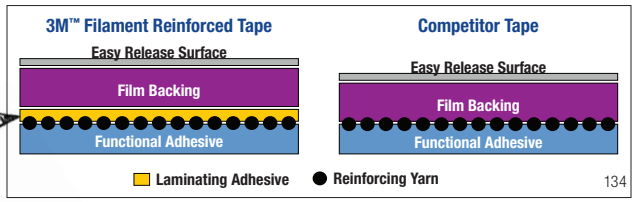
Scotch® and Tartan™ High Strength Filament Tapes

The World's Go-To Source for Filament Tapes Since 1946



3M's laminating adhesive layer provides an extra measure of protection against tape delamination to help ensure tape strength and performance throughout the application. With 3M, you get more consistency, reliability and confidence.

Scotch® High Strength Filament Tape 898

Tartan™ High Strength Filament Tape 8934

Scotch® High Strength Filament Tape 890MSR (Black)

Scotch® High Strength Filament Tape 880

Technologies Matched to the Applications

Choice of Adhesives

- **SR (Synthetic Rubber):** Versatile, good adhesion to many surfaces
- **MSR (Modified Synthetic Rubber):** Designed for adhesion to oily surfaces
- **RCT:** Designed for adhesion to recycled corrugate and other hard-to-stick-to-surfaces

Choice of Backings

- **Polypropylene:** Good abrasion, moisture and scuff resistance; excellent conformability
- **Polyester:** Tough, strong backing; handles and dispenses easily

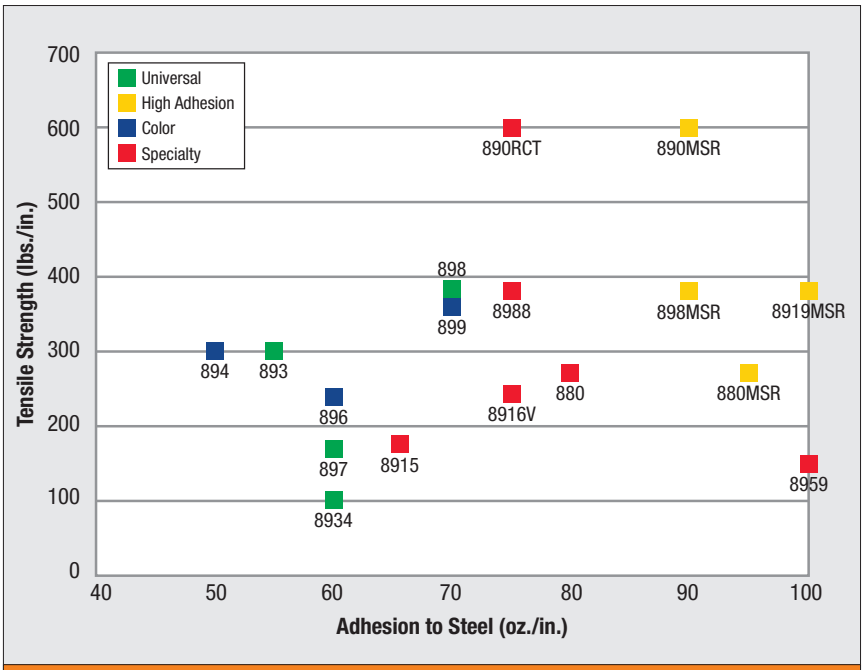
Scotch® Bi-Directional Filament Tape 8959

Bi-Directional Filament

- Superior cut and puncture resistance
- Extra box or package security against pilferage
- Highest adhesion in our high strength tape offering

Choice of Filament Types

- **Fiberglass:** Higher tensile strength for security and stretch resistance for stability
- **Polyester:** Higher elongation for better shock absorption and impact resistant



Performance Map — Filament Reinforced Tapes

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Scotch® and Tartan™ High Strength Filament Tapes

Product	Tensile Strength lb/in (N/100 mm)	Backing Material	Reinforcement	Total Thickness mils (mm)	Adhesive Type	Adhesion Strength oz/in (N/100 mm)	Elongation (%)	Backing Color	Typical Use and Comments
ASTM Test Method	D-3759			D-3652		D-3330			
Universal Filament									
898	380 (6655)	Polypropylene	Fiberglass	6.6 (0.168)	Synthetic Rubber (SR)	70 (77)	5	Clear	L-Clip box closure, General bundling and reinforcing; Very high strength, Versatile, Good adhesion to many substrates
893	300 (5254)	Polypropylene	Fiberglass	6.0 (0.152)	Synthetic Rubber (SR)	55 (60)	4.5	Clear	Box closing, palletizing, strapping, bundling and reinforcing; High strength
897	170 (2977)	Polypropylene	Fiberglass	6.0 (0.152)	Synthetic Rubber (SR)	60 (65)	3	Clear	Box closing, palletizing, strapping, bundling and reinforcing; Medium strength
8934*	100 (1751)	Polypropylene	Fiberglass	4.0 (0.102)	Synthetic Rubber (SR)	60 (65)	3	Clear	Box closing, palletizing, strapping, bundling and reinforcing; Utility
Colored Filament									
899	360 (6305)	Polypropylene	Fiberglass	6.6 (0.168)	Synthetic Rubber (SR)	70 (77)	5	Red	General bundling and reinforcing; Red color for increased visible and detection
894	300 (5254)	Polypropylene	Fiberglass	6.0 (0.152)	Synthetic Rubber (SR)	50 (55)	4.5	Black	Pipe bundling and other outdoor applications; High UV resistance
896	240 (4203)	Polypropylene	Fiberglass	5.4 (0.137)	Synthetic Rubber (SR)	60 (66)	3	White	Heavy box closure, general bundling and reinforcing; White boxes, Color coding
High Adhesion Filament									
890MSR	600 (10500)	Polyester	Fiberglass	8.0 (0.203)	Modified Synthetic Rubber (MSR)	80 (88)	3	Clear/ Black	Metal coil closure; Good adhesion to oily surfaces
898MSR	380 (6655)	Polyester	Fiberglass	6.0 (0.152)	Modified Synthetic Rubber (MSR)	90 (99)	3	Clear	Metal coil closure; Good adhesion to oily surfaces
8919MSR	380 (6655)	Polyester	Fiberglass	7.0 (0.180)	Modified Synthetic Rubber (MSR)	100 (109)	3	Clear	Metal coil closure; Good adhesion to oily surfaces, Thicker backing for improved handling
880MSR	270 (4728)	Polyester	Polyester	7.7 (0.196)	Modified Synthetic Rubber (MSR)	95 (100)	19	Clear	Metal coil closure; Good adhesion to oily surfaces, High cut resistance
Specialty Filament									
890RCT	600 (10500)	Polyester	Fiberglass	8.0 (0.203)	Synthetic Rubber (RCT)	75 (82)	3	Clear	Basiloid, Heavy appliance lifting; Good adhesion to recycled corrugate
8988	380 (6655)	Polypropylene	Fiberglass	6.9 (0.175)	Synthetic Rubber (RCT)	75 (82)	3	Clear	L-Clip box closure; Good adhesion to recycled corrugate
880	270 (4728)	Polypropylene	Polyester	7.7 (0.196)	Synthetic Rubber (SR)	80 (88)	19	Clear/ Red	Pipe and conduit, bundling and color coding; Excellent shock resistance
8916V	210 (3678)	Polypropylene	Fiberglass	6.8 (0.172)	Synthetic Rubber (SR)	75 (82)	3	Clear/ Blue	Appliance, Secure and stabilize parts; Clean removal, Thicker backing
8915	170 (2977)	Polypropylene	Fiberglass	6.0 (0.150)	Synthetic Rubber (SR)	65 (71)	3	Clear	Appliance, Secure and stabilize parts; Clean removal
8959	150 (2627)	Polypropylene	Bi-Directional Fiberglass	5.7 (0.145)	Synthetic Rubber (SR)	100 (109)	6	Clear	Heavy box closure, Splicing, Metal parts bundling; Bi-directional filament for excellent cut and puncture resistance; High adhesion

*Tartan™ branded.

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

Scotch® and Tartan™ Tensilized Polypropylene Tapes

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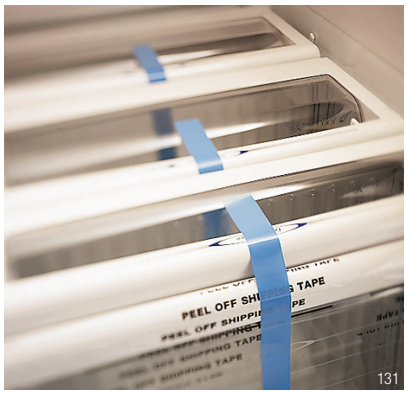
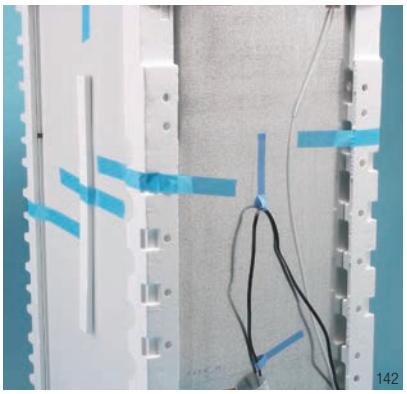
Clean Removal

- MOPP (monoaxially-oriented polypropylene) tape construction
- High strength tapes that hold firm, remove cleanly with no adhesive residue
- Great adhesion to vinyl and other plastics, glass, painted and unpainted metals, or powder coated
- Holds shelving, racks, doors, panels, cords, other parts in place, from plant to install


131

Bundle plastic, metal, stainless steel, glass, powdercoat or other coated electronic, appliance or automotive parts during assembly and transportation.


142

Hold packaging materials, spacers, corner boards, power cords and other hard-to-manage parts firmly in place.

143

Appliance racks, shelves, drawers and doors can be secured, from plant to install, then removed cleanly with no adhesive residue.

Product	Tensile Strength lb/in (N/100 mm)	Backing Material	Reinforcement	Total Thickness mils (mm)	Adhesive Type	Adhesion Strength oz/in (N/100 mm)	Elongation (%)	Color	Typical Use and Comments
ASTM Test Method	D-3759			D-3652		D-3330			
8899HP	170 (2977)	Polypropylene	None	4.8 (0.12)	Synthetic Rubber	55 (60)	30	Blue/ Ivory/ White	Secure and stabilize parts, clean removal and high/low temperature performance
8898	160 (2802)	Polypropylene	None	4.6 (0.12)	Synthetic Rubber	75 (82)	32	Blue/ Ivory	Appliance, Secure and stabilize parts; Clean removal, High adhesion
860*	110 (1926)	Polypropylene	None	2.8 (.071)	Synthetic Rubber	45 (49)	33	Black	General bundling and strapping; Utility grade for pallet unitizing

*Tartan™ branded.

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

Scotch® Reinforced Strapping Tapes

The CLEAREST High-Strength Tape Available

125

Why 3M?

- **Strong:** Polypropylene backing extruded to create monofilament "ribs"
- **Secure:** Resists nicking, cutting, tearing or puncturing during handling
- **Clear:** No filaments to obstruct graphics

Scotch® Reinforced Strapping Tape 8651

Scotch® Reinforced Strapping Tape 862

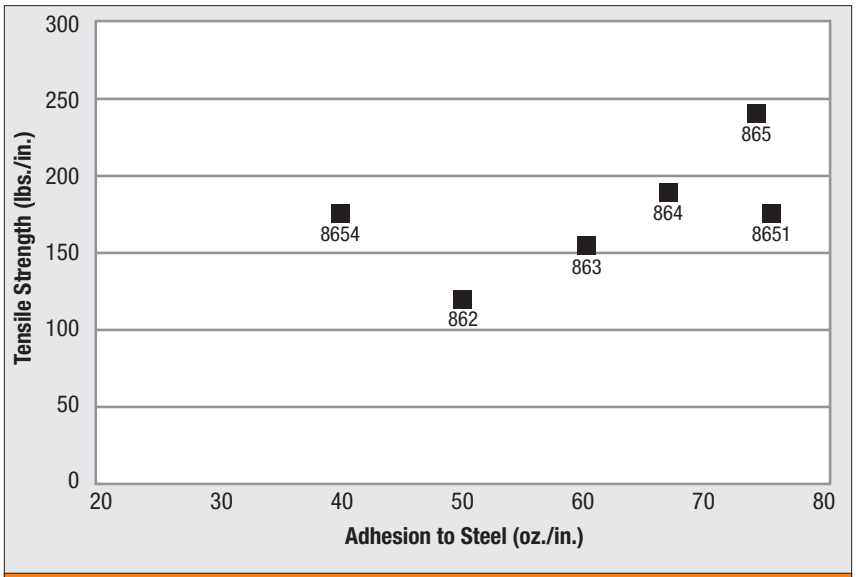
Reinforced Strapping Tape

Reinforced Gummed Paper Tape

Tensilized Polypropylene Tape

Staples

Filament Tape



Performance Map — Reinforced Strapping Tapes

151

Product	Clarity to Showcase Marketing Content	Barcode Scan-able	Resists Nicks	Resists Abrasion	Does it Scratch?
Reinforced Strapping Tape	Yes	Yes	Yes	Yes	No
Reinforced Gummed Paper Tape	No	No	Yes	Somewhat	No
Staples	Somewhat	No	n/a	n/a	Yes
Filament Tape	Somewhat	No	Yes	Yes	No
Tensilized Polypropylene Tape	No	No	No	Yes	No

Product	Tensile Strength lb/in (N/100 mm)	Backing Material	Reinforcement	Total Thickness mils (mm)	Adhesive Type	Adhesion Strength oz/in (N/100 mm)	Elongation (%)	Color	Typical Use and Comments
ASTM Test Method	D-3759			D-3652		D-3330			
865	240 (4200)	Polypropylene	Polypropylene	6.4 (0.163)	Synthetic Rubber	74 (80)	30	Clear	Palletizing; L-Clip box closure; High clarity for use on highly graphic boxes; Bar code readable
864	190 (3325)	Polypropylene	Polypropylene	5.6 (0.142)	Synthetic Rubber	67 (73)	30	Clear	Palletizing; L-Clip box closure; High clarity for use on highly graphic boxes; Bar code readable
8651	175 (3064)	Polypropylene	Polypropylene	5.6 (0.142)	Synthetic Rubber	75 (82)	30	Clear	Palletizing; L-Clip box closure; High clarity for use on highly graphic boxes; Bar code readable
863	155 (2713)	Polypropylene	Polypropylene	5.0 (0.127)	Synthetic Rubber	60 (65)	30	Clear	Palletizing; L-Clip box closure; High clarity for use on highly graphic boxes; Bar code readable
862	120 (2100)	Polypropylene	Polypropylene	4.6 (0.117)	Synthetic Rubber	50 (54)	30	Clear/ Black	Pipe Bundling; Black for UV resistance

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

Scotch® Stretchable Tapes

Tape That Gets Stronger As It's S-T-R-E-T-C-H-E-D

- Adhesive "de-tackifies" when stretched: holds in place but won't damage carton graphics, shipping instructions or other pallet information when removed
- 650% stretch factor: 55-meter roll yields 357 meters of tape
- Creates ventilated load for shipment of time- and temperature-sensitive goods
- More stability — less waste

152

153

High yield! One 55-meter roll can unitize 60 or more A- or B-style pallets for intra-plant movement.

154

"X"-pattern can contain loads for shipment anywhere.

155

Less waste! Compare the 3M™ Stretchable Tape waste "ball" on the left versus the size of typical stretch film waste on the right.

156

157

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Scotch® Stretchable Tape Dispenser H38

Hand-held dispenser with tensioning/stretching brake for use with Scotch® Stretchable Tapes.

Product	Tensile Strength lb/in (N/100 mm)	Backing Material	Total Thickness mils (mm)	Adhesive Type	Adhesion Strength oz/in (N/100 mm)	Elongation (%)	Color	Comments
ASTM Test Method	D-3759		D-3652		D-3330			
8886	28 (490)	Polyethylene	6.6 (0.168)	Synthetic Rubber	65 (71)	720	Clear	Load containment
8884	20 (350)	Polyethylene	5.0 (0.127)	Synthetic Rubber	70 (77)	710	Clear	Palletizing for intra-plant movement; Load containment; For hand application using Scotch® Stretchable Tape Dispenser H38

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

Scotch® Tear Strip Tapes

Easy Access With a Simple Pull

For easy opening of packages ranging from overnight envelopes to corrugated fiberboard, the recipient simply grabs and pulls the exposed end of a Scotch® Tear Strip Tape.

- Tensilized polypropylene tears through paper board and light to heavy weight fiber board with high pull-rate success
- Eliminates knives or other sharp edges from opening envelopes and panels

For overnight courier envelopes and mail order boxes, Scotch® Tear Strip Tape 8621 provides superior resistance to edge nicking and tearing compared to other film tear strip tapes without reinforcement.

Scotch® Tear Strip Tape 8626 with superior tensile strength tears through medium to heavy weight corrugated fiberboard as used in household detergent boxes.

Product	Backing Material	Reinforcement	Adhesive Type	Tensile Strength lb/in (N/100 mm)	Total Thickness mils (mm)	Adhesion Strength oz/in (N/100 mm)	Elongation (%)	Color	Comments
ASTM Test Method				D-3759	D-3652	D-3330			
8624	Polypropylene	None	Synthetic Rubber	160 (2802)	4.5 (0.114)	65 (71)	30	Blue	Medium-strength tear strip for light- to medium-weight fiberboard packaging materials

Scotch® Bag Conveying Tapes

- A high performance tape designed to convey a food grade preservation bag through the bag manufacturer's forming and packaging process
- Product constructions with or without reinforcement can meet a range of price/performance needs
- The pressure sensitive adhesive is specifically formulated to provide consistent adhesion to polyethylene

Scotch® Bag Conveying Tape 8361

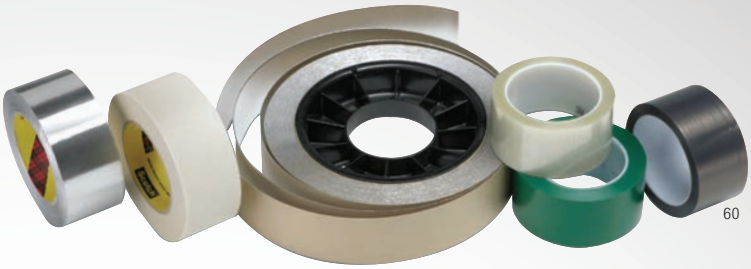
Scotch® Bag Conveying Tape 8365

Product	Tensile Strength lb/in (N/100 mm)	Backing Material	Reinforcement	Adhesive Type	Adhesion Strength oz/in (N/100 mm)	Total Thickness mils (mm)	Elongation (%)	Color	Width(s)	Core Size
ASTM Test Method	D-3759				D-3330	D-3652				
8631	160 (2800)	Polypropylene	Polypropylene	Synthetic Rubber	67 (73)	6.0 (0.15)	30%	Clear	1/4"	6"
8635	140 (2452)	Polyethylene	None	Synthetic Rubber	62 (68)	4.0 (0.102)	60%	Black	6mm, 9mm	6"

Selection simplicity.

Wide variety of applications.

With more than 120 product solutions, the portfolio of 3M™ Specialty Tapes presents customers with numerous characteristics to evaluate in making the optimum choice for an application.



3M™ Specialty Tapes

To help simplify and streamline the selection process, six products have been highlighted for their versatility. **These Specialty Six solve 80% of customer application needs**. The six represent the key backings that comprise much of the 3M™ Specialty Tapes line: glass cloth, metal foil, polyester, slick surface (PTFE), and vinyl.

1 SPLICING

Reliably hold a seam together between two materials.

- 3M™ Polyester Tape 850
- 3M™ Glass Cloth Tape 361
- 3M™ Vinyl Tape 471

2 SEALING

Reliably seal surfaces in many special or unique applications.

- 3M™ Polyester Tape 850
- 3M™ PTFE Film Tape 5490
- 3M™ Aluminum Foil Tape 425
- 3M™ Vinyl Tape 471

3 ENHANCING

Mark for color-coding, safety or aesthetics to enhance the workplace.

- 3M™ Polyester Tape 850
- 3M™ Vinyl Tape 471

4 SHIELDING

Shield sensitive surfaces from harsh chemicals, abrasion and heat or cold.

- 3M™ Aluminum Foil Tape 425
- 3M™ Glass Cloth Tape 361
- 3M™ PTFE Film Tape 5490

5 CONDUCTING

Effectively conduct heat or cold from one surface to another.

- 3M™ Aluminum Foil Tape 425

6 REDUCING NOISE

Minimize the noise of vibration or surfaces hitting/rubbing against each other.

- 3M™ UHMW-PE Tape 5423
- 3M™ Damping Foil 2552
- 3M™ PTFE Film Tape 5490

3M™ Application Specific Tapes

Variety for Many Process and Design Solutions

With a choice of unique backing and adhesive combinations, this engineered line meets demanding applications for aerospace, graphic arts, electronics, metal finishing, automotive and more.

62

3M™ Riveters Tape is used during riveting to help ensure easy visibility of rivets and no adhesive transfer to rivet heads.

63

3M™ All Weather Flashing Tape 8067 is a self-adhered, waterproof flashing membrane designed for sealing around openings and penetrations in exterior walls.

64

Use 3M™ Construction Seaming Tape 8087 for exterior and interior seam, seal, splice and repair applications.

65

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.
High Temperature Tapes											
8997/8997L	Amber	Silicone	Polyimide	1.0 (0.02)	Polyester	2.2 (0.06)	22 (24)	26 (453)	37	Up to 500 (Up to 260)	Transparent film. High temperature applications. 8997L is linered version.
8998/8998L	Amber	Silicone	Polyimide	2.0 (0.05)	Polyester	3.3 (0.08)	19 (20)	55 (963)	49	Up to 500 (Up to 260)	Transparent film. High temperature applications. 8998L is linered version.
Riveters Tapes											
685	Green	Rubber strip coated along edges of tape only	Polyester	1.0 (0.02)	—	1.7 (0.04)	30 (33)	19 (330)	28	-20 to 150 (-29 to 66)	Transparent film. Green adhesive.
695	Yellow	Acrylic strip coated along edges of tape only	Polyethylene	2.0 (0.05)	—	3.0 (0.08)	15 (16)	8 (140)	120	-20 to 120 (-29 to 49)	Yellow film. White adhesive.
Venting Tapes											
394	White	Acrylic	Non-Woven	4.5 (0.11)	—	5.0 (0.13)	12 (13)	6 (100)	18	Up to 120 (Up to 49)	Air-permeable backing.
3294	Pink	Acrylic	Non-Woven	4.5 (0.11)	—	5.0 (0.13)	9 (10)	8 (140)	15	Up to 120 (Up to 49)	Most permeable venting tape. Strip coated.
Nylon Tapes											
855	White	Rubber	Nylon	2.0 (0.05)	—	3.2 (0.08)	55 (60)	31 (540)	470	60 to 400 (16 to 204)	Composite bonding tape.
8555	White	Rubber	Nylon	5.0 (0.13)	—	6.0 (0.15)	60 (66)	69 (1208)	540	60 to 400 (16 to 204)	Thick version of 855 tape.
Construction Tapes											
8067	Tan	Acrylic	Multi-Layer Elastomeric Film	5.0 (0.13)	Polycoated Kraft Paper	10.0 (0.25)	60 (66)	20 (350)	700	Up to 176 (Up to 80)	Window and door flashing tape. Meets ICC AC 148, AAMA 711 specs.
8087	Red	Acrylic	Biaxially Oriented Polypropylene Film	1.5 (0.04)	—	3.0 (0.08)	45 (49)	20 (350)	130	Up to 220 (Up to 104)	Construction seaming tape.
Long Term Protection											
7070UV	Clear	Acrylic	Polyurethane	6.5 (0.17)	—	8.0 (0.20)	47 (51)	68 (1162)	656	-20 to 170 (-28 to 77)	Durable, abrasion resistant, UV resistant surface protection.
7071UV	Clear	Acrylic	Polyurethane	12 (0.31)	—	14 (0.36)	52 (52)	55 (963)	754	-20 to 170 (-28 to 77)	Durable, abrasion resistant, UV resistant surface protection.
Other Specialty Tapes											
253	Tan	Silicone	Treated Flatstock Paper	3.5 (0.09)	Modified Poly Liner	4.6 (0.12)	49 (54)	60 (1052)	3	50 to 150 (10 to 66)	Silicone butt splicing tape.
346	Tan	Rubber	Flat Paper Stock	15.0 (0.38)	—	16.7 (0.42)	22 (24)	28 (490)	4	60 to 100 (16 to 38)	Heavy-duty abrasion, moisture, UV protection.
838	White	Acrylic	PVF	2.1 (0.05)	—	3.4 (0.09)	47 (51)	24 (420)	170	100 to 225 (38 to 107)	Weather resistant film tape.
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.
8777	Tan	Acrylic	Multi-Layer Elastomeric Film	5.0 (0.13)	Polycoated Kraft Paper	10.0 (0.25)	60 (66)	20 (350)	700	Up to 176 (Up to 80)	Air and water tight sealing tape.
9343	Black	Acrylic	Non-Woven	14.5 (0.37)	Paper	19.5 (0.50)	27 (30)	5 (88)	400	Up to 250 (Up to 121)	Conformable for irregular parts.

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

3M™ Glass Cloth Tapes

High Tensile Strength with Choice of Other Properties

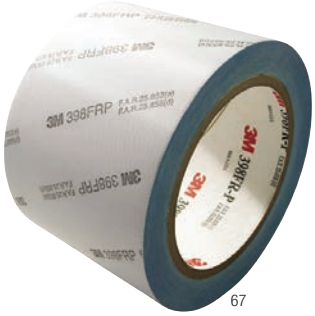
With a choice of high tensile strength glass cloth and silicone, acrylic, or rubber adhesives, this line meets demanding applications for Aerospace, Automotive, Commercial Vehicle, Construction, Marine and more.

Depending on the specific tape, you have a choice of characteristics:

- Pass FAA flame resistance regulations
- Protect surfaces against abrasion
- Temperature resistance up to more than 450°F (232°C) for one hour — even higher for intermittent exposures

66

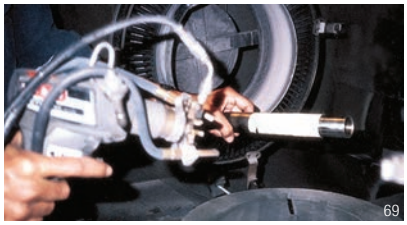
For seaming and sealing panels in aircraft cargo bays, 3M™ Glass Cloth Tape 398FR exceeds flame retardant standards F.A.R. 25.853 (a) and F.A.R. 25.855 (d). Pressure sensitive acrylic adhesive bonds on contact to many surfaces. High adhesion is secure for extended periods. Rugged cloth surface resists wear from heavy bags.



67

68

With high tensile strength and rubber adhesive, 3M™ Glass Cloth Tape 365 reliably splices fabrics and other textured surfaces.


69

For thermal spray and plasma spray masking, 3M™ Glass Cloth Tape 361 with silicone adhesive performs reliably at up to 450°F (232°C). Passes FAA flame resistance regulations.

Product	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)	Meets Specifications	Comments
Based on ASTM Test Method:				D-3652		D-3652	D-3330	D-3759	D-3759			
361	White	Silicone	Glass Cloth	5.0 (0.13)	—	6.4 (0.16)	38 (42)	146 (2555)	10	-65 to 450 (-54 to 232)	F.A.R. 25.853	General purpose glass cloth tape.
3615	White	Silicone	Glass Cloth	5.0 (0.13)	—	7.0 (0.18)	35 (38)	180 (3140)	7	-65 to 450 (-54 to 232)	—	General purpose glass cloth tape.
365	White	Thermoset Rubber	Glass Cloth	4.8 (0.12)	—	8.3 (0.20)	52 (57)	139 (2430)	7	40 to 450 (4 to 232)	—	Splicing textured surfaces. Thermosetting adhesive.
3650	White	Thermoset Rubber	Glass Cloth	4.8 (0.12)	Blue Film	8.3 (0.20)	52 (57)	139 (2430)	7	40 to 450 (4 to 232)	—	Linered version of 365. Thermosetting tape.
398FR	White	Acrylic	Glass Cloth	5.0 (0.13)	Blue Film	7.0 (0.18)	38 (42)	130 (2276)	7	-20 to 250 (-29 to 121)	BMS 5-146; F.A.R. 25.853(a); F.A.R. 25.855(d)	Skip-slit liner for ease of application.
398FRP	White	Acrylic	Glass Cloth	5.0 (0.13)	Blue Film	7.0 (0.18)	38 (42)	130 (2276)	7	-20 to 250 (-29 to 121)	BMS 5-146; F.A.R. 25.853(a); F.A.R. 25.855(d)	Printed backing version of 398FR.
399FR	White	Acrylic	Glass Cloth	5.0 (0.13)	Blue Film	9.5 (0.24)	52 (57)	130 (2276)	7	-20 to 200 (-29 to 93)	F.A.R. 25.853(a)	Thicker adhesive. Flame resistant.

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

3M™ Metal Foil Tapes

Choice of High Performance Foil Tapes

With a choice of conformable backings and adhesives, this line of tapes meets demanding applications in Aerospace, Appliance, Transportation, Construction, Automotive, and MRO (Maintenance and Repair) segments.

3M™ Aluminum Foil Tapes

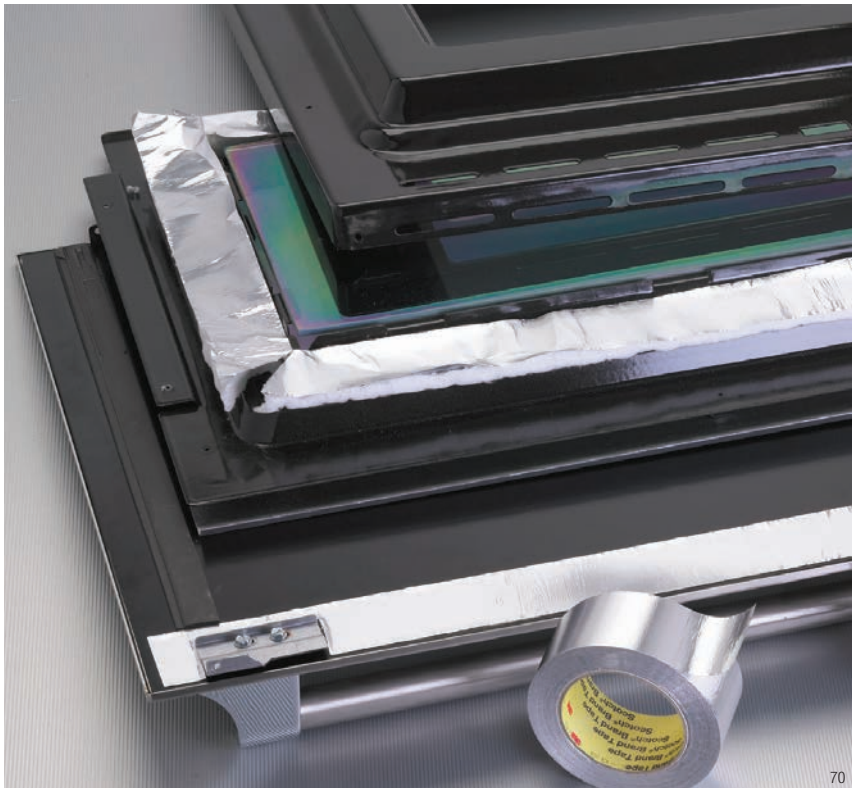
- Resist flame, moisture, weather, UV degradation and most chemicals
- Thermally conductive for heating and cooling efficiency
- Heat and light reflective

3M™ Aluminum Foil Reinforced Tapes

- Flexible flame-resistant wrap for wires and hoses
- Long wearing, tear and puncture resistant
- Flame and heat resistant

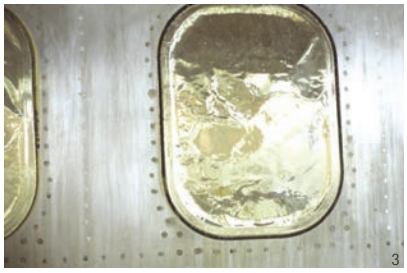
3M™ Lead Foil Tapes

- Electrically conductive
- Acid resistant for plating masking
- Radiopaque for X-ray markers



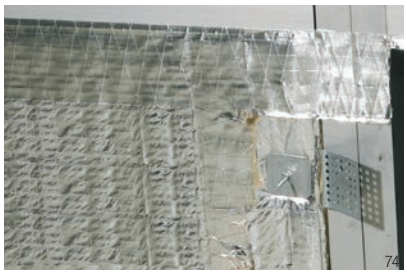
3M™ Aluminum Foil Tape bonds on contact as heat shielding inside an oven door. Helps keep the exterior cool to the touch behind the handle and around the window perimeter.

With aggressive adhesive and dead soft aluminum, Scotch® Foil Tape 3311 seals and secures seams and joints for long-term durability. UL 723 classified for duct sealing and general repairs.

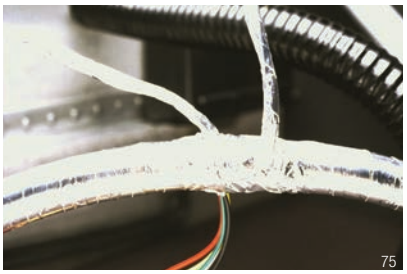


With conformability and chemical resistance, 3M™ Aluminum Foil Tapes used to protect aircraft windows during paint stripping using harsh chemicals.

With high heat reflectivity and thermal conductivity, 3M™ Aluminum Foil Tapes protect heat-sensitive components near lights in a garage door opener housing.



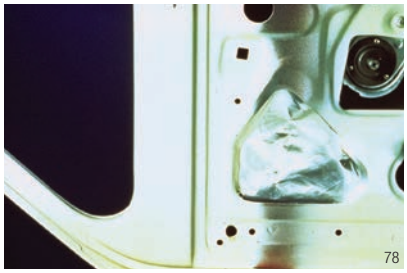
3M™ FSK Facing Tape 3320 is engineered specifically as a vapor retardant tape to seal mineral wool foil-faced insulation, bare sheet metal ducts and blanket style fiberglass duct insulation.



Tear-resistant 3M™ Reinforced Aluminum Foil Tape 363 bundles wire harnesses and helps protect wires, cables, and other flexible parts from heat.

Conformable 3M™ Aluminum Foil Tape securely holds copper cooling tubes to refrigerator panels. Thermal conductivity helps maximize cooling efficiency.

To seal fiberglass duct board and flexible duct systems, Scotch® Foil Tape 3340 meets the performance requirements for UL 181A-P and UL 181B-FX.



Applied over holes and cavities in the interior of a car or truck door panel, 3M™ Aluminum Foil Tape seals out moisture and dust.

3M™ Metal Foil Tapes

Product Number	Color	Adhesive Type	Backing Material	Backing Thickness mils (mm)	Liner 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 %	Meets Specifications	Temperature Range °F (°C)	Comments
ASTM Test Method				D-3652			D-3652	D-3330	D-3759	D-3759			
Premium Performance													
425	Silver	Acrylic	Aluminum Foil	2.8 (0.07)	—	—	4.6 (0.12)	47 (51)	28 (490)	6	F.A.R. 25.853(a); SAE AMS T-23397; UL 723; UL 746C; LT-80 C	-65 to 300 (-54 to 149)	Most versatile aluminum tape.
427	Silver	Acrylic	Aluminum Foil	2.8 (0.07)	3.1 (0.08)	Easy Release Film	4.6 (0.12)	50 (55)	28 (490)	6	F.A.R. 25.853(a); UL 723; UL 746C; LT-80 C	-65 to 300 (-54 to 149)	Linered version of 425.
431	Silver	Acrylic	Aluminum Foil	1.9 (0.05)	—	—	3.1 (0.08)	34 (37.3)	17 (302)	3	F.A.R. 25.853(a)	-65 to 300 (-54 to 149)	Conformable aluminum tape.
433	Silver	Silicone	Aluminum Foil	2.0 (0.05)	—	—	3.6 (0.09)	40 (43.8)	20 (350)	3.5	F.A.R. 25.853(a); US Gov A-A-59258	-65 to 600 (-54 to 316)	Silicone adhesive for high temperature resistance. Smooth, easy unwind, clean, straight edges with minimal wrinkling.
433L	Silver	Silicone	Aluminum Foil	2.0 (0.05)	3.2 (0.08)	Easy Release Film	3.5 (0.09)	38 (42.0)	20 (350)	3.5	F.A.R. 25.853(a)	-65 to 600 (-40 to 316)	Linered version of 433.
437	Silver	Acrylic	Aluminum Foil	2.8 (0.07)	4.2 (0.11)	Easy Release Film	8.0 (0.20)	150 (164)	30 (525)	8	—	-40 to 212 (-40 to 100)	Dead-soft aluminum foil tape.
438	Silver	Acrylic	Aluminum Foil	5.0 (0.13)	—	—	7.2 (0.18)	43 (47)	59 (1033)	10	F.A.R. 25.853(a)	-65 to 300 (-54 to 149)	Thickest non-reinforced aluminum tape for heat resistance. Smooth, easy unwind, clean, straight edges with minimal wrinkling.
438L	Silver	Acrylic	Aluminum Foil	5.0 (0.13)	2.5 (0.06)	Easy Release Film	7.2 (0.18)	43 (47)	59 (1033)	10	F.A.R. 25.853(a)	-65 to 300 (-54 to 149)	
439	Silver	Acrylic	Aluminum Foil	1.9 (0.05)	5.7 (0.14)	Kraft Paper with Silicone Release	3.1 (0.08)	34 (37.3)	17 (302)	3	F.A.R. 25.853(a)	-65 to 300 (-54 to 149)	Linered version of 431.
3338	Silver	Acrylic	Aluminum Foil	5.0 (0.13)	5.0 (0.13)	Polycoated Kraft Paper Release	7.0 (0.18)	45 (49)	50 (876)	21	—	-65 to 300 (-54 to 149)	66 lb. moisture stable liner.
33801	Silver	Acrylic	Aluminum Foil	2.0 (0.05)	5.0 (0.13)	Polycoated Kraft Paper	4.0 (0.10)	40 (43.8)	20 (350)	5	UL 723	-30 to 425 (-34 to 218)	High temperature acrylic adhesive.
33806	Silver	Acrylic	Aluminum Foil	3.0 (0.076)	5.2 (0.13)	Polycoated Kraft Paper	5.0 (0.13)	95 (105)	30 (525)	6	—	-40 to 425 (-40 to 218)	High temperature acrylic adhesive.

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

3M™ Metal Foil Tapes (cont.)

Product Number	Color	Adhesive Type	Backing Material	Backing Thickness mils (mm)	Liner 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 %	Meets Specifications	Temperature Range °F (°C)	Comments
ASTM Test Method				D-3652			D-3652	D-3330	D-3759	D-3759			
General Purpose													
3311*	Silver	Rubber	Aluminum Foil	2.0 (0.05)	2.0 (0.05)	Paper	3.6 (0.09)	90 (98)	17 (298)	3	UL 723	-10 to 180 (-23 to 82)	Designed for maximum adhesion over clean, dry surfaces.
3369	Silver	Acrylic	Aluminum Foil	1.1 (0.028)	3.2 (0.08)	Polycoated Natural Kraft Paper	2.4 (0.06)	58 (64)	11 (197)	2	UL 723	-40 to 250 (-40 to 121)	Thinnest aluminum foil tape.
33803	Silver	Rubber	Aluminum Foil	1.8 (0.05)	3.6 (0.09)	Polycoated Kraft Paper	3.6 (0.09)	90 (99)	15 (263)	4	UL 723	0 to 175 (-18 to 79)	Highest tack rubber adhesive.
97065	Silver	Acrylic	Aluminum Foil	1.8 (0.05)	5.2 (0.13)	Polycoated Kraft Paper	3.4 (0.09)	48 (53)	18 (315)	3	—	-40 to 250 (-40 to 121)	Good for die-cut applications.
3380	Silver	Acrylic	Aluminum Foil	2.0 (0.05)	3.2 (0.08)	Natural Kraft Paper	3.3 (0.08)	40 (43.8)	10 (175)	4	UL 723	-30 to 260 (-34 to 121)	Good for narrow slit rolls.
4380	Silver	Acrylic	Aluminum Foil	2.0 (0.05)	—	—	3.3 (0.08)	40 (43.8)	10 (175)	4	—	-30 to 300 (-34 to 149)	General purpose aluminum foil tape.
34383	Silver	Acrylic	Aluminum Foil	2.8 (0.07)	—	—	4.5 (0.11)	55 (61)	30 (542)	11	—	-40 to 300 (-40 to 149)	General purpose aluminum foil tape.
3363	Silver	Acrylic	Aluminum Foil	3.0 (0.08)	3.2 (0.08)	Polycoated Natural Kraft Paper	5.0 (0.13)	40 (43.8)	28 (490)	6	UL 723	-40 to 250 (-40 to 121)	Good for narrow slit rolls.
3367	Silver	Acrylic	Aluminum Foil	3.0 (0.08)	5.2 (0.13)	Polycoated Kraft Paper	4.4 (0.11)	48 (53)	30 (525)	6	UL 723	-40 to 250 (-40 to 121)	Good for die-cut applications.
Lead Foil													
420	Dark Silver	Rubber	Lead Foil	4.7 (0.12)	3.5 (0.09)	Easy Release Film	6.8 (0.17)	45 (49)	20 (350)	12	—	-60 to 225 (-51 to 107)	Linered plating tape.
421	Dark Silver	Rubber	Lead Foil	4.0 (0.10)	—	—	6.3 (0.16)	31 (34)	15 (263)	14	—	-60 to 225 (-51 to 107)	Self-wound plating tape.
34201	Dark Silver	Rubber	Lead Foil	5.0 (0.13)	5.3 (0.13)	Polycoated Natural Kraft Paper	6.3 (0.16)	50 (55)	20 (350)	5	—	0 to 180 (-18 to 82)	Removable rubber adhesive.
Copper Foil													
3313	Copper	Conductive Acrylic	Copper Foil	1.4 (0.04)	4.3 (0.11)	Glassine Paper	3.0 (0.08)	29 (32)	25 (444)	3	UL 510	-40 to 250 (-40 to 121)	EMI/RFI shielding.
3325	Copper	Acrylic	Copper Foil	1.5 (0.04)	5.0 (0.13)	Polycoated Natural Kraft Paper	3.0 (0.08)	40 (43.8)	28 (491)	10	UL 510	0 to 225 (-18 to 107)	EMI/RFI shielding.
33315	Copper	Acrylic	Copper Foil	1.5 (0.04)	5.0 (0.13)	Natural Kraft Paper	3.3 (0.08)	35 (39)	28 (491)	5	—	-30 to 300 (-34 to 149)	"Tinned", corrosion resistant.
33316	Copper	Conductive Acrylic	Copper Foil	1.5 (0.04)	4.0 (0.10)	Glassine Paper	3.0 (0.08)	30 (33)	33 (578)	6	UL 510	0 to 250 (-18 to 121)	"Tinned", corrosion resistant.
Stainless Steel Foil													
3361	Silver	Acrylic	Stainless Steel	2.0 (0.05)	4.6 (0.12)	Polycoated Kraft Paper	3.8 (0.10)	40 (43.8)	100 (1751)	40	—	-30 to 250 (-34 to 121)	Corrosion resistant.

*Scotch® Tape brand.

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3M™ Metal Foil Tapes (cont.)

Product Number	Color	Adhesive Type	Backing Material	Backing Thickness mils (mm)	Liner 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 %	Meets Specifications	Temperature Range °F (°C)	Comments
ASTM Test Method				D-3652			D-3652	D-3330	D-3759	D-3759			
Specialty and Reinforced Foils													
363	Silver	Silicone	Aluminum Foil Laminated to Glass Cloth	3.4 (0.086)	—	—	7.3 (0.19)	52 (57)	135 (2364)	7	F.A.R. 25.853(a)	-65 to 600 F (-54 to 316 C)	Aluminum foil/ glass cloth. Highest temperature metal foil tape.
363L	Silver	Silicone	Aluminum Foil Laminated to Glass Cloth	3.4 (0.086)	3.0 (0.08)	Easy Release Film	7.3 (0.19)	52 (57)	135 (2364)	7	F.A.R. 25.853(a)	-65 to 600 F (-54 to 316 C)	Linered version of 363.
1430	Silver	Acrylic	Aluminum Foil Non-Woven Web	5.0 (0.13)	—	—	5.5 (0.14)	22 (24)	19 (333)	12	—	-65 to 300 F (-54 to 106 C)	Aluminum foil/ non-woven laminate. Flexible wrapping tape.
3302	Silver	Conductive Acrylic	Aluminum Foil	2.0 (0.05)	4.3 (0.11)	Glassine Paper	3.5 (0.09)	30 (33)	19 (340)	3	UL 510	-40 to 250 F (-40 to 121 C)	Aluminum foil tape. EMI/RFI shielding.
3334	Silver	Acrylic	Aluminum Foil/Scrim/ Polypropylene	5.4 (0.14)	3.5 (0.09)	Bleached Glassine Paper	6.9 (0.18)	31 (33.9)	25 (439)	7	—	-10 to 175 F (-23 to 79 C)	Works well in very cold and hot temperatures.
HVAC Construction													
3320	Silver	Acrylic	Aluminum Foil	6.0 (0.16)	4.0 (0.10)	Poly Coated Kraft	6.7 (0.17)	81 (89)	40 (712)	2	UL 723	-20 to 175 (-29 to 79)	Aluminum foil/ scrim/laminate.
3340	Silver	Acrylic	Aluminum Foil	2.0 (0.05)	3.5 (0.09)	Paper	4.0 (0.10)	30 (33)	20 (350)	4	UL 181A-P; UL 181B-FX	-30 to 250 (-34 to 121)	Aluminum foil tape for use with rigid and flexible ducts.
3350	Silver	Acrylic	Silver Polypropylene Film	1.6 (0.04)	—	—	3.1 (0.08)	33 (36)	36 (631)	170	UL 181B-FX	-30 to 230 (-34 to 110)	Polypropylene tape for use with flexible ducts.
3380	Silver	Acrylic	Aluminum Foil	2.0 (0.05)	3.2 (0.08)	Natural Kraft Paper	3.3 (0.08)	40 (43.8)	10 (175)	4	UL 723	-30 to 260 (-34 to 121)	General purpose aluminum foil tape. Go-to product for this market.
3381	Silver	Acrylic	Aluminum Foil	1.4 (0.04)	3.2 (0.08)	Natural Kraft Paper	2.7 (0.07)	40 (43.8)	10 (180)	5	UL 723	-30 to 260 (-34 to 121)	Value grade aluminum foil tape.
3382	Silver	Acrylic	Aluminum Foil	2.5 (0.06)	5.2 (0.13)	PE Coated Kraft	4.2 (0.11)	50 (55)	30 (525)	25	—	-40 to 300 (-40 to 149)	Foil/PET laminate, tear resistance. Roof and gutter repair tape.

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3M™ Sound Damping Foils

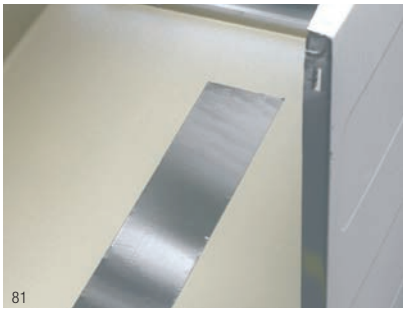
Reduce Noise and Vibration in Many Applications

With pressure sensitive viscoelastic acrylic polymer on dead soft aluminum foil, 3M™ Sound Damping Foils quiet noise and reduce vibration in many areas for Aerospace, Automotive, Appliances, Construction and MRO (Maintenance and Repair).

- Reduce structure-borne noise in metal and composite panels and support structures
- Optimized acrylic converts vibrational energy to negligible heat that readily dissipates
- Reduce vibrational fatigue to decrease wear and tear on parts and lower the risk of part loosening and displacement
- Effective damping with as little as 10% surface coverage
- Pressure sensitive for easy self-fixturing application
- Long aging performance
- Good performance over a wide temperature range
- Linered construction provides ability to die-cut product

Applied with a 3M™ PA-1 Wiper to the inside of a car door, 3M™ Damping Foil 2552 effectively damps noise and vibration with as little as 10% surface coverage. Optimized acrylic on a dead soft aluminum constraining layer converts vibrational energy to negligible heat that readily dissipates.

3M™ Damping Foil 435 between the ribs and stringers of an aircraft fuselage helps reduce vibrational fatigue and noise inside the passenger cabin.



3M™ Damping Foil 2552 on the inside of a washing machine reduces structure-borne noise and reduces vibrational fatigue to decrease the risk of part loosening and displacement.

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)	Meets Specifications	Comments
ASTM Test Method				D-3652		D-3652	D-3330	D-3759	D-3759			
434	Silver	Viscoelastic Polymer	Aluminum Foil	5.5 (0.14)	Polyethylene	7.5 (0.19)	65 (71.2)	50 (876)	12	-76 to 68 (-60 to 20)	F.A.R. 25.853(a)	Low temperature vibration damping.
435	Silver	Viscoelastic Polymer	Aluminum Foil	8.0 (0.2)	Polyethylene	13.5 (0.34)	65 (71.2)	50 (876)	12	-76 to 68 (-60 to 20)	F.A.R. 25.853(a)	Low temperature vibration damping.
436	Silver	Viscoelastic Polymer	Aluminum Foil	12.0 (0.31)	Polyethylene	17.5 (0.44)	65 (71.2)	50 (876)	12	-76 to 68 (-60 to 20)	F.A.R. 25.853(a)	Low temperature vibration damping.
2542	Silver	Viscoelastic Polymer	Aluminum Foil	5.0 (0.13)	Polyethylene	10.0 (0.25)	65 (72)	63 (1102)	7	-25 to 175 (-32 to 80)	—	Thinner general purpose vibration damping.
2552	Silver	Viscoelastic Polymer	Aluminum Foil	10.0 (0.25)	Polycoated Paper	15.0 (0.38)	65 (72)	126 (2205)	12	-25 to 175 (-32 to 80)	ASTM E756-83	General purpose vibration damping.
4014	Silver	Viscoelastic Polymer	Aluminum-Urethane	3.0 (0.09)	Easy Release Film	250.0 (6.35)	n/a	n/a	90	-94 to 86 (-70 to 30)	F.A.R. 25.853(a)	Foil/foam sheet laminate.

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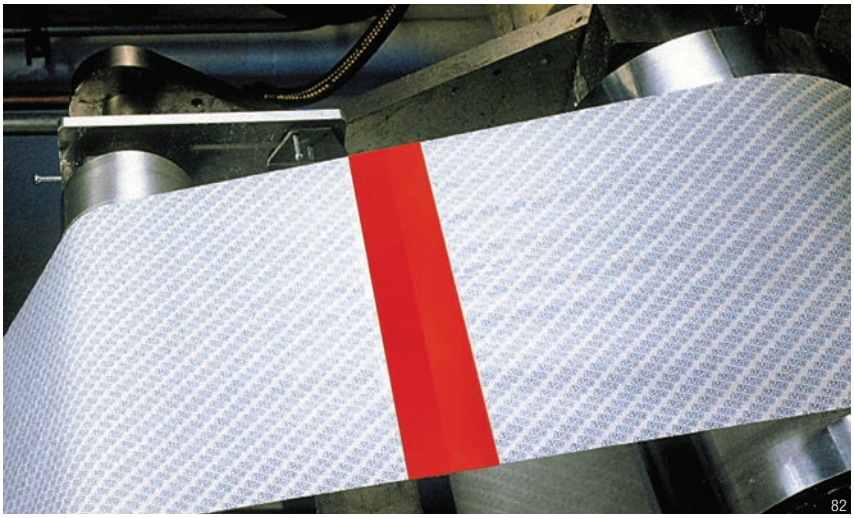
3M™ Polyester Tapes

Thin Caliper with Long-Term High Dimensional Strength

With a choice of thin backing calipers and adhesives, this line of tapes meets demanding applications for Graphic Arts, Photography, Metal Finishing and Electronics. Applications range from splicing silicone-treated paper to low profile decorative trim.

- Backing calipers from as thin as 0.9 mil up to 5 mils, all with very high dimensional strength
- Tensile strengths ranging from 20 lbs./in. (0.9 mil) to 140 lbs./in. (5 mils) — some of the strongest backings available
- Pressure sensitive acrylic, rubber, silicone and S/R blend adhesives to meet specific requirements. For example, acrylic with transparent backing for clarity and long-term holding; silicone for high temperatures and clean removal; rubber for quick adhesion to low surface energy materials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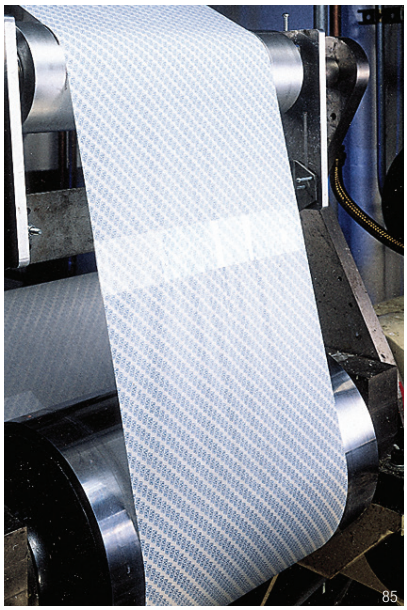
For marking splice location, 3M™ Polyester Tape 850 is available in red, black, white and silver. Transparent is also available to blend with the web stock. Pressure sensitive acrylic adhesive grabs on contact and holds butt splices securely. High tensile strength backing resists web handling stresses.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For butt splices on many low surface energy materials such as polyethylene. 3M™ Super Bond Film Tape 396 provides the thin caliper tensile strength of polyester, and high immediate holding strength of rubber adhesive.

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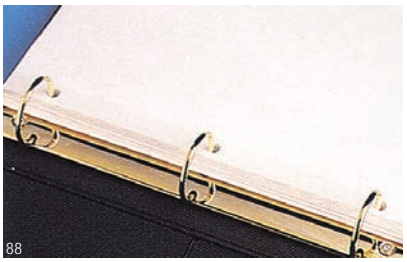
For powder coat paint masking, 3M™ Polyester Tape series 8900 provides popular choices with clean removing high temperature silicone adhesives and different backing thicknesses of tough non-slivering polyester.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With thin caliper and tear resistance, 3M™ Polyester Tape provides tough low-profile reinforcement for punch holes in card stock. Acrylic adhesive resists yellowing in long-term use.

89

With thin caliper, high tensile strength polyester backing and the excellent shear strength of silicone adhesive, 3M™ Polyester Tape 8402 works well for butt splicing silicone-treated papers.

3M™ Polyester Tapes

Product	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										
396	Transparent	Rubber	Polyester	1.7 (0.04)	4.1 (0.10)	140 (153)	43 (753)	140	40 to 200 (4 to 93)	Adhesion to low surface energy materials.
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.
853	Transparent	Acrylic	Polyester	1.1 (0.03)	2.2 (0.06)	46 (50)	25 (434)	83	-60 to 300 (-50 to 150)	L-T-100 F.A.R. 25.853(a)
856	Transparent	Acrylic	Polyester	1.0 (0.03)	2.0 (0.05)	20 (22)	25 (438)	90	-60 to 300 (-50 to 150)	Label protection. Edge and hole reinforcing.
8411	Transparent	Acrylic	Polyester	1.0 (0.03)	1.5 (0.04)	21 (23)	26 (456)	120	-60 to 300 (-50 to 150)	Edge and hole reinforcing.
8412	Transparent	Acrylic	Polyester	4.7 (0.12)	6.3 (0.16)	33 (36)	140 (2450)	180	-60 to 300 (-50 to 150)	Heavy-duty edge and hole reinforcing.
Protective Tapes										
335	Pink	Rubber	Polyester	0.9 (0.02)	1.5 (0.04)	13 g/in. (0.5)	26 (455)	115	40 to 150 (4 to 65)	Low tack protective tape. Pink in color.
336	Transparent	Rubber	Polyester	0.9 (0.02)	1.5 (0.04)	13 g/in. (0.5)	26 (455)	115	40 to 150 (4 to 65)	Low tack protective tape. Transparent.
High Temperature Masking and Liner Splicing Tapes										
875	Seafoam Green	Rubber	Polyester	1.0 (0.03)	2.0 (0.052)	36 (37)	34 (590)	105	60 to 400 (140 to 204)	High temperature, non-silicone composite bonding.
876	Seafoam Green	Rubber	Polyester	2.0 (0.05)	3.1 (0.078)	33 (36)	66 (1160)	128	60 to 400 (140 to 204)	High temperature, non-silicone composite bonding.
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.
8901	Blue	Silicone	Polyester	0.9 (0.02)	2.4 (0.06)	29 (31)	26 (455)	115	-60 to 400 (-50 to 204)	High temperature coating.
8902	Blue	Silicone	Polyester	2.0 (0.05)	3.5 (0.08)	37 (40)	46 (805)	100	-60 to 400 (-50 to 204)	High temperature coating.
8905	Blue	Silicone	Polyester	5.0 (0.12)	6.5 (0.17)	26 (28)	110 (1920)	115	-60 to 400 (-50 to 204)	High temperature coating.
8911	Transparent	Silicone	Polyester	0.9 (0.02)	2.3 (0.05)	26 (29)	26 (440)	110	-60 to 400 (-50 to 204)	High temperature label protection.
8991/ 8991L	Blue	Silicone	Polyester	1.0 (0.03)	2.4 (0.06)	31 (34)	29 (508)	100	-60 to 400 (-50 to 204)	Thin tapes, powder coat masking, high temperature applications. 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)	Powder coat and anodized masking, high temperature applications. 8992L is linered version.
Photo Film Splicing Tapes										
8421	White	Rubber	Polyester	1.4 (0.04)	2.5 (0.06)	50 (54)	43 (754)	140	-60 to 300 (-50 to 150)	Photo film splicing.
8422	Black	Rubber	Polyester	1.4 (0.04)	2.5 (0.06)	50 (54)	43 (754)	140	-60 to 300 (-50 to 150)	Photo film splicing.
8429	Yellow	Rubber	Polyester	2.0 (0.05)	3.2 (0.08)	69 (75)	54 (948)	130	-60 to 300 (-50 to 150)	Photo film splicing.
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, silver color-coding.
8437	Silver	Acrylic	Polyester	0.9 (0.02)	2.1 (0.05)	40 (44)	20 (350)	70	40 to 200 (4 to 93)	Low emissivity.

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3M™ PTFE and UHMW-PE Tapes

Low Coefficients of Friction With Choice of Other Characteristics

3M™ PTFE and UHMW-PE Tapes meet many application requirements for Printing, Aerospace, Automotive and MRO (Maintenance and Repair).

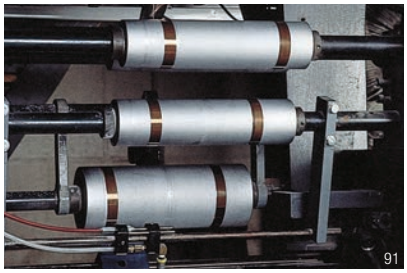
3M™ PTFE Tapes

- Low coefficient of friction to help improve web processing
- Resists up to 500°F (260°C) for long performance on heat sealing machines
- Anti-stick for easy cleanup of hot plastic
- Chemical-resistant barrier
- Silicone-free adhesive available

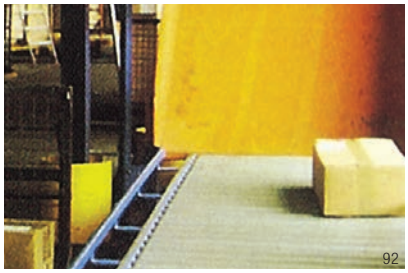
3M™ UHMW-PE Tapes

- Abrasion resistant to protect chutes, guide rails, and containers from wear
- Low coefficient of friction for "slip plane" effect between surfaces to reduce noise
- Anti-stick for ready release of many inks and adhesives

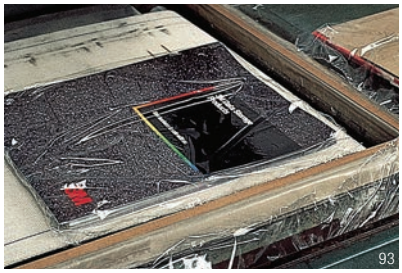
For automotive noise reduction, 3M™ UHMW-PE Tape 5425 provides a "slip plane" effect between incompatible surfaces to help reduce squeaks and rattles.



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



Corrugated boxes slide more easily down a chute lined with abrasion-resistant 3M™ UHMW-PE Tapes.



In shrink wrapping operation, 3M™ PTFE Glass Cloth Tape 5451 helps protect the bar underneath where the hot wire seals the plastic film.

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™ PTFE Tapes

Product	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		
Glass Cloth										
5151/ 5151L/ 5151PL	Light Brown	Silicone	PTFE GC	3.0 (0.08)	5.3 (0.13)	33 (36)	110 (1925)	5	-100 to 500 (-73 to 260)	General purpose PTFE glass cloth tape. 5151L is a linered version of 5151. 5151PL is a thicker, premium liner.
5153/ 5153L	Light Brown	Silicone	PTFE GC	5.8 (0.15)	8.0 (0.20)	43 (47)	290 (5075)	5	-100 to 500 (-73 to 260)	General purpose PTFE glass cloth tape. 5153L is a linered version of 5153.
5451	Brown	Silicone	PTFE GC	3.2 (0.08)	5.6 (0.14)	28 (31)	100 (1760)	5	-100 to 500 (-73 to 260)	Heat seal tape.
5453	Brown	Silicone	PTFE GC	6.0 (0.15)	8.2 (0.21)	55 (56)	175 (3065)	5	-100 to 500 (-73 to 260)	Heat seal tape.
Skived Film										
5180	Gray	Silicone	PTFE	2.0 (0.05)	3.5 (0.09)	25 (28)	30 (525)	100	-65 to 500 (-54 to 260)	General purpose PTFE skived film tape.
5181	Gray	Silicone	PTFE	5.0 (0.13)	6.5 (0.17)	35 (39)	75 (1300)	100	-65 to 500 (-54 to 260)	General purpose PTFE skived film tape.
5185	Red	Silicone	PTFE	2.7 (0.07)	4.2 (0.11)	27 (30)	41 (716)	117	-65 to 500 (-54 to 260)	Roller wrapping tape.
5480	Gray	Silicone	PTFE	2.0 (0.05)	3.7 (0.09)	20 (22)	27 (473)	140	-65 to 500 (-54 to 260)	Roller wrapping tape.
5481	Gray	Silicone	PTFE	5.0 (0.13)	6.8 (0.17)	32 (35)	49 (858)	335	-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 (29)	22 (385)	150	-65 to 500 (-54 to 260)	Lay-flat backing.
5491	Gray	Silicone	PTFE	5.0 (0.13)	6.7 (0.17)	35 (38)	40 (700)	200	-65 to 500 (-54 to 260)	Lay-flat backing.
5498	Brown	Rubber	PTFE	2.0 (0.05)	4.0 (0.10)	48 (53)	19 (332)	105	40 to 350 (4 to 177)	Non-silicone adhesive.

3M™ UHMW-PE Tapes

Product	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	Transparent	Rubber	UHMW-PE	5.0 (0.13)	60# Densified Kraft Paper	6.7 (0.17)	26 (28)	30 (526)	275	-30 to 225 (-34 to 107)	General purpose tape to protect plastic and metal chutes, guide rails and containers from wear.
5423	Transparent	Rubber	UHMW-PE	10.0 (0.25)	60# Densified Kraft Paper	11.7 (0.30)	26 (28)	55 (963)	300	-30 to 225 (-34 to 107)	Excellent abrasion resistance and low coefficient of friction makes this an effective solution for noise and vibration problems.
5425	Transparent	Acrylic	UHMW-PE	3.0 (0.08)	55# Densified Kraft Paper	5.0 (0.13)	30 (33)	45 (788)	100	-30 to 225 (-34 to 107)	Solvent resistant adhesive with low coefficient of friction and abrasion resistance.
5430	Transparent	Acrylic	UHMW-PE	5.0 (0.13)	55# Densified Kraft Paper	7.0 (0.18)	75 (82)	40 (696)	175	-30 to 225 (-34 to 107)	High tack adhesive.
9324	Black	Acrylic	UHMW-PE	5.0 (0.13)	55# Densified Kraft Paper	6.5 (0.17)	75 (82)	40 (696)	175	-30 to 225 (-34 to 107)	Black version of 5430 tape.
9325	Transparent	Acrylic	UHMW-PE	3.0 (0.08)	55# Densified Kraft Paper	5.0 (0.13)	50 (55)	40 (696)	175	-30 to 225 (-34 to 107)	Thin version of 5430 tape.

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

3M™ Vinyl and Polyethylene Tapes

Mark, Identify, Color-Code, Seal Seams and More

These rugged tapes adhere aggressively and remove cleanly from most surfaces for a wide variety of applications in Automotive, MRO (Maintenance and Repair), Construction, Marine, Commercial Vehicle, and other industries.

Applications include marking hazards and aisles, color coding of pipes, fine line paint masking, decorative trim, high visibility splicing and more.

- "Color throughout" construction resists scrapes, wear, weathering and chemicals
- Wide variety of colors plus transparent
- Flexible backing with aggressive adhesive bonds, conforms and seals even on irregular surfaces
- Removes cleanly without leaving adhesive behind to clean up
- Stretches to mold to contours

See our lane marking applicators on page 49.

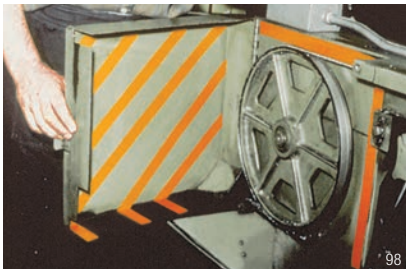
3M™ Vinyl Tapes clearly mark lanes, corridors and hazardous or no-go areas in factories, warehouses and hospitals. Durable vinyl backing resists abrasion, scuffing, moisture, weathering, acids and alkaline chemicals for long service life.

Red 3M™ Vinyl Tape immediately identifies fire protection equipment and apparatus, including fire extinguishers, alarm boxes and blanket boxes.

For color-coding pipes with 3M™ Vinyl Tapes, select from either nine vivid colors or transparent to let underlying color show through. Backing is colored throughout to help maintain ready visibility.

For fine line paint masking, 3M™ Vinyl Tape 471 provides sharp paint lines and the clean removal of a firm rubber adhesive.

To highlight low hanging objects, protruding equipment, or steps, 3M™ Vinyl Tape 5702 combines yellow and black for a striped combination that calls for attention.



Orange 3M™ Vinyl Tape identifies dangerous machine parts that may cause injury when enclosure doors are open or guards removed.

3M™ Vinyl 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
Premium Performance Vinyl Tapes										
471	Various	Rubber	Vinyl	4.1 (0.10)	5.2 (0.13)	26 (28)	14 (270)	150	40 to 170 (4 to 77)	Conformable and clean removal. Black, Blue, Brown, Green, Orange, Purple, Red, Transparent, White, Yellow. MIL-STD 2041D (SH).
4712	Various	Rubber	Vinyl	4.1 (0.10)	5.2 (0.13)	23 (25)	14 (270)	150	40 to 170 (4 to 77)	Linered version of 471 tape. MIL-STD 2041D (SH). Colors same as 471.
471+	Indigo	Rubber	Vinyl	4.1 (0.10)	5.3 (0.13)	35 (38.3)	13.9 (243)	191	Up to 250 (Up to 121)	Superior conformability, sharp paint lines, clean removal.
472	Black	Rubber	Vinyl	9.0 (0.23)	10.4 (0.26)	23 (25)	32 (560)	270	Up to 225 (Up to 107)	Abrasion and high temperature resistant.
477	Transparent	Rubber	Vinyl	6.0 (0.15)	7.2 (0.18)	24 (26)	24 (420)	230	40 to 170 (4 to 77)	Abrasion resistant.
General Purpose Vinyl Tapes										
764	Various	Rubber	Vinyl	4.1 (0.10)	5.0 (0.13)	18 (21)	13 (228)	180	60 to 85 (15 to 27)	Non-critical applications. Black, Blue, Brown, Gray, Green, Orange, Purple, Red, Transparent, White, Yellow.
Safety Stripe Tapes										
5700	Black/White	Rubber	Vinyl	4.2 (0.11)	5.5 (0.14)	19 (21)	15 (260)	170	40 to 170 (4 to 77)	Critical applications. Adhesive side printing for long-life.
5702	Black/Yellow	Rubber	Vinyl	4.2 (0.11)	5.5 (0.14)	19 (21)	15 (260)	170	40 to 170 (4 to 77)	Critical applications. Adhesive side printing for long-life.
766	Black/Yellow	Rubber	Vinyl	4.1 (0.10)	5.0 (0.13)	18 (21)	13 (228)	180	60 to 85 (15 to 27)	Non-critical marking applications.
767	Red/White	Rubber	Vinyl	4.1 (0.10)	5.0 (0.13)	18 (21)	13 (228)	180	60 to 85 (15 to 27)	Non-critical marking applications.
Electroplating and Anodizing Tapes										
470	Tan	Rubber	Vinyl	6.3 (0.16)	7.1 (0.18)	37 (40)	20 (350)	180	Up to 170 (Up to 77)	Conformable and abrasion resistant for masking various surfaces during electroplating and anodizing.
484	Tan	Rubber	Vinyl	5.6 (0.14)	6.7 (0.17)	22 (24)	23 (402)	220	Up to 170 (Up to 77)	Lower adhesion than 470 tape.
4731	Various	Rubber	Vinyl	5.8 (0.15)	7.0 (0.18)	20 (22)	17 (300)	230	40 to 170 (4 to 77)	Electroplating. Blue, Gray, Orange, Purple, White, Yellow.

3M™ Polyethylene 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
Polyethylene Tapes										
480	Transparent	Acrylic	Polyethylene	4.0 (0.10)	5.1 (0.13)	22 (24)	12 (210)	520	20 to 170 (-7 to 76)	Acrylic adhesive.
483	Various	Rubber	Polyethylene	3.9 (0.10)	5.0 (0.13)	18 (21)	10 (175)	300	Up to 170 (Up to 77)	Available in Black, Blue, Green, Red, Transparent, White and Yellow. MIL-STD 2041D (SH).

3M™ Preservation Tapes

Product Number	Color	Adhesive Type	Backing Material	Backing Thickness mils (mm)	Total Thickness mils	Adhesion to Steel oz./in. (N/100 mm)	Tensile Strength lb./in. (N/100 mm)	Elongation at Break %	Temperature Range °F (°C)	Comments
481	Black	Rubber	Polyethylene	7.7 (0.20)	9.8	25 (28)	15 (260)	510	20 to 170 (-7 to 76)	Preservation sealing tape. MIL-T-22085 Amend 3, Type IV. Clean removal up to 2 years.
4811	White	Rubber	Polyethylene	7.5 (0.18)	9.5	30 (36)	15 (260)	490	Up to 170 (Up to 77)	Preservation sealing tape. Clean removal up to 1 year.

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

3M™ Gripping Materials

Increase Friction and Reduce Slippage in Dry, Wet and Oily Conditions

When getting a grip is a performance requirement, strengthen your competitive advantage with 3M™ Gripping Material products. This 3M innovation utilizes 3M patented micro-replication technology to add thousands of micro gripping fingers on one side of a flexible backing to enhance control and improve gripping performance. Customers will see a noticeable increase in holding power, while using less force. Ultimately this can lead to enhanced performance and decreased fatigue.

Adhesives-backed versions stick on contact to many metals, plastics and sealed woods for a fast, easy increase in traction for applications such as fishing rods, ATV handlebars and forklift steering wheels.

Plain-backed versions offer some stretch and are designed for sew-on applications such as sports gloves or work gloves, where improved grip is a performance advantage.

Molded grips can be custom designed and manufactured for different high volume applications.

Performance Features:

- Increases friction to reduce slippage even in wet or oily conditions
- Immediate release when the hand lets go
- Abrasion and puncture resistant
- Water and oil resistance for secure attachment
- Performs across a broad temperature range from -40 to 160°F (-40 to 71°C) indoors and out

99

100

The unique micro-replicated surface structure of 3M™ Gripping Materials is engineered to provide different levels of friction, and when mated, create unmatched holding power, even in wet and oily environments.

Product	Color	Relative Durability 1–10: Low–High	Relative Friction 1–10: Low–High		Relative Tactility 1–10: Soft–Firm	Thickness mil (mm) without liner	Weight oz/yd² (g/m²) without liner	Temperature Use Range °F (°C)	Relative Chemical Resistance 1–10	Relative UV Resistance 1–10	Size
			Mated	Unmated							
Plain-backed: Washable nylon knit with moderate stretch for sew-on applications											
GM110	Black	10	10	3	10	33 (0.8)	10.7 (366)	-40 to 160 (-40 to 71)	10	9	24" x 72 yd
GM530	Black	8	8	7	8	33 (0.8)	10.7 (366)	-40 to 160 (-40 to 71)	8	7	24" x 72 yd
GM630	Grey	2	6	9	4	33 (0.8)	10.7 (366)	-40 to 160 (-40 to 71)	5	1	24" x 72 yd
GM640	Black	5	9	8	6	33 (0.8)	10.7 (366)	-40 to 160 (-40 to 71)	5	5	24" x 72 yd
Adhesive-backed: 3M pressure sensitive acrylic for bonding to high and low surface energy materials											
GM400	Black	10	10	3	10	33 (0.8)	12.9 (440)	-40 to 160 (-40 to 71)	10	9	24" x 72 yd
GM531	Black	8	8	7	8	33 (0.8)	12.9 (440)	-40 to 160 (-40 to 71)	8	7	24" x 72 yd
GM631	Grey	2	6	9	4	33 (0.8)	12.9 (440)	-40 to 160 (-40 to 71)	5	1	24" x 72 yd
GM641	Black	5	9	8	6	33 (0.8)	12.9 (440)	-40 to 160 (-40 to 71)	5	5	24" x 72 yd
GM731	Clear	10	10	3	10	33 (0.8)	12.9 (440)	-40 to 160 (-40 to 71)	10	2*	24" x 72 yd

*Yellows

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

For when you need to splice it up.

We offer a wide range of repulpable and non-repulpable tapes for every kind of splice so you can continue your production pace at full speed. Our products are designed to provide dependable splices. From temporary to permanent adhesion needs, our tape experts can help you select the best tape for your demanding application.

3M™ Splicing and Repulpable Tapes

Tapes for Paper Mills, Printers, Converters and Newspapers

From core starting to roll closing/tabbing and all the splices in-between, this totally repulpable line offers choices for the dependability you need to keep production at full speed. Backings and adhesives are engineered for optimum strength on every type of splice: flying, overlap, butt and general purpose.

Temporary Tapes

Good shear strength, high tack and reliable heat resistance

Permanent Tapes

High shear strength to stay with paper through sheeting, printing, slitting and perforating

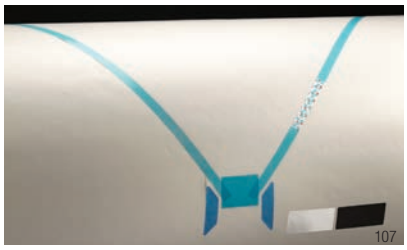
3M™ Repulpable Splittable Flying Splice Tape eliminates the time and work of "V" and "W" patterns with a straight across flying splice. Advanced coating provides a smooth and consistent opening force. A fiber-free break open means less blanket cleanup.

High tack 3M™ Temporary Single Coated Repulpable Tapes are available in white, blue, and kraft for dependable core starting, roll closing and butt splicing.

3M provides a complete line of core starting tapes that are easy to use and stick reliably every time.

For finished mill overlap splicing, 3M™ Repulpable Permanent Tape provides high shear strength without adhesive oozing or bleed through.

One simple splice with 3M™ Splittable Flying Splice Tape replaces complex patterns.



For "V" and "W" pattern splices, the 3M™ Splicing System provides all the splicing products you need.

3M™ Repulpable Splicing Tapes for the Paper Mills

Product	Color	Comments	Tape Thickness mils (mm)	Tape Structure		Liner		Heat Resistance °F (°C)	FDA Compliant*
				Backing/Carrier	Adhesive	Type	Thickness mils (mm)		
Permanent Double Coated									
405	Lt. Green	Excellent for raw and starch-treated papers	3.0 (0.08)	Tissue Carrier	Repulpable	UPVC	1.7 (0.04)	400 (200)	—
900	Blue	Recommended for light weight coated papers	2.5 (0.06)	Tissue Carrier	Repulpable	Paper	3.2 (0.08)	400 (200)	Yes
900B	Blue	Recommended for supercalendered papers	2.5 (0.06)	Tissue Carrier	Repulpable	Paper	3.2 (0.08)	400 (200)	Yes

*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).

3M™ Repulpable Splicing Tapes for the Paper Mills (cont.)

Product	Color	Comments	Tape Thickness mils (mm)	Tape Structure		Liner		Heat Resistance °F (°C)	FDA Compliant*
				Backing/Carrier	Adhesive	Type	Thickness mils (mm)		
Permanent Single Coated									
901	Lt. Green	Excellent for raw and starch-treated papers	4.0 (0.10)	Paper	Repulpable	UPVC	1.7 (0.04)	400 (200)	—
910	Blue	Recommended for coated and uncoated papers and paperboard	4.0 (0.10)	Paper	Repulpable	—	none	400 (200)	Yes
914	Blue	Recommended for high speeds, digital business forms, perforated splicing tape	4.0 (0.10)	Paper	Repulpable	—	none	400 (200)	Yes
9103	Blue	Printable, coatable backing	4.5 (0.11)	Paper	Repulpable	Paper	2.9 (0.07)	400 (200)	Yes
9960	Blue	Thinnest butt splicing tape for light weight uncoated and coated and supercalendered papers	2.2 (0.06)	Paper	Repulpable	Paper	2.9 (0.07)	350 (180)	Yes
9969	Blue/White	Very thin butt splicing/cover tape for uncoated, newsprint and most coated papers	2.2 (0.06)	Paper	Repulpable	Paper	2.9 (0.07)	350 (180)	Yes
Temporary Double Coated									
906	Blue/White	Flying splice at the Off-Machine Coater (OMC)	3.0 (0.08)	Tissue Carrier	Repulpable	Paper	3.2 (0.08)	400 (200)	Yes
9069	Blue	Excellent for newsprint or directory stock	3.5 (0.09)	Tissue Carrier	Repulpable	Paper	3.2 (0.08)	400 (200)	—
9977	Blue	High strength tissue for flying splices where extra strength is needed	4.0 (0.10)	Tissue Carrier	Repulpable	Paper	3.2 (0.08)	400 (200)	—
R3227	Blue/White	General purpose temporary splicing	3.5 (0.09)	Tissue Carrier	Repulpable	Paper	3.2 (0.08)	400 (200)	Yes
R3257	White	Thin tissue, very high tack	4.1 (0.11)	Tissue Carrier	Repulpable	Paper	3.2 (0.08)	400 (200)	Yes
R3287	White	Heavy tissue, very high tack	5.5 (0.14)	Tissue Carrier	Repulpable	Paper	3.2 (0.08)	400 (200)	Yes
Temporary Single Coated									
R3127	Blue/ White/Kraft	General purpose, excellent holding power	4.5 (0.11)	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
R3187	Blue/ White/Kraft	General purpose, strong repulpable backing	7.5 (0.19)	Paper	Repulpable	—	none	400 (200)	Yes
Splittable Flying Splice (SFS)									
R3345	Blue	Thin SFS tape for flying splices through supercalendering operations, and permanent butt splices for light weight coated papers	4.8 (0.12)	Paper	Repulpable	Paper	2.9 (0.07)	400 (200)	—
R3375	Blue	Strong SFS tape for flying splices on heavy papers and high tension web processing through supercalendering operations	6.5 (0.16)	Paper	Repulpable	Paper	2.9 (0.07)	400 (200)	—
R3379	Blue	Repulpable Splittable Flying Splice Tape is used for high speed splicing conditions when high tack is required and to compensate for roll profile issues	7.5 (0.18)	Paper	Repulpable	Paper	2.9 (0.07)	400 (200)	—
R3389B	Blue	Repulpable Splittable Flying Splice Tape for heavyweight papers in manual and automatic splicing equipment for high speed splicing conditions when high tack is required and to compensate for roll profile issues; Additional blue color on the backside	7.0 (0.18)	Paper	Repulpable	Paper	2.9 (0.07)	400 (200)	—

*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 on these pages should be considered representative or typical only and should not be used for specification purposes.

3M™ Splicing Tapes for the Printing Industry

Product	Color	Comments	Tape Thickness mils (mm) without liner	Tape Structure		Liner		Heat Resistance* °F (°C)	FDA Compliant†
				Backing/ Carrier	Adhesive	Type	Thickness mils (mm)		
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
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)	—
6359	Black	Optically detectable tape that provides all-in-one splicing solution engineered to be detected by sensors to trigger roll-to-roll splicing	6.5 (0.17)	Paper	Repulpable	Paper	2.4 (0.06)	400 (200)	—
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)	—
8387	Pink/Black	Designed to stick to LSE substrates such as LDPE, BOPP and PP	7.0 (0.19)	PET/PE	Rubber	Paper	3.0 (0.9)	n/a	—
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)	—

*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).

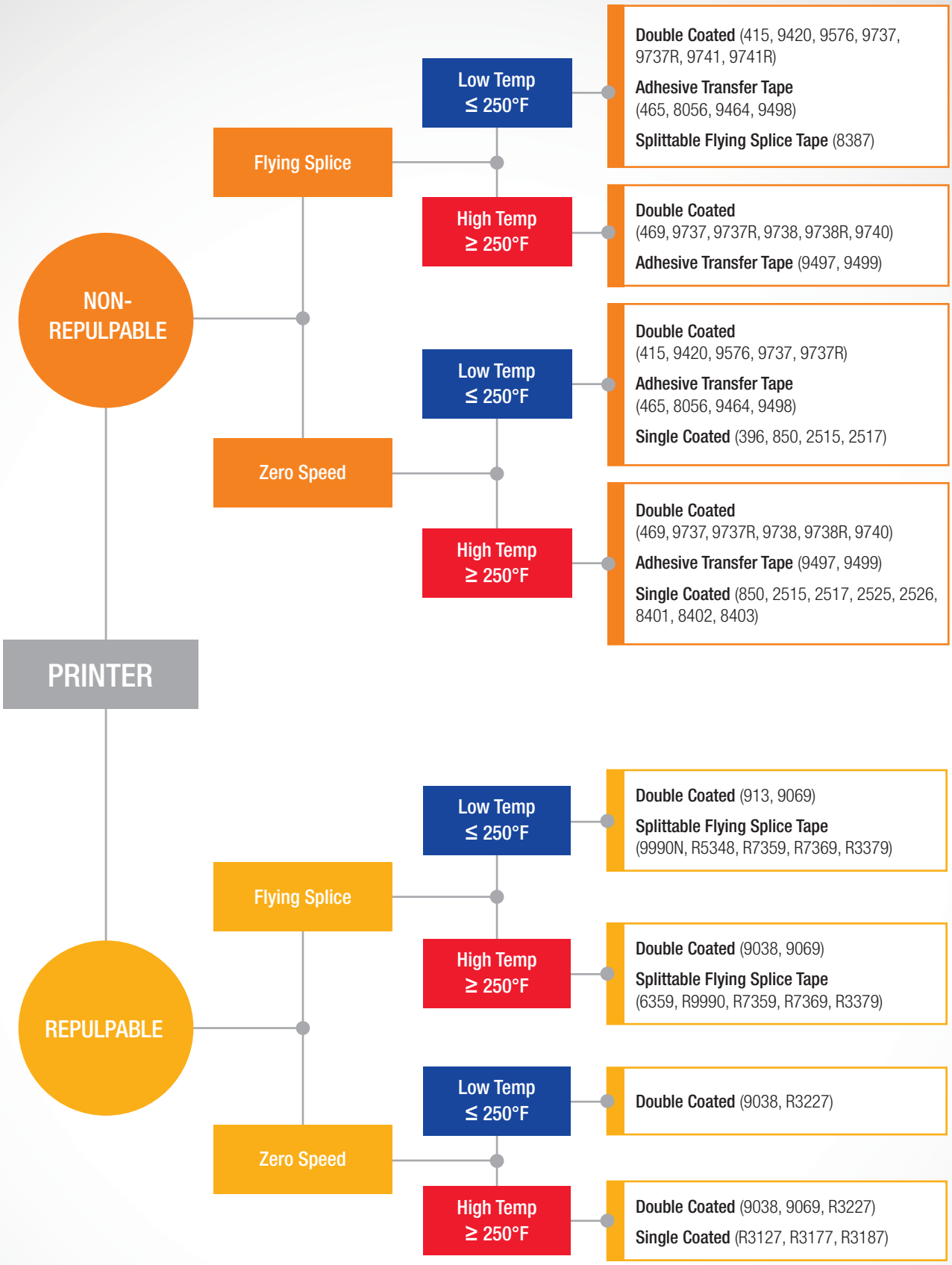
3M™ Non-Repulpable Splicing Tapes (All tapes in this chart can be considered for zero speed or flying splices)

Product	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/ Yellow	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 on these pages 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.

Easy to use.

Fast and effective.

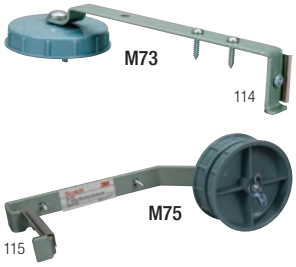
From hand-held to walk-behind, or custom-mounted to portable, our applicators and dispensers are specially designed for use with 3M Masking and Specialty Products.

3M™ Lane Marking Applicators

3M™ Lane Marking Applicator M1

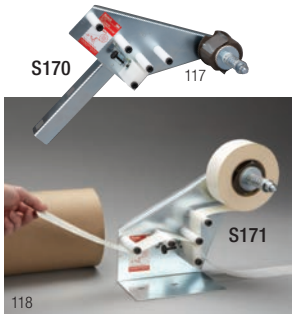
Product	Product Name	Product Description	Color
M1	3M™ Lane Marking Applicator M1	Lane Marking Applicator M1 is used to apply vinyl tape to floor surfaces in manufacturing and commercial plants. General use.	Red
M77	3M™ Lane Marking Applicator M77	Lane Marking Applicator M77 is used to apply vinyl tape to floor surfaces in manufacturing and commercial facilities. Heavy duty.	Red

3M™ Tape Dispensers



3M™ Utility Bracket Dispensers

3M™ Repulpable Tape Applicator



3M™ Set Change Dispensing Systems

Product	Product Name	Product Description	Color
H330	3M™ Dispenser for Flashing Tape H330	A hand-held dispenser that provides a quick and easy method to apply 3M™ All Weather Flashing Tape 8067 and 3M™ Sealing Tape 8777. Accommodates up to a 6 inch wide tape on a 3 inch core.	Red
H331	3M™ Dispenser for Flame Retardant Tape H331	A hand-held dispenser that provides a quick, easy and inexpensive method to apply 3M™ Glass Cloth Tape 398FR and 3M™ Flame Retardant Glass Cloth Tape 399FR. Accommodates up to a 6 inch wide tape on a 3 inch core.	Gray
M73	3M™ Utility Bracket Dispenser M73	Utility bracket dispensers can be custom-mounted on walls, equipment, tables, and to the sides of work stations. This model holds 1/4 inch to 1 inch wide.	Blue
M75	3M™ Utility Bracket Dispenser M75	Utility bracket dispensers can be custom-mounted on walls, equipment, tables, and to the sides of work stations. This model holds 1/4 inch to 2 inches wide.	Blue
RTA500	3M™ Repulpable Tape Applicator RTA500	A hand-held tape dispenser designed to dispense 3M linered repulpable tapes, while simultaneously removing the liner.	Tan
S170	3M™ Set Change Dispensing System S170	Use for dispensing repulpable core starting tape while removing liner. Accommodates up to 2 inch wide tape.	Silver
S171	3M™ Set Change Dispensing System S171	Table top version. Use for dispensing repulpable core starting tape while removing liner. Accommodates tape up to 2 inches wide.	Silver

See our vinyl tapes on page 40.

3M™ Dispensers for Large Area Masking

Scotch® Cart Masker 06781

Scotch® Slimline Apron Taper 06864

Scotch® Apron Tapers

Product	Product Name	Product Description
06781	Scotch® Cart Masker 06781	Portable masker provides a convenient method to adhere masking tape to the edge of masking paper for paint masking. Features two paper dispensing stations. Up to 24" wide paper.
06780	3M™ Overspray Protective Sheet Masker 06780	Portable masker designed to dispense sheeting. Allows for easy hand cutting of plastic sheeting.
06864	Scotch® Slimline Apron Taper 06864	Dispenses three widths of masking paper up to 18" wide. Side hooks hold different tape widths for special needs.
06865	Scotch® Apron Taper 18" 06865	Provides a convenient method for adhering masking tape to the edge of masking paper for paint masking. Features top loading, and easy operation and adjustment.
06866	Scotch® Apron Taper 36" 06866	

Glossary

This glossary is compiled by the Pressure Sensitive Tape Council (PSTC) and 3M (terms identified with an asterisk). PSTC is the North American trade association for tape manufacturers and affiliate suppliers, dedicated to helping the industry produce quality pressure sensitive adhesive tape products in the global marketplace.

Abrasion Resistance
The ability of a tape to withstand rubbing and still function satisfactorily.

Accelerated Aging
A means whereby the deterioration of a tape encountered in natural aging may be accelerated and reproduced in the laboratory.

Accelerated Weathering (Weathering)
Exposure in a chamber to ultraviolet light, heat, and water whereby the effect of outdoor exposure on a tape can be approximated.

Acrylic Adhesive*
A pressure sensitive, viscoelastic blend of acrylic-based materials which may be modified by tackifying additives. Acrylic adhesives are a very broad class of materials and come in many types to achieve different properties.

Adhesion to Backing
The bond produced to the backing of the same tape or another tape backing.

Adhesive Deposit or Residue
Adhesive that is pulled away from the tape upon removal and remains on the surface to which it has been applied.

Adhesive Transfer
When the adhesive on a tape either splits or transfers completely from the backing on to the surface it has been applied to either during unwind or removal, resulting in tacky areas on the surface.

Anchorage
The specific adhesion of a pressure sensitive adhesive to a face material or an anchor coat.

AOG*
Aircraft On Ground

Article Letters
Letters if a MSDS does not exist on a product.

Backing
A relatively thin flexible material to which the adhesive is applied. Theoretically, any material that is reasonably flat, thin and flexible can be used as a tape backing.

Backsize
An occlusive coating applied to the non-pressure sensitive side of a porous backing, such as paper, in order to provide a satisfactory surface that the pressure sensitive adhesive side can contact when the tape is wound into a roll.

Bleed-through (Bleeding)
Penetration through the tape of a coloring material (paint, etc.) onto the surface to which the tape is applied.

Blocking
Adhesion between the sheets of the plies of rolls of coated material, usually due to extreme conditions of pressure, temperature or humidity.

BSR*
An acronym for Buzz, Squeak and Rattle.

Bursting Strength
The ability of a tape to resist damage when a force is applied evenly and perpendicularly to the surface of a tape.

Butt Splice (Butt Joint)*
Splices made on certain converting equipment (especially in heavy basis weight paper, boards, etc.). The trimmed ends of the web do not overlap but are held together end-to-end with single-sided adhesive tape, or in some similar fashion. A strip of paper or tape may also be laminated on one or both sides to form a continuous web.

Caliper
The thickness (as of a sheet of paper) measured under specified conditions. See also THICKNESS.

Carrier
A webstock that holds a pressure sensitive adhesive, especially used to refer to double-faced or double coated tapes.

CID*
In relation to military specs = Commercial Item Description.

Clean Removal*
When a tape is expected to remove cleanly from the substrate after a period of time.

Coating Weight
The weight of a coating per unit area. In SI-units expressed as grams per square meter (g/m^2).

Cohesion (Cohesive Strength, Internal Bond)
The ability of the adhesive to resist shear stress and splitting. Good cohesion is necessary for clean removal.

Cold Flow
The tendency of a pressure sensitive adhesive to act as a heavy viscous liquid over long periods of time. Such phenomena as oozing and increase in adhesion with time are the result of this characteristic.

Color Stability
The ability of a tape to retain its original color, particularly when exposed to light.

Conformability*
The ability for a tape to make arcs, circles, go into depressions, go over protrusions and still stay in one piece without slivering, tape lifting, necking down.

*Compiled by 3M.

Glossary (cont.)

Controlled Unwind*
When a balance is achieved between too low of an unwind, allowing the tape to prematurely unwind from its own backing, or too high, causing premature slivering or breaking when unwinding from its roll.

Corona Resistance
The ability of an elastomeric adhesive, coating, or sealer acting as an insulator to withstand the effects of high voltage discharge. Indications of failure appear as surface cracks.

Cratering*
A paint defect that when viewed under a microscope resembles a crater with a depression in the center and a raised rim around the perimeter. This usually is caused by a surface contaminant like a particle of dirt, gel particle or a surface tension change like from an oil drop or silicone contamination.

Creep
The slow movement of the adhesive or backing under shear stress.

Crepe Paper*
Paper with a crinkled or puckered texture. This allows the paper to stretch or elongate making it useful to curve and conform to irregular surfaces better than flat paper.

Cross-linking
Developing a three-dimensional molecular structure in an adhesive normally activated by heat or irradiation. An improvement in shear resistance, high temperature resistance, and oil or solvent resistance will normally result.

Cure
To alter the properties of an adhesive by chemical reaction, which may be condensation, polymerization, or vulcanization. Usually accomplished by the action of heat and catalysts, alone or in combination, with or without pressure.

Curl
The tendency of paper by itself or in a laminate to bend or partly wrap around the axis of one of its dimensions.

Dead Soft Aluminum*
Aluminum that has had no annealing or hardening.

Dead Stretch*
The ability for a tape to be pressed into a depression and stay in place as if it were "dead" or without "memory/recovery."

Delamination
A separation or splitting of the tape such as separation of the backing into two distinct layers, separation between laminations of a tape consisting of more than one backing, separation between filaments and backing of a filament reinforced tape, or separation of the adhesive from the backing.

Dewetting*
When a paint appears to bead up or not flow out on a surface, like water on a freshly waxed car.

Dielectric Strength
The measure of the maximum voltage stress that a single layer of tape can withstand before dielectric failure occurs, the test being carried out under prescribed conditions.

Dimensional Stability
That property of a material that relates to the constancy of its dimensions, particularly in relation to external influences such as moisture or temperature.

Double Coated
An adhesive applied to both sides of a carrier.

Double Process*
A sandblasting procedure in which frosting is done first and sunk lines are done last. This requires frosted areas to be uncovered and recovered for the frosting process.

Edge Curl
The peeling back or lifting of the outer edge of an applied tape in a curved manner.

Edge Lift
The tendency for the edge of an adhesive label to lift from a surface to which it has been adhered.

Edge Seepage*
When paint gets under the edge of a tape, often appearing as hairlines of paint perpendicular to the tape edge.

Elasticity
The extensible property of adhesive films or adhesive interfaces to contract and expand in such a manner as to overcome the differential contraction and expansion rates that the bonded adherents may exhibit.

Elastomer
An elastic, polymeric substance, such as natural or synthetic rubber.

Electrolytic Corrosion Factor
A measure of the tape's corrosive effect on an electrical conductor, particularly copper. This is particularly important in the selection of tapes for electrical insulation.

Elongation (Stretch, Ultimate Elongation)
The distance a tape will stretch in the machine or cross direction before breaking under controlled conditions, expressed as a percentage of original length. Elongation is not necessarily an indication of conformability.

Emissivity*
All solid surfaces emit radiant energy. The emissivity of a material is a ratio of the actual energy emitted from that surface to the maximum possible, or "black body", radiant energy. The maximum possible emissivity is unity and it is a unit-less parameter.

Enamel Paint*
A broad classification of free-flowing pigmented finishing materials which dry to a smooth, hard finish and usually possess a gloss.

ESD*
ElectroStatic Discharge

Extruded*
A manufacturing process where material is forced through a nozzle (like extruded film or backing). Better for lay-flat than skived.

Face Stock
Any paper, film, fabric, laminate, or foil material suitable for converting into pressure sensitive material stock. In the finished construction this web is bonded to the adhesive layer and becomes the functional part of the tape construction.

Fall-off
When a tape pulls completely from the surface to which it is applied and drops off.

*Compiled by 3M.

Glossary (cont.)

F.A.R. 25.853(a)*
Federal Aviation Regulation 12-second vertical burn test.

Fatigue
A weakness resulting from stress created by repeated flexing or impact force upon the adhesive-adherent interface.

Filaments
Thin, longitudinal yarns or threads of glass, polyester, nylon or other high strength materials.

Fine Line*
Tapes that are used in the painting industry to give a very sharp paint line. Usually made with plastic type backings that are both smooth and conformable.

Flame Resistance
The ability of a tape to withstand exposure to flame. Fireproof materials will not burn even when exposed to flame. Flame-resistant (fire-retardant, self-extinguishing) materials will burn when exposed to flame, but will not sustain the burn after the flame is removed.

Flame Retardant*
Serving or tending to retard 1) slows flame propagation 2) meets industry regulations 3) is not flameproof 4) is not necessarily high temp performance.

Flatback Paper*
Paper with a flat (not crinkled) texture. This allows the paper to retain its original shape making it useful for maintaining a straight line and smooth backing feel.

Fluting
Distortion of a roll of tape such that the layers no longer form a circle.

Frosting*
Lightly removing the polish from a monument by using abrasive to give texture and a white contrast to the engraving.

Gapping
Openings between layers of tape within a finished roll.

General Paint Masking*
Where the paint line is important, but not critical to function or appearance on the finished part.

General Purpose Holding*
Where a tape is expected to temporarily hold miscellaneous items, such as during an assembly process.

Gloss
A light reflection characteristic of tape backings, usually expressed by such terms as glossy, low gloss, matte, etc.

Gross Masking*
Any material like paper or plastic that can be used to cover a large area, usually held in place with tape, that protects the area from paint overspray.

Hand-cut*
Cutting/carving design by hand to achieve desired pattern in sandblast stencil rubber.

Heat Seal
An adhesive film intended to be reactivated by the application of physical or chemical changes caused by exposure to high temperatures.

High Holding Strength — Masking*
Where a masking tape is expected to hold for long periods of time (several hours) to a surface to be painted or hold large areas of gross masking materials.

High Temperature Masking*
Where a masking tape is expected to withstand bake oven temperatures up to 300°F (149°C) for 30 minutes.

High Unwind*
When a tape is very difficult to unwind from its own roll. Can result in slivering off the roll.

High-Speed Unwind
A term referring to the process of unwinding or dispensing of tapes at a relatively high rate of speed, usually over 15 meters per minute.

Holding Power (Shear Adhesion, Shear Resistance)
The ability of a tape to resist static forces applied in the same plane as the backing. Usually expressed in a time required for a given weight and length of tape to shear free from a vertical panel.

Hot Melt (Pressure Sensitive Adhesive)
A pressure sensitive adhesive, applied to the backing in hot liquid form, which then cools to form a conventional pressure sensitive adhesive.

Humidity
The moisture content of the air. Actual humidity is the number of grams of moisture in the air at any given time. Relative humidity is the percent of moisture relative to the maximum that air at any given temperature can retain without precipitation.

Hygroscopic
A tendency of some materials to readily absorb moisture from the atmosphere.

Impact Resistance (Shock Resistance)
The ability of a tape to resist sudden impacts, pulls, or shocks as may sometimes be encountered by packages in transit.

Imprinting (Ghosting)*
Can occur when a vapor barrier, such as plastic sheeting, is placed over a painted surface and exposed to heat and/or UV. Moisture trapped under the plastic can't evaporate so it is driven back into the paint, leaving an imprint.

Insulation Resistance
The ability of tape to prevent the flow of electrical current across its surface, usually measured on the backing.

Label Stock
Pressure sensitive insulation materials furnished in roll or sheet form with liner, which can be later printed, frequently die-cut, and intended for use as labels.

Lacquer*
Various clear or colored synthetic organic coatings that typically dry to form a film by evaporation of a solvent, frequently a solution of cellulose derivative (as nitrocellulose).

Lap Joint
A joint made by lapping one material over another to provide a mated area that can be joined with an adhesive.

Latent Stain
A stain in a surface to which tape has been applied, which does not become noticeable until some time after the tape is removed, usually after the surface has been exposed to sunlight or heat.

*Compiled by 3M.

Glossary (cont.)

Latex Paint*
A water emulsion of plastic, obtained by polymerization, used especially in coatings that can recoalesce to form a thin film.

Leader Tape*
Used to splice photographic film leaders together for film processing.

Lifting
A situation where a section of tape has pulled away from the surface to which it has been applied.

Low Adhesion Backsize (LAB)*
Surface treatment on the back (non-adhesive coated side) of a tape that allows tape to unwind when in roll form. It also helps coatings like paint to stick to its surface to prevent paint flaking.

Low Tack Masking*
Where a very low removal force is desired, often for use on delicate surfaces.

Low Temperature Masking*
Where a masking tape is expected to withstand bake oven temperatures up to 200°F (93°C) for 30 minutes.

Medium Temperature Masking*
Where a masking tape is expected to withstand bake oven temperatures up to 250°F (121°C) for 30 minutes.

Metal Foil
Thin, flexible sheets of metal, such as aluminum, copper and lead, used as tape backings because of their inherent properties such as weather resistance, electrical conductivity, reflectivity, etc.

Moisture Vapor Transmission Rate
A measure of the rate of water vapor transmission through a pressure sensitive product usually measured in grams per square meter per 24 hours.

Necking Down*
When a tape's width is reduced (usually due to stretching or elongating the tape) resembling the neck of a beverage bottle.

Nomograph*
A graphical means of representing properties of a material or system as a function of multiple parameters. A nomograph is used to describe the storage modulus and loss factor of viscoelastic damping materials as a function of temperature and frequency.

NPE*
An NPE number is used to designate an experimental product. NPE products are often provided to customers for evaluation purposes only, and may or may not be commercialized.

Off-Core
A roll of tape in which the layers are in correct alignment, but the tape is displaced sideways on the core.

Off-Site Blasting*
Process where names and dates are blasted onto monument surface after installation of monument.

Oozing
A "squeezing out" of the adhesive from under the backing. Occurrence when a tape is in a roll form causes the edges of the roll to become tacky.

Opacity
The ability of a tape to prevent the transmission of light.

Opaque*
Cannot be seen through.

Out-Gassing
The release of volatile components under heat or vacuum.

Overspray*
Light coating of paint, usually from excess airborne paint, that can drift onto adjacent surfaces that should not be coated.

Overlap Joint (Overlap Splice, Lap Splice, Lap Join or Lap Joint)*
A type of adhesive joint, used normally on roll goods, in which the surface of one edge of the product extends over the edge of the product to be spliced normally at least one half inch, and is spliced with a single coated tape, adhesive or double coated tape.

Paint Flaking*
The breaking of paint (that has been dried on the back of a tape) into small pieces such that when the tape is flexed, as during removal from a job, it falls off the back of the tape.

Pattern Coated
A term that refers to the width and spacing arrangement of strips of adhesive laid down parallel to machine direction and across the width of pressure sensitive stock during its production.

PCB*
Printed Circuit Board

PE*
The abbreviation for polyethylene. Usually extruded in a single (mono) layer.

Peel Adhesion
The force per unit width required to break the bond between a pressure sensitive adhesive tape and the surface to which it has been applied when the tape is peeled back at a controlled angle at a standard rate and condition.

Picking and Weeding*
The process of removing the cut stencil pieces prior to sandblasting.

Plastic Sheeting*
Large area plastic film used to cover or protect a surface or area from airborne particles.

Plasticization
The softening of an adhesive when exposed to migrating plasticizers or oils.

Plotters/Cutters*
Computerized machines that cut lettering and designs into sandblast stencil are called plotters. There are IBM compatible plotters that require a "T" punch, Gerber plotters that require a "S" punch and friction plotters that require no punch.

PP*
Abbreviation for polypropylene. Usually manufactured as a single (mono) layer via a casting process.

*Compiled by 3M.

Glossary (cont.)

PPAP*
Production Part Approval Process — an automotive market requirement that can increase a product's chances of meeting specifications.

Pressure Sensitive
A term commonly used to designate a distinct category of adhesive tapes and adhesives which in dry form (solvent/water free) are aggressively and permanently tacky at room temperature and that firmly adhere to a variety of dissimilar surfaces upon mere contact without the need of more than finger or hand pressure. These products require no activation by water, solvent, or heat in order to exert a strong adhesive holding force toward such materials as paper, plastic, glass, wood, cement, and metal. They have sufficient cohesive holding power and elastic nature so that, despite their aggressive tackiness, they can be handled with the fingers and removed from smooth surfaces without leaving a residue.

Priming
Application of a thin layer of adhesive-like material to a backing that serves as a bonding agent between the backing and the final adhesive coat.

PTFE*
Abbreviation for polytetrafluorethylene.

Quick Stick (Finger Tack, Initial Adhesion, Wet Grab)
See TACK.

Release Force
The measure of the force required to separate a unit width of pressure sensitive tape from a release coated surface at a controlled angle and speed.

Release Liner
A web of sheet material used as a protective liner, which covers the adhesive side of the tape. It is removed prior to application. Most frequently found on double-sided tapes and label stocks.

Repulpable*
Paper tapes that can be recycled to the process without contamination of the broke pulp.

Resonant Vibration*
A condition of oscillation caused when a small amplitude of periodic input has a frequency approaching one of the natural frequencies of the driven system. Resonant frequencies are determined by the physical parameters of the object or system. i.e. Marching troops "break step" when marching over a bridge such as to not to vibrate the bridge in resonance in the event the natural frequency of the bridge structure matches the frequency of the troops marching in step.

Rewinding
The operation of winding the webstock from the reel onto a core to produce rolls of the desired width, diameter and tension.

Rope Stock
A smooth paper made wholly or largely of hemp fiber for tensile strength.

Rubber Adhesive*
A pressure sensitive, viscoelastic blend of polymeric rubber-based materials and tackifying resin. The rubber materials may be natural or synthetic. Rubber adhesives are a very broad class of materials and come in many types to achieve different properties.

Sandblast Filler*
Adhesive that is brushed on monuments to assure firm adhesion of stencil.

Saturation (Impregnation)
Adding materials (saturant) to the backing for improvement of physical properties and resistance to various deleterious environments.

Self-Seal
An adhesive joint that is accomplished by coating both adherent surfaces, and bringing them under pressure; an elastomeric adhesive (cohesive) used on envelope flaps, box closures, etc, whereby the adhesive film will bond only to itself.

Shear Adhesion
The time required, under specified test conditions (surface area, weight load), to slide a standard area of pressure sensitive tape from a standard flat surface in a direction parallel to the surface.

Shear Strength After Solvent Immersion
The force required to separate a bond by shear force after immersion in a typical varnish solvent under designated conditions.

Sheet Resistivity*
A measure of electrical resistivity obtained by measuring the voltage drop across two opposite sides of a square planer area at known current. The geometry of this measurement allow a square of any size to be used. Sheet resistivity is commonly used to measure the electrical characteristics of thin films. Units are ohms or more commonly ohms/square.

Silicone Adhesive*
A pressure sensitive, viscoelastic blend of polymeric silicone-based materials and a silicone tackifying resin. Silicone adhesives are typically higher temperature performing pressure sensitive adhesive materials.

Single Faced (Coated)
A tape to which a pressure sensitive adhesive is applied to only one side of the backing.

Single Process*
A sandblasting procedure in which sunk lines are sandblasted first and frosting is done last.

Sinking/Blasting*
Blowing sandblast abrasive at areas where the rubber has been removed to create recessed lines one half inch deep.

Skived*
A manufacturing process where material is shaved (like shaving off a layer of soap). Usually better for wrapping than extruded material.

Slip Sheet or Interliner
See RELEASE LINER.

Slivering
When the tape tears or breaks into small pieces, either on unwind or on removal from a surface.

Slot Feed*
A punched "S" pattern using several round holes and a long, oblong slot hole.

Solvent/Chemical Resistant*
Ability to resist common solvents or chemicals.

*Compiled by 3M.

Glossary (cont.)

Solvent Trap*
When a freshly painted surface is painted or taped over too quickly not allowing the solvent to evaporate. Can result in a haze, surface takes on the shape of what ever touches it, adhesive transfer due to solvents attacking the adhesive on the tape.

Splice*
A joint made in a continuous sheet of paper with a glue or adhesive-type tape when there is a break in the web caused by winding or rewinding into a roll.

Static Charge*
Static (or sometimes electro-static) charge is electrical charge that has typically been generated by the tribocharging that results from the separation of two dissimilar materials. It may also occur as the result of previous direct contact with a power source. Usually measured in volts.

Static Dissipative*
A class of materials with sufficient electrical conductivity to dissipate or bleed static charge prior to an ESD "event" or rapid discharge of energy. Static dissipative materials have electrical resistivities in-between semi-conductors and insulators, typically between 1E09 ohms/sq and 1E12 ohms/sq.

Stencil Press*
A machine that presses and cuts plastic letters into rubber stencil.

Subsequent Adhesion
The force required to remove a unit width of pressure sensitive tape from a standard panel after it has been in contact with a release liner for a given period of time. This must be compared with the adhesion of the same tape that has not been in contact.

Sunk Lines*
Individual lines about 1/16" wide or larger that create lettering and designs.

Sunlight Exposure — up to 7 days*
When exposure to direct sunlight is expected, even on a transparent surface like glass.

Surface Energy (Surface Wetting Ability)
The measure of surface tension in dynes. The lower the surface energy of a substrate, the more difficult it becomes for an adhesive or coating to wet out that surface.

Surface Treating
Any method of treating a polyolefin so as to alter the surface and render it receptive to inks, paints, lacquers and adhesives such as chemical, flame and electronic oxidation.

Tack
The property of a pressure sensitive adhesive that allows it to adhere to a surface under very slight pressure. It is determined by the ability of the adhesive to wet quickly the surface it contacts.

Tape Lifting*
When a tape prematurely releases from a surface after it has been firmly rubbed down to the surface.

Tear Resistance
The force required to propagate a tear in a tape in a given direction after the tear has been initiated.

Telescoping
A sideways sliding of the tape layers, one over another, such that the roll looks like a funnel or a telescope, usually occurring over a period of time.

Tensile Strength
The force required to break a unit width of tape by controlled pulling on opposite ends of the piece.

Thermal Conductivity*
The rate of thermal energy transfer through a material by conduction.

Thickness (Caliper, Gauge)
The perpendicular distance from one surface of either a tape, backing or adhesive to the other, usually expressed in mils, thousandths of an inch or millimeters. This is usually measured under controlled slight pressure with a special gauge.

Tractor Feed*
A punched "T" pattern using round holes.

Transfer Tape
A pressure sensitive adhesive unsupported applied to a two-side release coated liner.

TSCA*
Toxic Substances Control Act

UHMW-PE Film*
Ultra High Molecular Weight.

UL Listed*
Underwriter Laboratory certification of products for product compliance for public safety (i.e. electronics, heating and ventilation, etc.) as well as businesses for compliance to industry standards (i.e. ISO).

UL 181*
UL181A, UL181B, and UL181B-FX are different in that those must be UL Listed and that information must be printed on the tape surface. HVAC/R contractors often deal with UL 181A (maybe foils) and UL 181 F-FX.

UL 723*
UL 723 deals mainly with flammability.

Unwind or Unwind Adhesion
The force required to remove tape from a roll under prescribed conditions.

Use on Masking Machines*
When tape and a gross masking material are automatically dispensed on a piece of equipment and applied to each other for large area protection from paint overspray.

Varnish*
A liquid preparation that when spread and allowed to dry on a surface forms a hard lustrous typically transparent coating.

Water Penetration Rate (WPR)
The weight of water transmitted through a controlled area of tape under a specified time and conditions.

Water Vapor Transmission (WVTR)
The weight of water vapor allowed through a controlled area of tape within a specified time period and under controlled conditions.

*Compiled by 3M.

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