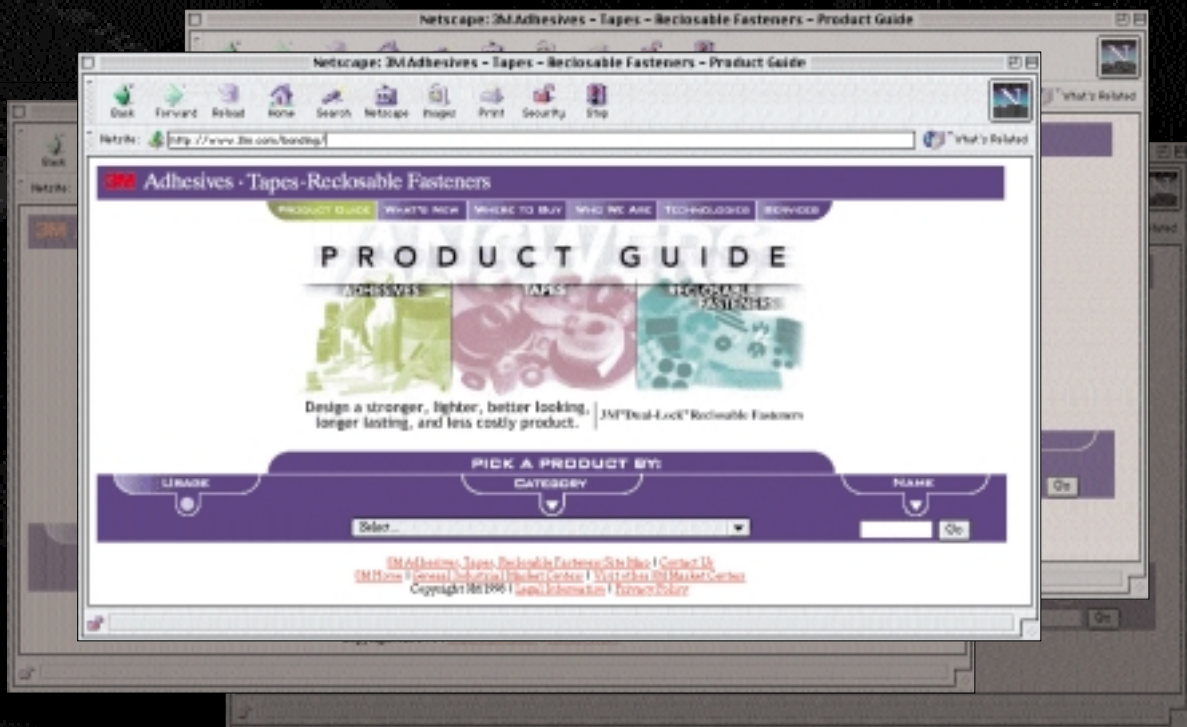


3

Double Coated Tapes, Adhesive Transfer Tapes and Reclosable Fasteners



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Helping you design and build better products.

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If you think these benefits can help you bring a better, more competitive product to market, you'll want to evaluate the many adhesive technologies available from 3M.

These industrial tapes and reclosable fasteners represent more than 50 years of 3M leadership in providing design and production engineers with innovative adhesive formulations and application systems. Today you can rely on 3M for the **most comprehensive and versatile line** of adhesive tapes available. You'll find 3M options for joining metals, powder paint surfaces, glass, plastics, even fabrics, bond any one of thousands of material combinations.

From among the many design and assembly advantages of 3M adhesive tape technology, consider what the following can do for your product and bottom line.

- **Bond strength matched to your application.** Select strength ranging from repositionable to structural strength. Adhesive distributes stress more evenly, eliminating concentrated stress points of mechanical fastening. The result—reliable holding power in static and dynamic loads.
- **Increased material options.** With adhesive tapes, you can use thinner, and lighter materials in your product to help reduce cost and enhance appearance. And tape can compensate for differential thermal expansion or contraction in many applications, so you can more readily consider using dissimilar materials.
- **Virtually invisible fastening.** In most applications that use tape for assembly, your product surfaces stay clean and smooth. That expands your aesthetic and styling opportunities.
- **Help cut costs and increase manufacturing efficiency.** You can also reduce or eliminate operations such as riveting, welding, surface refin-

ishing, and clean-up in many applications. Tapes are easy to apply by hand or with a 3M dispensing system for higher volume production.

- **Bond, seal and fill gaps in one step.** With the wide range of tape thicknesses, you can select a tape appropriate for not only joining but also sealing and gap filling.
- **Reclosable Fasteners, as strong as you need them.** Many applications require convenient reclosability and high strength. A full line of hook and loop and mating mushroom-head fasteners utilize many of the 3M adhesive technologies. This enables bonding to a wide array of surfaces and provides a broad range of disengagement strength.
- **Conduct electricity or heat.** For advanced assembly that requires the adhesive to conduct heat or electrical current, 3M™ Conductive Adhesives can enable new designs and processes.

More than advanced technology... expert total service.

Nearby sales assistance: 3M Bonding Solutions sales professionals are located throughout the United States and Canada. Sales assistance is also available in more than 50 other countries.

Technical service: A highly-trained technical team is ready to help you with everything from suggesting an appropriate tape for your evaluation to creating an entire tape dispensing system.

Local authorized distributors and converters: The 3M nationwide authorized distributor network can provide professional sales assistance, local product availability, and fast, efficient service. Authorized converters are also available to help you customize 3M tapes to meet your special requirements. This includes laminating, die-cutting, precision slitting, cutting to length, adding or removing liners, and more.

3M™ VHB™ and VHB™+ Tapes 2-3

3M™ Structural Bonding Tapes 4

3M™ Heat Bond Tapes 5

3M™ Double Coated Foam Tapes 6-7

3M™ Double Coated Tapes 8-9

3M™ Adhesive Transfer Tapes 10-13

Scotch® ATG Adhesive Systems 14

3M™ Extended Liner Tapes 15

3M™ Conductive Adhesives 16

3M™ Optically Clear Adhesives 17

3M™ Membrane Switch Adhesives 18-19

3M™ Removable/Repositionable Tapes 20-21

3M™ Scotchmate™ Hook and Loop Reclosable Fasteners 22-23

3M™ Dual Lock™ Reclosable Fasteners 24-25

3M™ Double Coated Tape Dispensers and Selection Guides 26-27

Fundamentals of Adhesion 28-29

Tape Selection Guide 30-31

Product Index 32

2

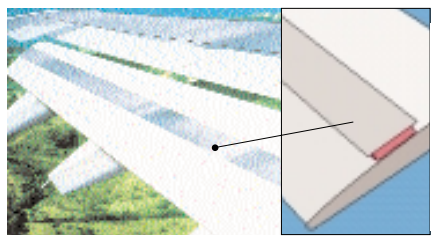
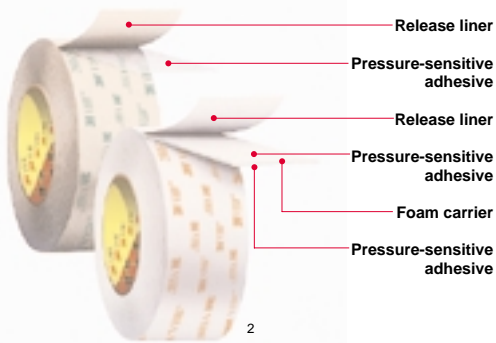
Replace rivets, screws and other mechanical fasteners.

3M™ VHB™ Tape's all-acrylic construction seals against moisture and most solvents, providing long-term resistance to UV and temperature cycles. The tape's unique foam acts as a shock absorber for outstanding impact resistance. Unlike the stress points common to mechanical fasteners, VHB tape distributes the stress. You can use thinner, lighter-weight materials with less material fatigue.

3M™ VHB™+ Tapes provide additional features: conformability for better void filling and flexibility, additional adhesive choices for bonding to a wider range of surfaces, and the ability to initiate bonds at lower temperatures.



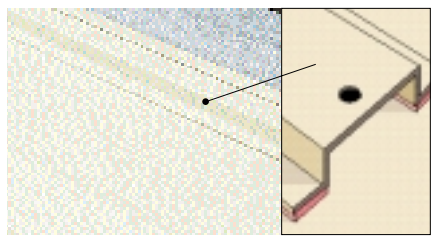
Smooth trucking – 3M™ VHB™ Tape replaced rivets in bonding truck side panels to stiffeners. The result was a much smoother, cleaner appearance and a strong bond. In addition to the design improvement, VHB tape can reduce vibration in the box.



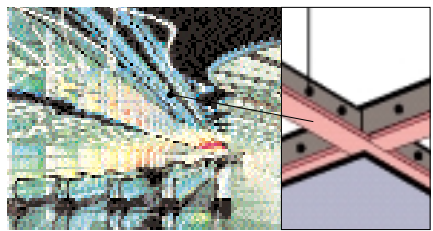
Compensate for differences in thermal expansion – 3M™ VHB™ Tape securely bonds stainless steel scuff strips to aluminum wing flaps despite extreme ground-to-air temperature swings of 150°F to -40°F (65°C to -40°C).



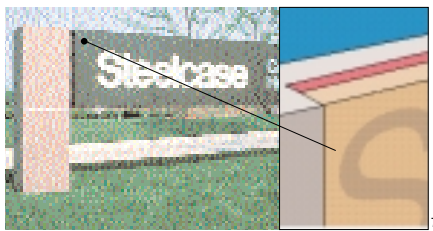
Die-cut for easy assembly – For assembly efficiency, die-cut pieces of 3M™ VHB™ Tape bond components in a water-resistant video camera case. The foam conforms to help seal the unit.



Immediate bonding to pre-painted metal – 3M™ VHB™ Tape bonds panel stiffeners on contact to pre-painted metal cabinetry. Unlike welding, applying the tape does not damage the finish.



Virtually invisible fastening – Mirrored ceiling panels are held in place with 3M™ VHB™ Tape rather than with rivets or screws. This helps maintain a clean, smooth appearance without distorting the reflective surfaces.



Use lighter, thinner materials – In assembling this sign with 3M™ VHB™ Tape, lighter, thinner materials were used for easier installation, helping reduce labor and materials cost.



High contact adhesion to glass – To bond muntin bars to window glass, 3M™ VHB™+ Tape conforms to glass with high contact. The bond resists weathering and UV light.

Product Information, 3M™ VHB™ and VHB™ + Tapes

Product Number	Tape Thickness w/o liner Mils (mm)	Description	Adhesive Type	Temperature Resistance		Solvent Resistance	Relative Adhesion		Application Ideas	Liner Type									
				Minutes Hours	Days Weeks		HSE	LSE											
3M™ VHB™+ Tape	4926	15 (0.4)	Dark gray, closed-cell acrylic foam carrier.	Acrylic	300°F (149°C)	200°F (93°C)	High	High	Med.	Bond muntin bars to windows. Bond and seal polycarbonate lens over LCD.	A								
	4936	25 (0.64)									B								
	4936F	25 (0.64)									B								
	4941	45 (1.1)									A								
	4941F	45 (1.1)									D								
	4956	62 (1.6)									A								
	4956F	62 (1.6)									B								
	4979F	62 (1.6)									B								
	4932	25 (0.64)									White, closed-cell acrylic foam carrier. Adhesive provides good adhesion to polypropylene and many powder paints.	Synthetic	200°F (93°C)	160°F (71°C)	High	High	High	Bond powder painted metal stiffeners to office desks and file cabinets. Bond polypropylene, polystyrene and other low surface energy plastics.	A
	4952	45 (1.1)																	A
4951	45 (1.1)	White, closed-cell acrylic foam carrier. Can be applied as low as 32°F (0°C).	Acrylic	300°F (149°C)	200°F (93°C)	High	High	Low	Mount panels to aluminum frames in buildings. Mount aluminum panels to truck trailer frames. Mount trim to portable buildings. Bond cellular phone antennas.	C									
4943F	45 (1.1)	Gray conformable foam. Can be applied as low as 32°F (0°C).	Acrylic	300°F (149°C)	200°F (93°C)	High	High	Low	Bond cellular phone antennas. Bond automatic toll tags to vehicle bumpers.	C									
4957F	62 (1.6)									C									
3M™ VHB™ Tape	4905	20 (0.5)	Clear, closed-cell acrylic carrier. Excellent for joining transparent material.	Acrylic	300°F (149°C)	200°F (93°C)	High	High	Low	Seal between inner/outer dome of skylights. Attach handle to sliding glass doors. Mount back lit translucent signs. Edge-bond resin filled glass.	D								
	4910	40 (1.0)									D								
	4920	15 (0.4)									White, closed-cell acrylic foam carrier. Features an all-purpose adhesive. UL Listing 746C.	Acrylic	300°F (149°C)	200°F (93°C)	High	High	Low	Attach stiffeners in air conditioners, office furniture and telecommunications equipment. Bond aluminum skin to steel support of trucks, vans, ambulances. Bond architectural signs to frames.	A
	4930	25 (0.64)																	A
	4950	45 (1.1)									A								
	4955	80 (2.0)									Black version of 4930 tape. Black version of 4950 tape.	Acrylic	400°F (204°C)	300°F (149°C)	High	High	Low	Attach letters and signs to windows. Mount black trim.	C
	4959	120 (3.0)																	C
	4929	25 (0.64)									White, closed-cell acrylic foam carrier. Plasticizer resistant. UL Listing 746C.	Acrylic	300°F (149°C)	200°F (93°C)	High	High	Med.	Attach vinyl trim. Bond vinyl extrusions to window frames. Bond pre-painted truck and trailer skins.	A
	4949	45 (1.1)																	C
	4945	45 (1.1)									B								
4946	45 (1.1)	Same as 4945 tape with film liner.	Acrylic	300°F (149°C)	200°F (93°C)	High	High	Med.											
Transfer Tape	F-9460 PC	2.0 (0.05)	Clear adhesive transfer tape. Features high shear strength adhesive. UL Listing 746C.	100 VHB	500°F (260°C)	300°F (149°C)	High	High	Low	Bond decorative metal trim. Bond flexible circuits to aluminum rigidizers or heat sinks.	E								
	F-9469 PC	5.0 (0.13)									E								
	F-9473 PC	10 (0.25)									E								

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.

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

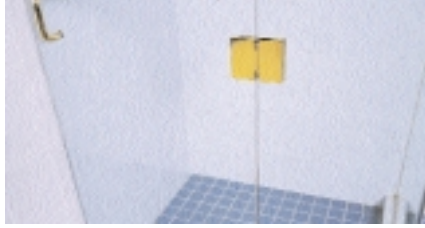
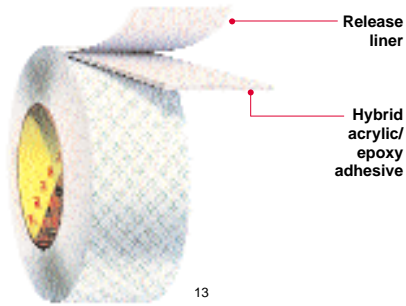
Relative Adhesion:

HSE – High Surface Energy
 LSE – Low Surface Energy
 (See p. 28)

3M™ Structural Bonding Tapes

All the advantages of pressure-sensitive tapes and structural adhesives in one advanced product.

3M™ Structural Bonding Tape uniquely combines the high bond strength of liquid epoxy with the convenience of 3M™ VHB™ tape. It is an ideal replacement for liquid adhesives where crisp aesthetics, uniform bond thickness, reduced cleanup, or improved throughput are important. Initially tacky, it is cured via hot bar or oven to achieve full strength. Combines exceptional shear strength with leathery flexibility when cured. It also provides significantly higher fixturing strength and less flow than adhesive bonding films.



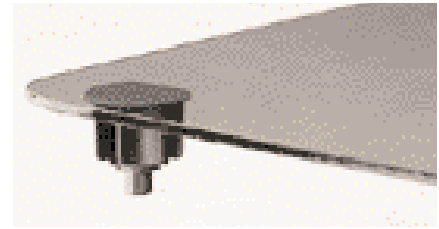
Cleaner shower doors – 3M™ Structural Bonding Tape creates a structural bond and a cleaner look than mechanical fasteners.



Replacing spot welds – In this range hood application, 3M™ Structural Bonding Tape replaced spot welding. The tape provides the strength of welding while sealing edges and preventing leaks. The use of tape also eliminated refinishing the steel after welding.



No need to drill holes – The expense of drilling holes through glass is entirely eliminated in bonding metal hardware to pickup top caps.



Smooth sailing – It's the convenient way to bond boat latch hardware to glass. 3M™ Structural Bonding Tape eliminates the need for messy sealants and provides a watertight structural strength bond.

Product Information

	Product Number	Tape Thickness w/o liner Mils (mm)	Description	Adhesive Type	Temperature Resistance		Solvent Resistance	Relative Adhesion		Application Ideas	Liner Type
					Minutes Hours	Days Weeks		HSE	LSE		
Structural Bonding Tapes	9244	10 (0.25)	High strength permanent bonds to glass, metals, ceramics, and engineered plastics.	Acrylic/epoxy hybrid	400°F (204°C)	300°F* (149°C)	High	High	Low	Bonds brackets, hinges, knobs, etc., to glass doors and windows. Weld-free stainless steel joining. Bonding to belts and wire mesh. Non-conductive plastic to metal bonds in electronics.	3 mil densified Kraft paper w/green plaid print.
	9245	20 (0.5)									
	9246	40 (1.0)									

*Overlap shear strength drops below structural levels (1,000 psi) at temperatures above 150°F (66°C).

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Relative Adhesion:

HSE – High Surface Energy

LSE – Low Surface Energy

(See p. 28)

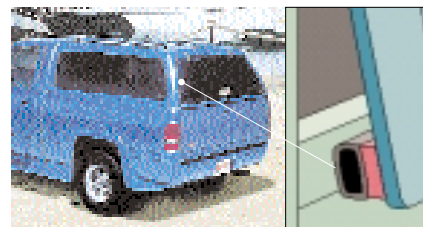
3M™ Heat Bond Tapes

A better way to attach rubber and plastic extruded profiles.

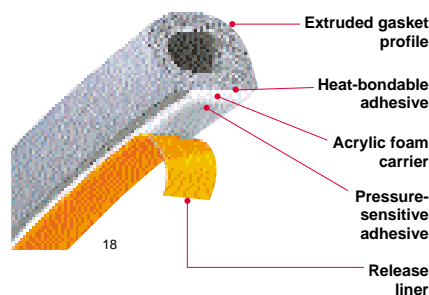
3M™ Heat Bond Tape is a specially constructed 3M™ Acrylic Foam Tape with a heat-activated adhesive on one side of a foam carrier. On the other side is an acrylic pressure-sensitive adhesive covered with a release liner. The tape is thermally bonded to extruded profiles with a heat-bond laminator, usually by the extruder.



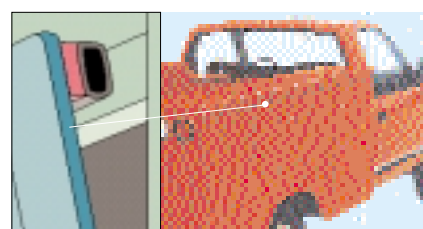
Reliable performance in heat, saltwater and UV exposure – 3M™ Heat Bond Tape 4233 bonds the PVC rub rail to the side of personal watercraft. Replacing pop rivets and a secondary extrusion to cover the rivet heads helps save cost and improve style.



Reduced gasket failures – To reduce gasket failures, 3M™ Heat Bond Tape 4981 bonds EPDM gaskets to painted or unpainted metal or fiberglass door frames of pickup toppers.



Solution to a sanitation problem – In bonding a PVC rub rail to hospital utility carts, 3M™ Heat Bond Tape 4233 seals out dirt that collected behind the rail when pop rivets were used.



High adhesion strength – 3M™ Heat Bond Tape 5403 provides a seal for truck utility boxes with very high shear and peel strength and temperature resistance.

Product Information

	Product Number and Color	Tape Thickness w/o liner Mils (mm)	Description	Adhesive Type	Temperature Resistance		Solvent Resistance	Relative Adhesion (pressure sensitive adhesive)		Application Ideas	Liner Type
					Minutes	Days		HSE	LSE		
					Hours	Weeks					
Acrylic Foam Tape	4237 White	47 (1.19)	Bonding to EPDM rubber, Santoprene® rubber and most propylene-based plastics.	E2/Acrylic	300°F (149°C)	200°F (93°C)	High	High	Low	Bonds extruded plastics and rubber profiles in manufacturing, marine and transportation industries.	A
	5403 Gray	32 (0.81)									
	5404 Gray	47 (1.19)									
	5406 Gray	62 (1.57)	Bonding to most neoprene or polyvinylchloride (PVC) plastics.	N1/Acrylic	300°F (149°C)	200°F (93°C)	High	High	Low	Bonds neoprene extruded or PVC profiles in manufacturing, marine and transportation industries.	A
	4233 White	45 (1.14)									
	4974 Gray	45 (1.14)									
5408 Gray	30 (0.76)										
Transfer Tape	4981 Clear	7 (0.18)	Bonding to EPDM rubber, Santoprene® rubber and most propylene-based plastics.	E2/100 VHB	325°F (163°C)	300°F (149°C)	High	High	Low	Temporary application of gasket prior to fastening. General strength gasket applications.	A

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Relative Adhesion:
HSE – High Surface Energy
LSE – Low Surface Energy
(See p. 28)

Liner A – 5 mil Polyethylene film—Orange

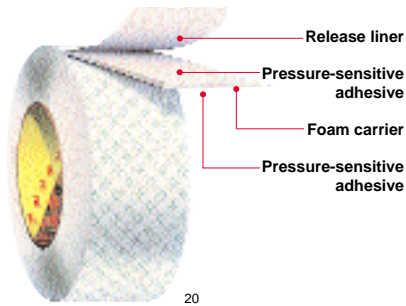
Pressure sensitive adhesive side will adhere to most ABS, Acrylic, Aluminum, Enamel and Epoxy Paints, Glass, Plasticized and Rigid Vinyl, Polycarbonate, Polyester, and Steel.

Santoprene is a registered trademark of Advanced Elastomer Systems.

3M™ Double Coated Foam Tapes

Flexible foam carriers fill gaps and help bond irregular surfaces.

In bonding rough or irregular surfaces, 3M™ Double Coated Foam Tapes fill gaps and distribute stress uniformly over the bonded area. Depending on the specific tape, the result is a bond line that seals, cushions and damps vibration, resists impact, withstands a wide temperature range, and provides good insulating qualities. To meet your requirements, select from rubber or acrylic adhesive, and a choice of different foam carriers: urethane, vinyl, elastomeric, polyethylene, acrylic or neoprene. Apply by hand or with a 3M™ Tape Dispenser (pages 26–27).



20



19

3M™ Removable Foam Tape 4658F – bonds temporary signs to many surfaces. Unique clear adhesive can bond permanently yet allows removal with no adhesive residue. (Note: May delaminate substrates with low internal strength.)



21

Simplify installation – In bonding plastic soap dispensers to tile, or other surfaces, 3M™ Double Coated Urethane Foam Tapes eliminate the need to drill holes and attach screws.



22

Die cut for application convenience – 3M™ Double Coated Foam Tape can be precisely die cut and pre-applied to the back of any shape hook. Ready to mount to a variety of surfaces.



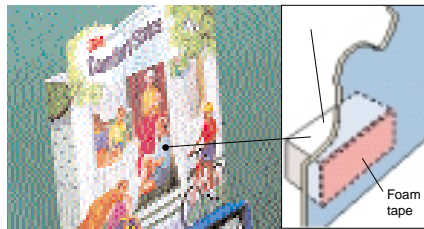
23

Adhesion with high shear strength – When mounting mirrors in furniture, 3M™ Double Coated Urethane Foam Tapes bond with high shear strength for reliable performance.



24

Bond plastic to irregular surfaces – 3M™ Double Coated Urethane Foam Tape bonds plastic signs to painted cinder block. The foam fills gaps between irregular surfaces. Various foam thicknesses are available for surface conformance based on the degree of roughness.



25

Point-of-purchase assembly – 3M™ Double Coated Polyethylene Foam Tapes with high tack adhesive bond foam spacers between the planes of a 3-dimensional P.O.P. display.



26

Secure joining – 3M™ Double Coated Polyethylene Foam Tapes effectively bond plastic extrusion price channels to grocery shelves.

Product Information, 3M™ Double Coated Foam Tapes

	Product Number	Tape Thickness Mils (mm)	Description	Adhesive Type	Temperature Resistance		Solvent Resistance	Relative Adhesion		Application Ideas	Liner Type
					Minutes Hours	Days Weeks		HSE	LSE		
Urethane	4004	250 (6.4)	Off-white, open-cell urethane foam carrier. Features high shear adhesive with high temperature resistance.	100	380°F (193°C)	220°F (104°C)	Medium	High	Low	Bond mirrors to walls or furniture. Bond acoustic panels to walls. Mount air fresheners. Mount soap dispensers. Mount interior signs and nameplates. Attach wire clips to various surfaces. Mount electrical channel to wall surfaces. Vibration damping for electronic components. Die cut pieces.	A
	4008	125 (3.2)									
	4016	62 (1.6)									
	4026	62 (1.6)									
	4032	31 (0.8)									
	4042	31 (0.8)	Off-white, open-cell urethane foam carrier. Features high tack adhesive.	710	200°F (93°C)	150°F (66°C)	Medium	High	High		A
	4046	62 (1.6)									
4052	31 (0.8)	Black version of 4032 tape.	100	380°F (193°C)	220°F (104°C)	Medium	High	Low		A	
4056	62 (1.6)	Black version of 4016 and 4026 tapes.									
4085	45 (1.1)	Off-white, open-cell urethane foam carrier. Features high tack adhesive.	740	200°F (93°C)	125°F (52°C)	Medium	High	High		F	
Vinyl	4408	125 (3.2)	Black, closed-cell vinyl foam carrier.	430	200°F (93°C)	150°F (66°C)	Medium	High	Low	Mount indoor sign, nameplates and wall corner protectors to irregular surfaces. Mount fiberglass trim panels in trailers. Hold polycarbonate panels in vending machines. Mount display screen in electronic scales.	A
	4416	62 (1.6)	White or black, closed-cell vinyl foam carrier.								
	4432	31 (0.8)									
Elastomeric	4921	16 (0.4)	White, closed-cell elastomeric foam carrier. Provides thin bond line.	100	200°F (93°C)	150°F (66°C)	Medium	High	Low	Bond trim strips to computer printer housing.	A
Polyethylene	4462	31 (0.8)	White or black, closed-cell polyethylene foam carrier. High tack adhesive.	745	158°F (70°C)	120°F (49°C)	Medium	High	High	Attach hooks, wire clips and racks. Mount retail shelf price channels. Mount pen holders. Window glazing.	B
	4466	62 (1.6)									
	4492	31 (0.8)	White or black, closed-cell polyethylene foam carrier. High shear adhesive with high temperature resistance.	430	180°F (82°C)	158°F (70°C)	Medium	High	Low	Mount nameplates on awards and novelties. Point of purchase displays and signs.	C
	4496	62 (1.6)									
Neoprene	4962	31 (0.8)	Black, closed-cell neoprene foam carrier. Offers high internal strength and high temperature resistance. UL Listing 746C and UL 94HB.	100	380°F (193°C)	220°F (104°C)	High	High	Low	Mount indoor signs and nameplates to irregular surfaces. Bond aluminum frames. Attach stiffeners in steel desks. Bond ABS liner to truck beds.	A/E
	4965	45 (1.1)									
	4992	31 (0.8)	Black, closed-cell neoprene foam carrier. Offers good adhesion to many surfaces.	710	250°F (121°C)	150°F (65°C)	Medium	High	High	Mount indoor signs. Sealing and gasketing.	A
Acrylic	4658F	31 (0.8)	Clear closed foam acrylic removable foam tape. Offers clean removability from many substrates.	100	212°F (100°C)	175°F (80°C)	High	High	Low	Removable P.O.P. displays. Signs. Exhibitions. Name plates.	D

*Peel adhesion limited by internal foam strength.

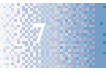
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Liner Types:

A – 3 mil 62# Densified Kraft paper – Green plaid
 B – 3 mil Densified Kraft paper – White
 C – 4 mil 58# Polycoated Kraft paper – Tan
 D – 2 mil Polyester film
 E – 3.5 mil Polyethylene film – Green
 F – 3 mil Densified Kraft paper – Tan

Relative Adhesion:

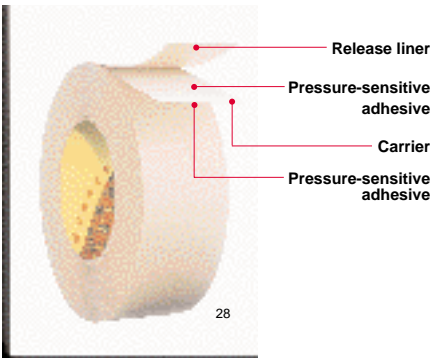
HSE – High Surface Energy
 LSE – Low Surface Energy
 (See p. 28)



3M™ Double Coated Tapes

A variety of carriers for easy handling and dispensing.

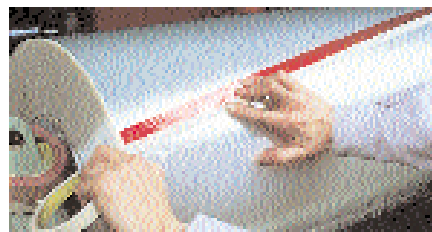
3M™ Double Coated Tapes are engineered with adhesive on both sides of paper, film or tissue. This increases the dimensional stability of the adhesive for easy handling and application. Depending on your production volume, you can apply tape by hand or with 3M's automatic high volume dispensers (pages 26-27). Select paper, polyester film or other synthetic carriers to help meet your special needs. Different adhesives—rubber, silicone or acrylic—can be on opposite sides of the carrier to join different materials. Your choice of properties include high temperature resistance, conformability to irregular surfaces, high initial adhesion, high shear strength, and more.



Differential adhesive for silicone rubber keypad assembly – With 3M™ Double Coated Tape 9731, the silicone adhesive side adheres to the silicone rubber keypad. The acrylic adhesive side adheres to a plastic base.



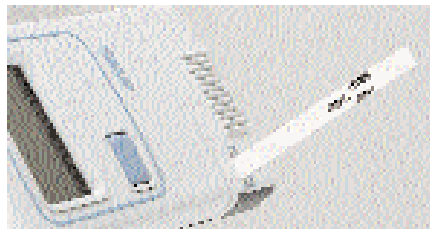
Withstands temperature extremes – 3M™ Double Coated Tape 9495B bonds LED windows to cellular phone housings and endures severe environmental conditions.



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



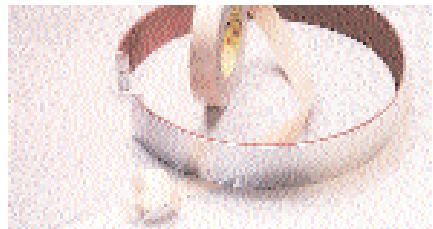
Fabricated for precise fit – 3M™ Double Coated Tapes are often pre-applied to foam gasketing materials and then die-cut to size. This helps increase dimensional stability of the part to facilitate assembly.



Adhesion to plastic – In a self-test strip for diabetes, 3M™ Double Coated Tape bonds the chemical reagent material to the plastic stick.



Golf grip attachment – 3M™ Double Coated Tape 410 is the quick, convenient way to bond golf club grips to shafts. The adhesive sets up fast and bonds firmly for long-lasting performance.



Differential adhesive for water heater bands – The silicone adhesive side of 3M™ Double Coated Tape 9731 bonds a silicone rubber insulator. The acrylic adhesive side adheres to the metal band. The band mounts to a wall bracket.

Product Information, 3M™ Double Coated Tapes

Adhesive Family	Product Number	Tape Thickness w/o liner (mm)	Carrier Type	Liner Type	Description	Temperature Resistance		Solvent Resistance	Relative Adhesion		Application Ideas
						Minutes Hours	Days Weeks		HSE	LSE	
200MP High Perf	9495MP	5.0 (0.13)	PET	58# PCK	Excellent peel strength on high surface energy plastics and metals.	300°F (14°C)	250°F (12°C)	High	High	Low	Graphic attachment. High pressure laminate bonding. LED lens attachment for cellular phones and pagers. Automotive decorative trim attachment.
	9495B	5.0 (0.13)	Black PET	58# PCK	9495MP with a 0.5 mil black polyester carrier.						
	9495FL	5.0 (0.13)	PET	58# PCK/PET	9495MP with two liners.						
300 High Strength	444	4.0 (0.1)	PET	60# DK	High tack acrylic adhesive.	180°F (82°C)	150°F (65°C)	Low	High	High	Gasket attachment. Good adhesion to most plastics.
	444PC	4.0 (0.1)	PET	58# PCK	444 with a polycoated liner.						
300LSE High Strength	9490LE	6.0 (0.2)	PET	58# PCK	300MP adhesive on face side, 300LSE adhesive on the other.	300°F (14°C)	200°F (93°C)	Medium	High	High	Gasket attachment to low surface energy surfaces. Plastic extrusion attachment.
	9495LE	6.0 (0.2)	PET	58# PCK	300LSE adhesive on both sides for low surface energy surfaces.						
300MP High Strength	9690	5.0 (0.13)	PET	86# PCK	Excellent adhesion to most plastics and foams.	300°F (14°C)	150°F (65°C)	Medium	High	Med.	Foam lamination. Gasket attachment. LED lens attachment for cellular phones and pagers.
	9690B	5.0 (0.13)	Black PET	86# PCK	9690 with a 0.5 mil black polyester carrier.						
340 High Strength	9456	4.5 (0.12)	Tissue	55# DK	Tissue carrier with high tack adhesive.	180°F (82°C)	150°F (65°C)	Medium	High	Med.	Bond fabric to window blind valances. High performance gasketing and trim attachment. POP displays.
	9507EK	7.0 (0.18)	Polyprop	78# EK	Thick tapes for irregular surfaces.						
	9573	9.0 (0.23)	UPVC	56# DK	High initial tack and excellent static shear holding power.						Plastic extrusions.
	9586F	8.0 (0.21)	Polyprop	HDPE	High initial tack and excellent static shear holding power, film liner.						
	9828	3.5 (0.09)	PET	55# DK	High tack acrylic adhesive with good adhesion to many foams.						Foam lamination. Gasket attachment.
350 High Holding	9500PC	5.5 (0.14)	PET	58# PCK	High performance on a wide array of surfaces.	350°F (177°C)	250°F (121°C)	High	High	High	LED lens attachment for cellular phones and pagers.
400 High Tack	415	4.0 (0.1)	PET	60# DK	High tack adhesion to paper and many other surfaces.	180°F (82°C)	150°F (65°C)	Medium	Med.	Low	Splice papers, films and foils.
	9420	4.0 (0.1)	Red PET	60# DK	415 with a 0.5 mil red carrier.						
	9576	4.0 (0.1)	Polyprop	60# DK	Available in red, black, yellow, and transparent.	165°F (75°C)	125°F (52°C)	Medium	Med.	Low	
700 Synthetic Rubber	700 919	5.0 (0.13)	Tissue	58# PCK	Tissue carrier with synthetic rubber adhesive.	180°F (82°C)	150°F (65°C)	Medium	High	High	General purpose laminating adhesives. Bonding plastic surfaces.
	745 443	4.0 (0.1)	PET	62# PCK	High tack rubber adhesive with good adhesion to most plastics.	180°F (82°C)	150°F (65°C)	Medium	High	High	Photo polymer printing plates.
	760 9443	6.0 (0.2)	Polyprop	60# DK	High tack rubber adhesive with good adhesion to most plastics.	180°F (82°C)	150°F (65°C)	Medium	High	High	Assemble computer ink cartridges. Bonding polyethylene.
	760 9579	9.0 (0.23)	Polyprop	60# DK	General purpose, high tack, hand-tearable film tape.	150°F (65°C)	120°F (49°C)	Medium	High	High	Core starting on metal cores.
	760 9589	9.0 (0.23)	Polyprop	60# DK	Aggressive rubber adhesive with high initial adhesion.	150°F (65°C)	120°F (49°C)	Medium	High	High	Carpet attachment.
	770 464	3.0 (0.08)	Tissue	60# DK	Tissue carrier with high tack rubber adhesive.	200°F (93°C)	150°F (65°C)	Low	Med.	Med.	Nameplate mounting.
	800 Natural Rubber	860 401	9.0 (0.23)	Paper	60# DK	Thick flatstock paper carrier.	180°F (82°C)	150°F (65°C)	Medium	High	Med.
830 404	5.0 (0.13)	Paper	60# DK	High temperature resistant rubber adhesive.	250°F (12°C)	200°F (93°C)	Medium	High	Med.	Mount printing plates.	
860 406	5.0 (0.13)	Paper	60# DK	Paper carrier.	180°F (82°C)	150°F (65°C)	Medium	High	Med.	Approved tape for Scott™ Bond Paper Test. Photo polymer printing plates.	
850 410	5.0 (0.13)	Paper	60# DK	Smooth adhesive on both sides.	200°F (93°C)	150°F (65°C)	Medium	High	Med.	Core starting/end tabbing of papers, films and foils.	
830 442	4.0 (0.1)	PET	58# PCK	Rubber adhesive removes from metals.	180°F (82°C)	150°F (65°C)	Medium	High	Med.	Mount polishing pads.	
900 Misc.	9820	3.5 (0.09)	PET	60# DK	Moderate performance acrylic adhesive.	200°F (93°C)	125°F (52°C)	Medium	Med.	Low	Foam lamination. Gasket attachment.
	9851	3.5 (0.09)	PET	60# DK	Moderate performance rubber adhesive.	150°F (65°C)	100°F (41°C)	Low	High	High	Foam lamination.
Silicone	9731	5.5 (0.14)	PET	4.0/5.0 PET/PCK	High performance acrylic adhesive/silicone adhesive, double lined.	350°F (177°C)	250°F (121°C)	Medium	High	High	Silicone keypad attachment. Printer toner cartridge refurbishing.

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Relative Adhesion:

HSE – High Surface Energy LSE – Low Surface Energy (See p. 28)

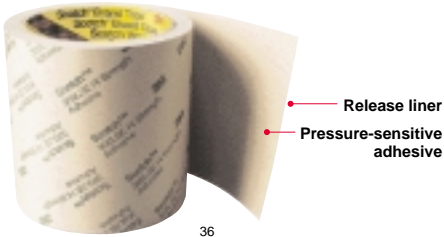
Scott is a trademark of Kimberly-Clark Corporation.

3M™ Adhesive Transfer Tapes

Neat precise application and high performance in a variety of applications.

3M™ Transfer Tapes are rolls of pressure-sensitive adhesive pre-applied to a special release liner. For application, the tape is simply pressed, adhesive side down, to a surface and the liner is peeled off. A variety of adhesive properties are available including high tack, high temperature resistance, exceptional moisture or solvent resistance, and adhesion to low surface energy plastic. High-performance laminating adhesives are also available. Each is specially engineered to provide a full range of performance characteristics meeting virtually any application need—from adhering nameplates to high- and low-surface energy plastics, to keeping appliance faceplates intact at extremely high operating temperatures.

10



36



35

High cohesive strength – 3M 200MP adhesive bonds aggressively, offers excellent temperature resistance and meets the non-fogging specifications of the automotive industry.



Plasticizer resistance – For bonding flexible vinyl in such applications as door gaskets, 3M™ Adhesive Transfer Tape F-9465PC resists the effect of plasticizers that tend to migrate from the vinyl.



For tough bonding challenges – 3M™ Laminating Adhesive 300LSE is the solution when you have difficult surfaces to bond. Graphics hold securely and stand up to tough environmental conditions.



Foam lamination – 3M™ Adhesives Transfer Tapes are ideal for a variety of foam laminating applications where conformability is required. The acrylic adhesive also provides high shear strength and good environmental aging properties.



Web splicing – 3M™ Adhesive Transfer Tape 465 has the grab strength for many printing splices, including flying splices, zero speed and manual overlap. Can be used with a variety of paper grades.



EMI/RFI Shielding Attachment – 3M™ Adhesive Transfer Tape 467MP is used to laminate a metal foil onto a circuit board to reduce interference on electronic circuitry.



Graphic beauty – 3M™ 100 Acrylic Adhesive is ideal for attaching graphics in closed environments. With its low odor, reduced outgassing and low fogging, it is used extensively in automotive, aerospace appliance and hard disk drive applications.

42

Product Information, 3M™ Adhesive Transfer Tapes

Adhesive Family	Product Number	Tape Thickness w/o liner Mils (mm)	Liner Type	Description	Temperature Resistance		Solvent Resistance	Relative Adhesion		Application Ideas
					Minutes Hours	Days Weeks		HSE	LSE	
100 High Temp	9461P 966	1.0 (0.025)	55# DK	High temperature, low outgassing.	450°F (232°C)	300°F (149°C)	High	High	Low	Aerospace fuel line labeling. Meets NASA Outgassing Specification. Flex Circuit attachment.
		2.0 (0.05)	62# DK							
100 VHB	9460PC 9469PC 9473PC	2.0 (0.05)	58# PCK	High shear strength, high temperature resistance, UL listing 746C.	500°F (260°C)	300°F (149°C)	High	High	Low	Industrial joining and metal fabrication.
		5.0 (0.13)								
		10.0 (0.25)								
200 High Perf	467 468	2.0 (0.05)	62# DK	High bond and medium temperature holding.	350°F (177°C)	250°F (121°C)	Medium	High	Low	Metal nameplates and electronics. Metal nameplates on rough or textured surfaces.
		5.0 (0.13)								
200 MP High Perf	467MP 468MP	2.0 (0.05)	58# PCK	High performance high temperature formulation.	400°F (232°C)	300°F (149°C)	High	High	Low	General industrial joining. Industry standard for graphic attachment and die-cut parts.
		5.0 (0.13)								
220 Stamark	9502 9505	2.0 (0.05)	58# PCK	Economical acrylic formulation.	350°F (177°C)	250°F (121°C)	Medium	High	Low	Economical attachment of graphics and industrial joining.
		5.0 (0.13)								
290 Ultra Clean	501FL 502FL 504FL	1.0 (0.025)	PET	Very low outgassing.	450°F (232°C)	300°F (149°C)	High	High	Low	Hard disc drive seals, low odor and outgassing applications.
		2.0 (0.05)								
		4.0 (0.1)								
300 High Strength	9458 927 9453 950	1.0 (0.025)	55# DK	High tack, excellent adhesion to LSE plastics and foams.	250°F (121°C)	150°F (65°C)	Medium	High	High	Automotive underhood label bonding. Attach gaskets and a variety of industrial foam materials. Foam lamination to various surfaces.
		2.0 (0.05)	60# DK							
		3.5 (0.09)	60# DK							
		5.0 (0.13)	60# DK							
300LSE High Strength	9471LE 9453LE 9472LE	2.0 (0.05)	58# PCK	High bond to plastics with high temperature holding.	300°F (149°C)	200°F (93°C)	High	High	High	Bonds graphics to powder coatings, LSE plastics and oily metal. General industrial bonding of LSE materials.
		3.5 (0.09)								
		5.0 (0.13)								
300MP High Strength	9770 9774 6032PC 6035PC 6038PC 964	2.0 (0.05)	58# PCK	Good bond with moderate temperature range. Low fogging for automotive interior applications.	250°F (121°C)	158°F (70°C)	Medium	High	Med.	Economical attachment of graphics and industrial joining. Bond anti-squeak fabric and foam. For automotive interior.
		4.0 (0.1)	58# PCK							
		2.0 (0.05)	58# PCK							
		5.0 (0.13)	58# PCK							
		8.0 (0.2)	58# PCK							
		13.0 (0.3)	86# PCK							
320	9447	1.0 (0.025)	55# DK	High tack, cleaner rotary cutting than 300.	250°F (121°C)	150°F (65°C)	Medium	High	High	Economical protected graphics label.
350 High Holding	9482PC 9485PC	2.0 (0.05)	58# PCK	High tack, high shear and high temperature performance. Excellent adhesion to LSE plastics and foams.	450°F (232°C)	300°F (149°C)	High	High	High	Laminate high performance plastics and difficult substrates. Splice metal coils.
		5.0 (0.13)								
400 High Tack	9457 465	1.0 (0.025)	55# DK	High tack. Excellent adhesion to most paper stocks. Flexible to -60°F.	250°F (121°C)	180°F (82°C)	Medium	Med.	Low	Validation labels & parking permits on car windows. Paper splicing and general office and commercial joining.
		2.0 (0.05)	60# DK							
420	F-9752PC F-9755PC	2.0 (0.05)	58# PCK	High tack. Can be applied as low as 32°F (0°C).	450°F (232°C)	300°F (149°C)	High	Med.	Low	Bond gaskets and foams. Bond polycarbonate instrument panels.
		5.0 (0.13)	58# PCK							
430	9497 9499	2.0 (0.05)	60# DK	Pink. High Temperature splicing. Clear version of 9497.	350°F (177°C)	250°F (121°C)	Medium	Med.	Low	High temperature, zero speed splicing.
		2.0 (0.05)	60# DK							
Specialty	F-9465PC 8056 909	5.0 (0.13)	58# PCK	Medium tack, plasticizer resistant.	200°F (93°C)	160°F (71°C)	Medium	Med.	Low	Bonding plasticized vinyl gaskets, decals and moldings.
		5.0 (0.13)	58# PCK	High tack, for hard to bond surfaces.	150°F (65°C)	120°F (49°C)	Low	High	Med.	Splicing photographic papers.
		1.4 (0.04)	60# DK	Assembly aid tape.	180°F (82°C)	150°F (65°C)	Medium	Med.	Med.	Assembly aid for pick and place.

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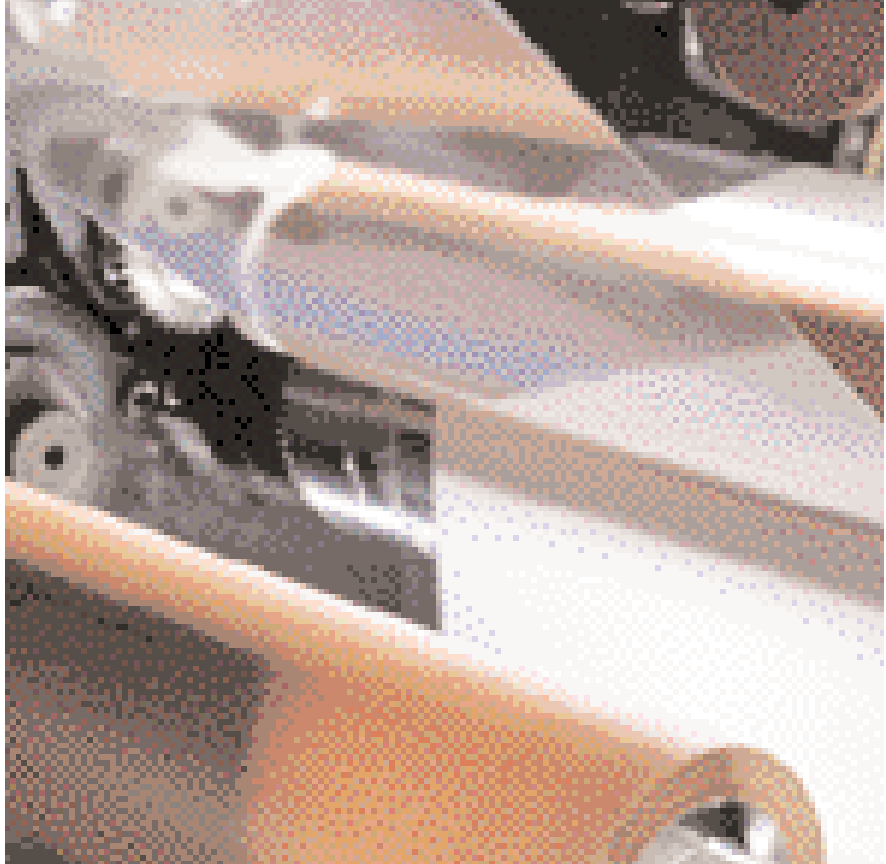
Relative Adhesion:

HSE – High Surface Energy
LSE – Low Surface Energy
(See p. 28)

Additional Adhesive Transfer Tapes On Different Liners

Precise application with tailor-made performance.

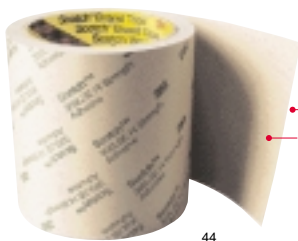
Whatever your production needs, there's a 3M™ Adhesive Transfer Tape to match them precisely. 3M offers a variety of liners which give the tapes a wide range of characteristics. They give you the flexibility you need to create products that perform better, look more attractive and stand up under a variety of environmental conditions. Like all 3M adhesive transfer tapes, these special varieties offer neat, precise application of pressure-sensitive adhesive. Simply press the adhesive side down to a surface and peel off the liner.



43

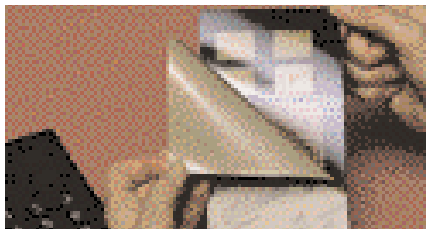
Clean room processing – Polyester liners are the industry standard in clean room processing. They're ideal for rotary die-cutting, polycarbonate or polyester nameplates, high-speed processing and automatic dispensing. They won't curl or buckle with humidity changes.

12



44

• Release liner
• Pressure-sensitive adhesive



45

Graphic Overlays – Get a smooth appearance on graphic overlays with 58# polycoated kraft liner. This economical alternative is moisture-resistant for less buckling and curling.



46

Rotary die-cuttable – The 55# densified kraft liner features plain paper and a dense, uniform caliper for high-quality rotary die-cutting. Subsurface printing for a protected image under these custom clear films.



47

Die-cutting metal nameplates – The 62# densified kraft liner is the product of choice for reduced edge burr when die-cutting metal nameplates. The liner offers excellent tear-resistance.



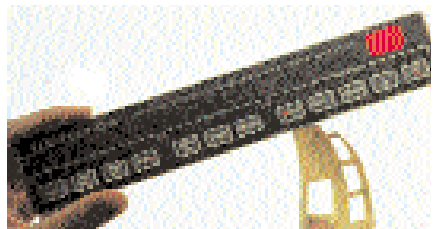
48

Flat-out performance – The 86# polycoated kraft liner is ideal for "kiss-cutting" multiple nameplates on the same sheet. The thick 6.5 mil liner lies flat and offers excellent tear- and moisture-resistance.



49

The clear choice – HDPE (high-density polyethylene) is a clear liner that allows for easy inspection of backlit graphics. It's tear-resistant for easy liner removal. It offers excellent moisture stability and can be thermoformed.



50

Double duty – A liner on each side of the adhesive allows die-cutting prior to lamination. This "selective die-cutting" is used when full adhesive coverage is undesirable, like on the illuminated portion of backlit graphics.

Additional Adhesive Transfer Tapes On Different Liners

Alternate Liner Configurations for Processing and Delivery

Adhesive Family	Product Number	Tape Thickness w/o liner Mils (mm)	Liner		Adhesive Family	Product Number	Tape Thickness w/o liner Mils (mm)	Liner		
			Type	Caliper Mils				Type	Caliper Mils	
100 High Temp	965	2.0 (0.05)	55# DK	3.2	300 High Perf	9459W	1.5 (0.04)	55# DK	3.2	
	9462P	2.0 (0.05)	55# DK	3.2		992	2.0 (0.05)	55# DK	3.2	
	941	2.0 (0.05)	58# PCK	4.0		992U	2.0 (0.05)	55# DK	3.2	
	941N	2.0 (0.05)	86# PCK	6.5		9671	2.0 (0.05)	86# PCK	6.5	
100 VHB	9437	2.0 (0.05)	PET/58# PCK	2.0/4.0		9653	3.5 (0.09)	86# PCK	6.5	
200 High Perf	467MS	2.0 (0.05)	58# PCK	4.0		950EK	5.0 (0.13)	78# EK	6.0	
	9567	2.0 (0.05)	62# DK	3.7		9672	5.0 (0.13)	86# PCK	6.5	
	9568	5.0 (0.13)	62# DK	3.7		300LSE High Strength	8132LE	2.0 (0.05)	86#/58# PCK	6.5/4.0
	468MS	5.0 (0.13)	58# PCK	4.0			9653LE	3.5 (0.09)	86# PCK	6.5
200MP High Perf	467MPF	2.0 (0.05)	PET	2.0			9671LE	2.0 (0.05)	86# PCK	6.5
	9172MP	2.0 (0.05)	HDPE/58# PCK	3.0/4.0			8153LE	3.5 (0.09)	86#/58# PCK	6.5/4.0
	9667MP	2.0 (0.05)	86# PCK	6.5			9672LE	5.0 (0.13)	86# PCK	6.5
	7952MP	2.0 (0.05)	58#/58# PCK	4.0/4.0			300MP High Strength	7951	2.0 (0.05)	86#/58# PCK
	7962MP	2.0 (0.05)	86#/58# PCK	6.5/4.0		9692		2.0 (0.05)	86# PCK	6.5
	9172PT	2.0 (0.05)	PET/58# PCK	2.0/4.0	9784	4.0 (0.1)		HDPE/58# PCK	3.0/4.0	
	9676MP	2.0 (0.05)	PP/58# PCK	3.5/4.0	9695	5.0 (0.13)		86# PCK	6.5	
	468MPF	5.0 (0.13)	PET	2.0	350	9442	2.0 (0.05)	55# DK	3.2	
	7955MP	5.0 (0.13)	58#/58# PCK	4.0/4.0		9445	5.0 (0.13)	55# DK	3.2	
	7965MP	5.0 (0.13)	86#/58# PCK	6.5/4.0		9485EK	5.0 (0.13)	78# EK	6.0	
9188	5.0 (0.13)	HDPE/86# PCK	3.0/6.5	400	463	2.0 (0.05)	60# DK	3.8		
9185MP	5.0 (0.13)	HDPE/58# PCK	3.0/4.0		9665	2.0 (0.05)	58# PCK	4.0		
9668MP	5.0 (0.13)	86# PCK	6.5							
220 Stamark	9502HL	2.0 (0.05)	86# PCK	6.5						
	9552	2.0 (0.05)	58#/58# PCK	4.0/4.0						
	9505HL	5.0 (0.13)	86# PCK	6.5						
	9555	2.0 (0.05)	58#/58# PCK	4.0/4.0						

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Description	Caliper (mils)	Use
43# Densified Kraft paper (DK)	2.5	Inexpensive secondary liner, protect from humidity extremes.
55# Densified Kraft paper (DK)	3.2	Excellent liner for rotary die-cutting; reduces edge roll on metal parts, protect from humidity extremes.
60# Densified Kraft paper (DK)	3.7	General purpose liner, rotary or steel rule, protect from humidity extremes.
62# Densified Kraft paper (DK)	3.7	General purpose liner, rotary or steel rule, protect from humidity extremes.
58# Polycoated Kraft paper (PCK)	4.0	Excellent liner for steel rule die-cutting, resists moisture.
86# Polycoated Kraft paper (PCK)	6.5	Improved handling (layflat), steel rule die-cutting, kiss-cutting, resists moisture.
78# Extensible Polycoated Kraft paper (EK)	6.0	Extra tough liner for increased tear-resistance.
Polyester film (PET)	2.0	Rotary die-cuttable, clean room, clear for inspection of parts, humidity stable.
Clear, high density Polyethylene film (HDPE)	3.0	Clear for inspection of parts, thermoformable, tear-resistant.
White Polypropylene film (PP)	3.5	Pressure formable, paper-like properties.

Scotch® ATG Adhesive Systems

Finger touch application of pressure sensitive adhesive.

With Scotch® ATG Adhesive Applicators, a touch of the finger triggers quick, controlled application of a strip of Scotch ATG pressure sensitive transfer tape. There's no mess or clean-up. Bond lines are thin and adhesive flows into surface irregularities. With 3M's advanced acrylic adhesive technology, you can bond, join, mount, or laminate materials such as paper, plastics, metal, wood, and foam. A variety of properties are available to help meet different requirements: high temperature resistance, differential tack, solvent resistance, high initial tack, and others.



51

Save time and effort – With the Scotch® ATG Adhesive System (above), you apply a precise strip of adhesive at the same time as the liner rewinds into the applicator.



52

Easy furniture trim assembly – With the Scotch® ATG 700 Applicator, strips of ATG Tape 926 apply exactly where needed for fast and convenient assembly.



53

Immediate holder folder assembly – Scotch® ATG 700 Applicator with ATG Tape 924 makes fast work of holder folder assembly. Pressure sensitive adhesive bonds immediately and the folder pocket is ready to hold contents.



54

Thin, uniform strips of ready-to-bond adhesive – Scotch® ATG 700 Applicator applies a strip of ATG Acrylic Adhesive Transfer Tape 924 for neat, clean double matting.



55

Product Information

Adhesive Type	Product Number	Tape Thickness w/o liner (mm)	Description	Temperature Resistance		Solvent Resistance	Relative Adhesion		Application Ideas	Adhesive Transfer Tape Equivalent
				Minutes Hours	Days Weeks		HSE	LSE		
300 High Strength	976	2.0 (0.05)	High tack. Excellent adhesion to most plastics.	250°F (121°C)	150°F (66°C)	Med.	High	High	Attach fabric swatches in sample books. Assemble point-of-purchase displays. Bond trim strips to furniture or luggage. Bond labels to plastic toys. Attach gaskets or foams.	927
	969	5.0 (0.13)								950
350 High Holding	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 name plates on award plaques.	9485PC
400 High Tack	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. Seal pocket in folders. Bond matte board in picture frames. Splice paper, films, foils. General purpose bindery attaching.	920XL
	924	2.0 (0.05)								465
400/1000	928	2.0 (0.05)	Differential tack. Repositionable.	180°F (82°C)	120°F (49°C)	Med.	High/Low	Low/Low	Attach credit card in mailer. Core start/end tab paper, films and foils. Attach temporary labels.	9416

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.

Relative Adhesion:
 HSE – High Surface Energy
 LSE – Low Surface Energy
 (See p. 28)

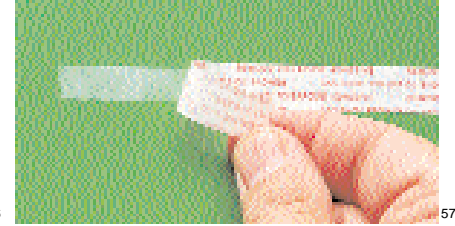
3M™ Extended Liner Tapes

Excellent adhesive performance with an easy-to-remove liner.

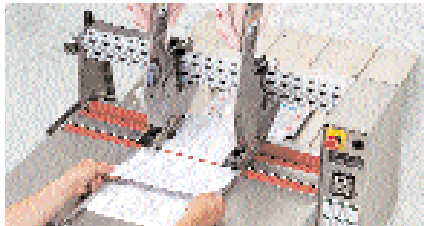
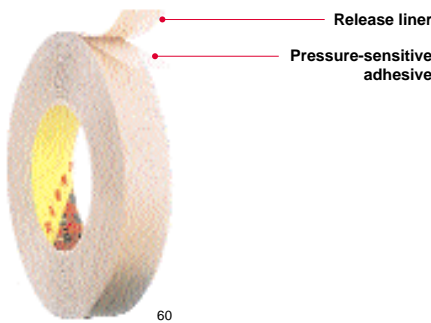
3M™ Extended Liner Tapes offer the same adhesive performance as our 3M™ Adhesive Transfer Tapes—and they have an easy-to-remove liner. Each extended liner tape has a liner wider than the adhesive. This makes liner removal convenient and easy. A variety of adhesives are available to meet your needs—from a high-tack adhesive for coated papers and plastics to a low-tack adhesive for temporary attachment.



Bond to polyethylene bottles – 3M™ Adhesive Transfer Tape 450XL immediately bonds product information “outserts” to polyethylene bottles. Holds tightly but can be cleanly removed.



Extended liner for easy removal – Several 3M™ Transfer Tapes are available with a release liner wider than the adhesive. This provides an easy-to-grab edge for convenient liner removal.



Semi-automatic application – 3M™ T-646Wi Applicator quickly applies 3M Adhesive Transfer Tape 920XL to window warranty stickers, ready to apply at car dealerships.



Secure sealing – 3M™ Adhesive Transfer Tape is pre-applied to an overnight envelope ready for use. Adhesive seals the envelope with paper-tearing strength.

Product Information

Adhesive Type	Product Number	Tape Thickness w/o liner Mils (mm)	Liner Type	Description Resistance	Temperature Resistance		Solvent Adhesion	Relative Ideas		Application Ideas
					Minutes Hours	Days Weeks		HSE	LSE	
340	466XL	2.0 (0.05)	62# DK white with black print.	High Tack. Permanent.	180°F (82°C)	150°F (65°C)	Medium	High	High	Coated papers. LSE plastics. Overnight envelopes.
350	922XL	2.0 (0.05)	60# DK tan without print.	High performance.	450°F (232°C)	300°F (149°C)	Medium	High	High	Seal flaps on overnight cartons/envelopes.
400	450XL	1.0 (0.025)	60# DK tan with green print.	General purpose.	250°F (121°C)	180°F (82°C)	Medium	Med.	Low	Outsert attachment.
	920XL	1.0 (0.025)	40# DK white with red print.							Seal flaps on polybags and envelopes. Attach literature, photos, posters and labels.
	465XL	2.0 (0.05)	62# DK tan with green print.							Seal flaps on overnight envelopes. Attaches business forms to each other.
760	476XL	6.0 (0.16)	60# DK white with red print.	High tack. Double coated film.	150°F (65°C)	120°F (49°C)	Medium	High	High	Seal boxes and tubes used for various types of shipment.
770	9925XL	2.5 (0.065)	42# DK white with black print.	Tissue reinforced. High initial adhesion to a wide variety of materials.	150°F (65°C)	100°F (41°C)	Low	Med.	Med.	Permanent bonding paper to paper, business forms, and traffic tickets. Envelope labels.
	464XL	3.0 (0.08)		Tissue reinforced. General purpose.	200°F (93°C)	150°F (65°C)	Low	Med.	Med.	Attach photos in greeting cards. Attach book covers.
1000	921XL	1.0 (0.025)	40# DK white with blue print.	Low tack.	200°F (93°C)	150°F (65°C)	Low	Low	Low	Attach literature, labels or forms temporarily.

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.

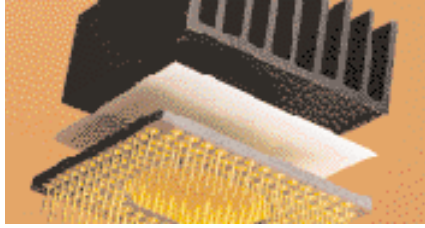
Relative Adhesion:

HSE – High Surface Energy
 LSE – Low Surface Energy
 (See p. 28)

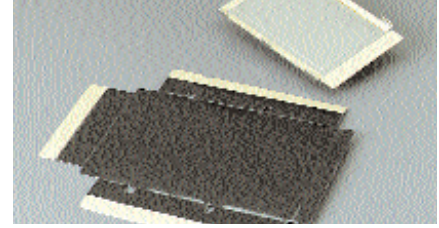
Electrically or Thermally Conductive Tapes.

3M offers electrically and thermally conductive tapes and films for high productivity and performance in demanding electronic applications. These products combine established 3M adhesive technologies with state of the art conductive technologies to provide solutions offering both high performance and high reliability.

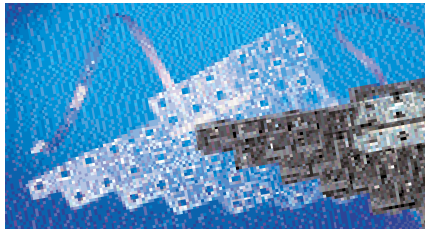
3M™ Electrically Conductive Tapes and Films provide a range of products to match the performance requirements of your application. From Pressure-Sensitive Adhesive Tapes to Thermoset Films, find a product here that matches your needs for mechanical performance, electrical performance, and environmental stability.



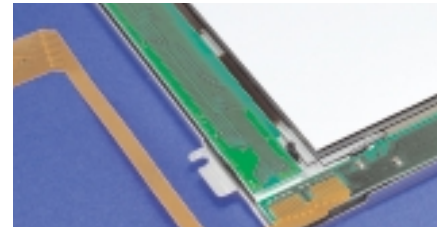
Heat sink attachment – For bonding heat sinks to chip packages or flex circuits, 3M™ Thermally Conductive Tapes feature immediate tack, effective electrical insulation, low outgassing, and high thermal conductivity.



EMI shield attachment – For attaching EMI shields to electronic devices. 3M™ XYZ-Axis films use innovative conductive fibers to provide high adhesion plus high electrical conductivity.



Electrical conductivity – For interconnection of flexible circuits. 3M™ Z-Axis Films are electrically conductive only through the thickness of the film.



Eliminates solder and mechanical connectors – For interconnection of flexible circuits to Liquid Crystal Displays, Printed Circuit Boards, or other flexible circuits. 3M™ Z-Axis Films offer a cost effective, reliable, low profile and lead-free solution.

Product Information

	Product Number	Tape Thickness w/o liner Mils (mm)	Liner Type	Description	Temperature Resistance		Solvent Resistance	Relative Adhesion		Application Ideas					
					Minutes Hours	Days Weeks		HSE	LSE						
Thermally Conductive	9882	2.0 (0.05)	58# PCK	Pressure sensitive acrylic, thermally conductive adhesive.	500°F (260°C)	300°F (149°C)	High	High	Low	Bond heat sinks. Bond rigidizers to flexible circuits.					
	9885	5.0 (0.13)													
	9890	10 (0.25)													
Electrically Conductive	9713	3.0 (0.08)	58# PCK	Pressure sensitive acrylic, XYZ-Axis electrically conductive tape.	250°F (121°C)	158°F (70°C)	High	High	Low	EMI/RFI shielding.					
	9703	2.0 (0.05)	58# PCK	Pressure sensitive acrylic, Z-Axis electrically conductive tape.	176°F (80°C)	176°F (80°C)	High	High	Low	Bond flex circuits to flex circuits. EMI/RFI shielding					
	7303	2.5 (0.06)	58# PCK	Heat cure epoxy/acrylate hybrid, Z-Axis electrically conductive.						Bond flex circuits to flex circuits. Bond flex circuit to printed circuit board.					
	5303R-1	1.0 (0.025)	2 mil PET	Heat cure cyanate ester, Z-Axis electrically conductive tape.						257°F (125°C)	257°F (125°C)	High	High	Low	Bond flex circuit to flat panel display.
	5303R-2	2.0 (0.05)													Bond flex circuit to PCB.

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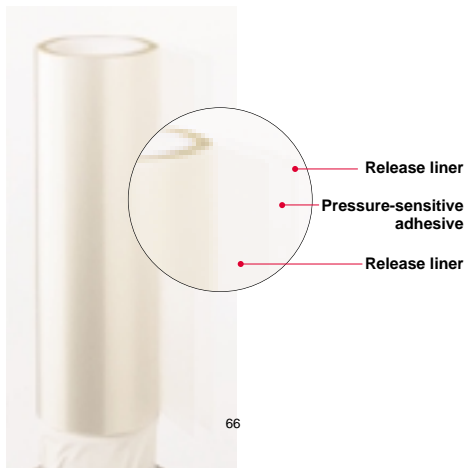
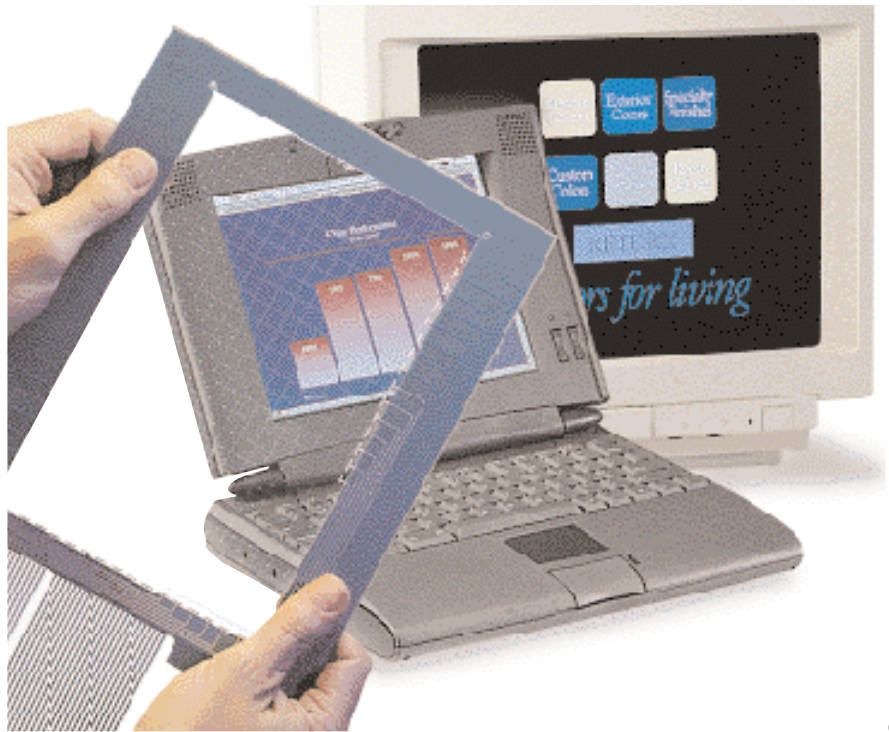
Relative Adhesion:

HSE – High Surface Energy
LSE – Low Surface Energy
(See p. 28)

3M™ Optically Clear Adhesives

**The less you see of us,
the better we look.**

3M™ Optically Clear Adhesives are specifically designed for applications requiring an optically clear laminating adhesive. Optically clear adhesives 8141 and 8142 are available in both a 1.0 mil and 2.0 mil thickness. These highly specialized free-film adhesives offer superior clarity and adhesion capabilities for use in touch screen displays and other applications requiring an optically clear bond.



The clear choice – 3M™ Optically Clear Adhesives 8141 and 8142 are the best products you'll never see. They offer superior clarity and long-term durability for touch screen displays and other applications.

65

66

Product Information

	Product Number	Tape Thickness w/o liner Mils (mm)	Liner Type	Description	Temperature Resistance		Solvent Resistance	Relative Adhesion		Application Ideas
					Minutes Hours	Days Weeks		HSE	LSE	
Optically Clear Adhesives	8141	1.0 (0.025)	PET	Optically clear adhesive.	300°F (149°C)	200°F (93°C)	Medium	Med.	Med.	For touch screens, graphic overlays and optical films.
	8142	2.0 (0.05)								

17

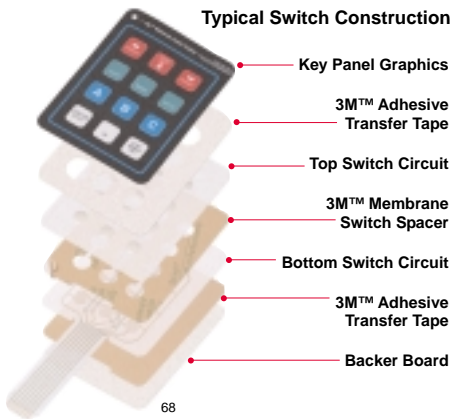
NOTE: The technical information and data provided here should be considered representative or typical only and should not be used for specification purposes. User should evaluate the 3M product to determine whether it is fit for a particular purpose and suitable for user's method of application.

Relative Adhesion:
HSE – High Surface Energy
LSE – Low Surface Energy
(See p. 28)

3M™ Membrane Switch Adhesives

Strong adhesives for long-lasting switch performance.

Since your product is only as good as the adhesive that holds it together, 3M has designed a line of membrane switch systems that will prevail against the test of time. 3M Adhesives withstand the constant stress of actuations and remain strong in a variety of environments throughout the life of the switch. They are specially formulated to provide a tight seal and resist moisture, temperature extremes, ultraviolet radiation and solvents, performing consistently without deteriorating. They offer exceptional cohesive strength with resistance to slippage, oozing, lifting, channeling and buckling.

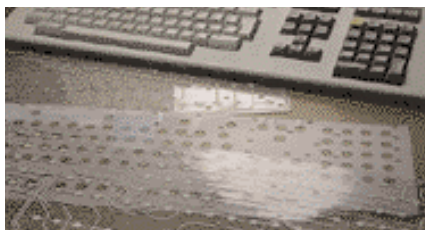


Extreme Protection – Thanks to 3M™ Membrane Switch products, fish finders can perform reliably despite constant exposure to water and temperature extremes.

18



Spacer Excellence – 3M™ Single-coated Spacer materials are ideal for lead protection and dome retainer layers.



Heavy action – 3M™ Membrane Switch products stand up to heavy repetitive activations on keyboards.



Registration – 3M™ Single-coated Spacers effectively maintain registration of metal and polyester domes even under elevated temperature and humidity environments.



The Switch is on – 3M™ Adhesive Transfer Tapes ensure strong attachment of switches, even to rough or textured surfaces, low or high energy surfaces.



Dishwasher safe – Durable 3M™ Membrane Switch products stand up through the stress of repeated heat cycles in dishwashers and other appliance applications.



Convenient adhesive removal – 3M™ Double-lined Adhesive Transfer Tapes offer the ability to selectively die cut and remove adhesive.

Product Information, 3M™ Membrane Switch Adhesives

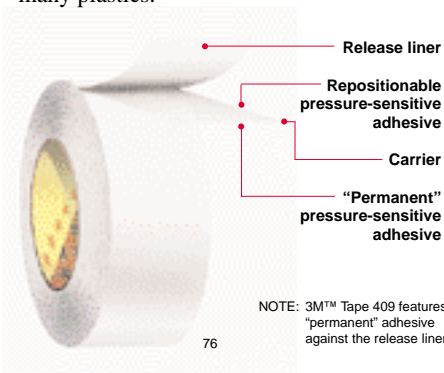
	Product Number	Adhesive Type	Description	Construction				
				Liner (Weight/Mils)	Adhesive Mils (mm)	Polyester Mils (mm)	Adhesive Mils (mm)	Liner (Weight/Mils)
Adhesives for Selective Die-Cutting (Double-Lined)	7952MP	200MP High Performance Acrylic	Double-lined 467MP.	58# PCK 4.0	2.0 (0.05)	—	—	58# PCK/4.0
	7962MP	200MP High Performance Acrylic	Double-lined 467MP with heavy layflat liner for added stiffness, controlled kiss-cutting and ease of handling.	58# PCK 4.0	2.0 (0.05)	—	—	90# PCK/6.7
	7953MP	200MP High Performance Acrylic	Double-coated polyester for adhesive stability and ease of handling.	58# PCK 4.0	1.5 (0.04)	0.5 (0.01)	1.5 (0.04)	58# PCK/4.0
	7955MP	200MP High Performance Acrylic	Double-lined 468MP.	58# PCK 4.0	5.0 (0.13)	—	—	58# PCK/4.0
	7965MP	200MP High Performance Acrylic	Double-lined 468MP with heavy layflat liner for added stiffness, controlled kiss-cutting and ease of handling	58# PCK 4.0	5.0 (0.13)	—	—	90# PCK/4.0
	7951MP	300MP High Strength Acrylic	Double-lined 300MP. High-bond to low surface energy plastics.	58# PCK 4.0	2.0 (0.05)	—	—	58# PCK/4.0
Spacers for Circuit Separation (Double-Coated)	7945MP	200MP High Performance Acrylic	Designed to meet the performance requirements of most membrane keyboards and other flex circuit laminations. Outstanding resistance to temperature extremes, chemicals and humidity. Also oozing, lifting and separation of switch layers. All products feature 2 mils of #200MP on each side.	58# PCK 4.0	2.0 (0.05)	1.0 (0.025)	2.0 (0.05)	58# PCK/4.0
	7956MP				2.0 (0.05)	2.0 (0.05)	2.0 (0.05)	
	7957MP				2.0 (0.05)	3.0 (0.08)	2.0 (0.05)	
	7959MP				2.0 (0.05)	5.0 (0.13)	2.0 (0.05)	
	7961MP				2.0 (0.05)	7.0 (0.2)	2.0 (0.05)	
	9045MP	200MP High Performance Acrylic	The 90XX series of products has a layflat liner on each side which improves die-cutting and handling of intricate die-cut parts.	90# PCK 6.7	2.0 (0.05)	1.0 (0.025)	2.0 (0.05)	90# PCK/6.7
	9056MP				2.0 (0.05)	2.0 (0.05)	2.0 (0.05)	
	9057MP				2.0 (0.05)	3.0 (0.08)	2.0 (0.05)	
	9059MP				2.0 (0.05)	5.0 (0.13)	2.0 (0.05)	
	9061MP				2.0 (0.05)	7.0 (0.2)	2.0 (0.05)	
7979	100 VHB	Premium performance, particularly in temperature resistance and shear strength.	58# PCK 4.0	2.0 (0.05)	5.0 (0.13)	2.0 (0.05)	58# PCK/4.0	
Spacers for Switch Assembly (Single-Coated)	7993MP	200MP High Performance Acrylic	Single side spacers aid in the construction of membranes with circuitry, i.e. to protect leads, hold domes in place, or build custom spacers.	90# PCK 7.7	2.0 (0.05)	1.0 (0.025)	—	—
	7995MP				2.0 (0.05)	3.0 (0.08)	—	—
	7997MP				2.0 (0.05)	5.0 (0.13)	—	—

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3M™ Removable/Repositionable Tapes

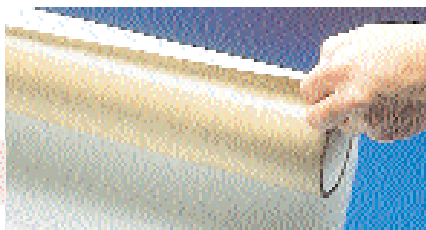
Strong adhesive on one side of the carrier; repositionable adhesive on the other.

3M™ Removable/Repositionable Tapes feature a relatively “permanent” adhesive on one side of a film or tissue carrier and a removable/repositionable adhesive on the other side. With lined versions, you can initially join one side to a surface while the other side is covered with the liner, ready to be joined later to the second surface. Linerless versions are used for bonding both surfaces at the same time. Different tapes in the line offer different levels of adhesion on each side of the carrier. You can join substrates that include glass, metals, wood, paper, painted surfaces, and many plastics.



Easy opening and reclosure – 3M™ Tape 665 seals hosiery bags for shipment and display but also lets the customer open and reclose the bag as necessary. The tape is linerless to help speed automatic dispensing.

20



Core starting – The high tack adhesive side of 3M™ Tape 9415 PC “permanently” adheres to cores for winding up paper, foils or film. The low tack side releases the paper, or film when unwinding.



Reclosable envelope flaps – For reusable inter-office envelopes, 3M™ Removable/Repositionable Tape 9415 PC eliminates costly two-tape systems.



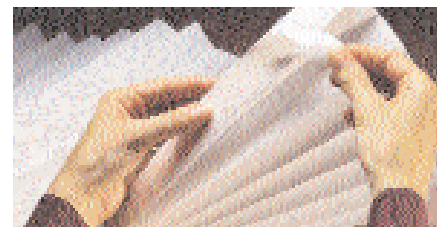
3M™ Removable foam tape – bonds temporary signs to many smooth surfaces. Unique clear adhesive bonds firmly yet allows removal with no adhesive residue. (Note: May delaminate substrates with low internal strength.)



Removable labels – 3M™ Removable/Repositionable Tape bonds to most plastics. In this application, the low tack side bonds a label in a pan, yet allows easy removal.



Removable carpeting – With the differential tack of 3M™ Tape 409, temporary carpeting adheres to the floor until lifted for removal. This helps save time and effort in exhibits.



Pleated paper shades – 3M™ Removable/Repositionable Tape 9429 attaches temporary paper window blinds inside window frames.

Product Information, 3M™ Removable, Repositionable Tapes

Product Number	Adhesive Type	Tape Thickness w/o liner Mils (mm)	Liner Type	Description	Temperature Resistance		Solvent Resistance	HSE	LSE	Application Ideas	
					Minutes Hours	Days Weeks					
Removable/Repositionable	409	760	10 (0.25)	62# DK	Double coated film tape. Differential tack. Hand tearable. Med. tack/high tack.	150°F (65°C)	120°F (49°C)	Medium	High	High	Temporary carpet bonding for exhibit halls.
	665	400	3.5 (0.09)	Linerless	Clear 1.5 mil UPVC film carrier. Slight differential tack. Linerless.	125°F (52°C)	125°F (52°C)	Medium	Med.	Low	Reclosable adhesive for polybags. Attach outserts to bottles. Attach microscope slides to paperboard holder.
	666	400	3.5 (0.09)	PE	Clear 1.5 mil UPVC film carrier. Slight differential tack. Lined.	125°F (52°C)	125°F (52°C)	Medium	Med.	Low	Attach chemically sensitive film to test sticks.
	4658F	100	31 (0.8)	2 mil PET	Clear closed foam acrylic removable foam tape. Offers clean removability from many substrates.	212°F (100°C)	175°F (80°C)	High	High	Low	Removable P.O.P. displays. Signs. Exhibitions. Name plates.
	9415 PC	400/1000	2.0 (0.05)	70# PCK	1 mil polyester film carrier. High tack/low tack.	150°F (65°C)	120°F (49°C)	Low	Med/Low	Low	Core start/end tab of paper, film and foils. Temporary hold of credit cards in mailers. Reclosable adhesive for envelope flaps.
	9416	400/1000	2.0 (0.05)	70# PCK	Translucent white tissue carrier. High tack/low tack.	150°F (65°C)	120°F (49°C)	Low	Med/Low	Low	Removable label adhesive. Removable photo adhesive.
	9425	220/400	5.5 (0.14)	58# PCK	Clear 1.5 mil UPVC film carrier. Features high tack and medium tack adhesives. Lined.	120°F (49°C)	120°F (49°C)	Medium	Med/Low	Low/Low	Removable adhesive for backlit signs. Reclosable adhesive for polybags and envelope flaps. Core start/end tab paper, films and foils.
	9429	400	5.0 (0.13)	66# DK	Double coated tape. Removable medium tack adhesive. 3 mil polyethylene film carrier.	150°F (65°C)	120°F (49°C)	Low	Med.	Low	Temporary holding. Removable poster mounting. Core starting. Liner designed for rotary die-cutting.
	9449	1000	1.0 (0.025)	55# DK	Adhesive transfer tapes for constructing removable labels.	120°F (49°C)	120°F (49°C)	Low	Low	Low	Removable repositionable labels.

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Selection Guide

1. Determine the surface that will need "permanent" adhesion.
2. Determine the surface that will need repositionable adhesion.
3. Cross-reference the two surfaces and locate suggested 3M Repositionable Double Coated Tapes for evaluation.

	Repositionable		
	Metals, glass, ceramics, rigid vinyl, ABS, acrylics, styrene, painted surfaces	Polyethylene, polypropylene	Paper
"Permanent"	Metals, glass, ceramics, rigid vinyl, ABS, acrylics, styrene, painted surfaces	3M™ Tape 409, 665, 666, 9415 PC, 9416, 9425, 9429, 4658F.	3M™ Tape 665, 666, 9415 PC, 9416, 9425, 9429.
	Polyethylene, polypropylene	3M™ Tape 409, 9415 PC, 9416, 9425.	3M™ Tape 665, 666, 9415 PC, 9416, 9425, 9429.
	Paper	3M™ Tape 665, 666, 9415 PC, 9416, 9425.	3M™ Tape 665, 666, 9415 PC, 9416, 9425, 9429.

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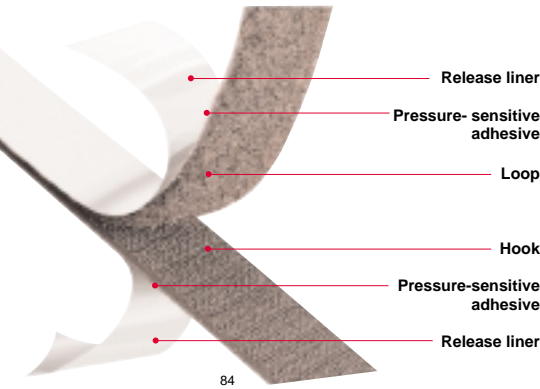
Relative Adhesion:
HSE – High Surface Energy
LSE – Low Surface Energy
(See p. 28)

3M™ Scotchmate™ Hook and Loop Reclosable Fasteners

Industrial-strength fasteners for easy opening and closing

It's as simple as pressing together and pulling apart. When your product calls for thousands of easy openings and closings, 3M™ Scotchmate™ Reclosable Fasteners pull through for you. Tiny, stiff hooks mesh with pliable loops for quick, secure fastening. Product quality goes up while production time and costs go down.

There's a Scotchmate fastener for any application: flame-resistant versions, high and low temperature-resistant formulations, and plasticizer-resistant adhesives for attachment to most vinyls. Choose sew-on or pressure-sensitive fasteners in a variety of adhesive strengths.



Fit for comfort – Remove and replace bicycle helmet straps and cushions easily. 3M™ Scotchmate™ Reclosable Fasteners allow simple positioning to fit the head. They hold strong despite heat and dirt.



22

Flame resistant attachment – Aircraft seat assembly is quick and easy with 3M™ Scotchmate™ Reclosable Fasteners. Its flame-resistance characteristics meet FAA flammability standards.



Cool applications – Pressure-sensitive adhesive backing attaches easily to plastic curtains on refrigerated displays. It resists low temperatures and moisture. Plasticizer-resistance assures long-term performance.



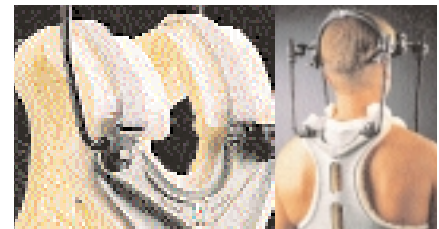
Firm support – 3M™ Scotchmate™ Fasteners create readjustable braces to provide a comfortable fit that holds securely. Can be opened and closed hundreds of times.



Custom fabrication – 3M™ Scotchmate™ Reclosable Fasteners are available in rolls and standard piece parts. But they can be easily fabricated to a wide variety of custom shapes to fit your product design and manufacturing needs.



Exhibit ease – Exhibit assembly is quick and easy. 3M™ Scotchmate™ Fasteners bond styrene walls to the frame, creating a display that's lightweight and portable. Changing graphics is a snap.



Critical care – This medical device features a removable interior padding attached to a plastic surface with a 3M™ Scotchmate™ Reclosable Fastener. It holds securely, yet it can be adjusted easily for comfort.

Product Information, 3M™ Scotchmate™ Hook and Loop Reclosable Fasteners

Product Number	Adhesive Type	Description	Engaged Thickness Mils (mm)	Temperature Resistance		Relative Adhesion		Application Ideas	Liner	
				Short Term	Long Term	HSE	LSE			
Plain back - No Adhesive	SJ-3401	Plain back Scotchmate hook and loop.	100 - 150 (2.6 - 3.9)	—	—	—	—	Canvas awning attachment. Luggage closure.	—	
	SJ-3402									
	SJ-3418	Flame resistant plain back Scotchmate hook and loop.	100 - 150 (2.6 - 3.9)	—	—	—	—	Aircraft seating. Aircraft curtain closures.	—	
	SJ-3419									
	SJ-3476	Polyester plain back Scotchmate polyester hook and loop.	100 - 150 (2.6 - 3.9)	—	—	—	—	Outdoor sew on attachment. Military applications.	—	
	SJ-3477									
SJ-3486	Flame resistant plain back polyester hook and loop.	100 - 150 (2.6 - 3.9)	—	—	—	—	Aircraft interior/seating.	—		
SJ-3487										
PSA	SJ-3518	Rubber 715	Flame resistant adhesive back Scotchmate hook and loop.	100 - 160 (2.6 - 4.2)	158°F (70°C)	120°F (49°C)	High	High	Aircraft panel attachment. Rail transit panel attachment.	B
	SJ-3519									
	SJ-3522	Acrylic Specialty	Plasticizer resistant adhesive back Scotchmate hook and loop.	100 - 120 (2.6 - 3.1)	158°F (70°C)	120°F (49°C)	High	Low	Vinyl binder closures. Auto dash accessories.	C
	SJ-3523									
	SJ-3526	Rubber 720	General purpose adhesive back Scotchmate hook and loop.	100 - 160 (2.6 - 4.2)	158°F (70°C)	120°F (49°C)	High	High	Brace closure. Exhibit/display fastener.	B
	SJ-3527									
	SJ-3536	Rubber 720	Limited purpose adhesive back Scotchmate hook and loop.	100 - 170 (2.6 - 4.4)	158°F (70°C)	120°F (49°C)	High	High	Point of purchase attachment to fiberglass, composites and plastics.	D
	SJ-3537									
	SJ-3571	Acrylic 100VHB	Premium performance adhesive back Scotchmate hook and loop.	100 - 160 (2.6 - 4.2)	200°F (93°C)	200°F (93°C)	High	Low	High temp closures.	E
	SJ-3572									
SJ-3576	Acrylic 100VHB	Polyester adhesive back Scotchmate hook and loop.	100 - 160 (2.6 - 4.2)	200°F (93°C)	200°F (93°C)	High	Low	Outdoor pressure sensitive applications.	E	
SJ-3577										
SJ-3586	Rubber 715	Flame resistant Polyester adhesive back hook and loop.	100 - 160 (2.6 - 4.2)	158°F (70°C)	120°F (49°C)	High	High	Aircraft panel attachment.	B	
SJ-3587										

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.

Liner Types:

- A – Tan Polycoated paper, 86# (6 mil)
- B – White Polypropylene film with Red 3M (3 mil)
- C – Clear Polyethylene film (3½ mil)
- D – White Polypropylene film, no print (3 mil)
- E – Clear Polyethylene film with White 3M (3½ mil)

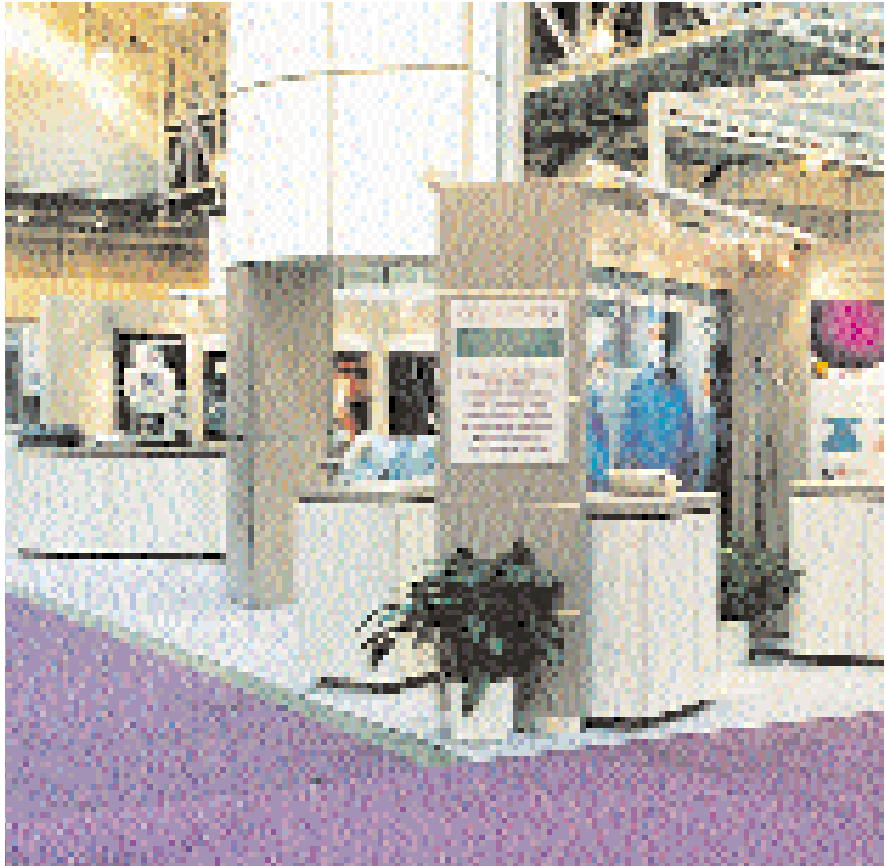
Relative Adhesion:

- HSE – High Surface Energy
- LSE – Low Surface Energy
- (See p. 28)

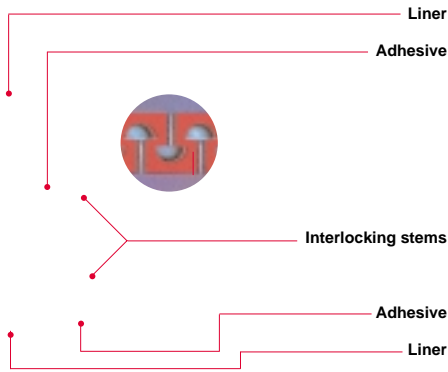
3M™ Dual Lock™ Reclosable Fasteners

A reclosable system to replace unsightly mechanical fasteners

3M™ Dual Lock™ Reclosable Fasteners invisibly attach access doors and panels, signs, display components, and many other frequently removed parts. When the mushroom-shaped stems interlock, tensile strength is high enough to replace mechanical fasteners in many applications. Yet, you can readily open and close Dual Lock fasteners hundreds of times. Depending on your application, select either plain-backed or adhesive-backed versions. Adhesive-backed versions are available for bonding to bare or painted metal, wood, glass, many plastics including plasticized vinyl, and more.



Change show booth panels – For fast assembly, panels and fixtures are readily assembled in a booth with 3M™ Dual Lock™ Reclosable Fasteners. An audible “snap” announces that the fastener is engaged and the graphic panel is secured in place. Breakdown is equally fast and convenient.



92

91



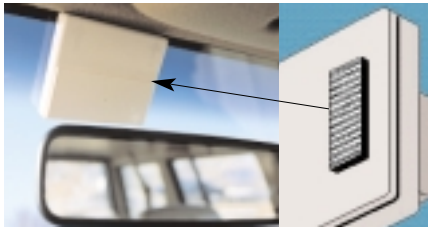
Secure, stable attachment – 3M™ Dual Lock™ Reclosable Fastener secures a document holder to the side of a PC monitor. When not in use, the holder simply snaps off for storage.



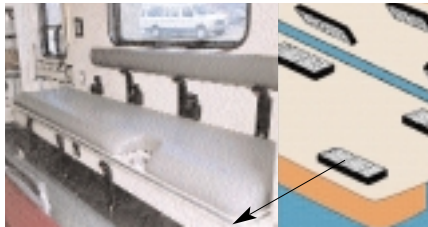
Quick snap access – For convenient access to wiring in moveable office partitions, 3M™ Dual Lock™ Reclosable Fasteners attach metal cover plates over wiring channels.



Weather resistance – With a 3M™ Dual Lock™ Reclosable Fastener, a vinyl golf cart enclosure simply snaps in place. The fastening withstands wind and moisture, and is hidden for clean design.



Attach to glass – A 3M™ Dual Lock™ Reclosable Fastener attaches an automatic toll transponder to a windshield. Attachment is secure, yet the transponder can be easily removed to help prevent theft.



No-tools removal – With 3M™ Dual Lock™ Reclosable Fasteners, the wall panels, cushions, and other components inside an emergency vehicle are easily removed without tools for cleaning and disinfecting.



Fast Attachment – 3M™ Dual Lock™ Reclosable Fastener secures a telemetry transponder in this NASCAR stock car. The transponder is easily removed on race day.

93

94

95

96

97

98

Product Information, 3M™ Dual Lock™ Reclosable Fasteners

	Product Number	Adhesive Type	Engaged Thickness Mils (mm)	Description	Temperature Resistance		Solvent Resistance	Relative Adhesion		Application Ideas	Liner
					Minutes Hours	Days Weeks		HSE	LSE		
Plain back - No Adhesive	SJ-3440	—	160 (4.0)	Type 250, black	200°F (93°C)	158°F (70°C)	High	—	—	Attach information signs to wood.	—
	SJ-3441	—	160 (4.0)	Type 400, black	200°F (93°C)	158°F (70°C)	High	—	—	Close boat storage box lids.	—
	SJ-3442	—	160 (4.0)	Type 170, black	200°F (93°C)	158°F (70°C)	High	—	—		—
	SJ-3443	—	280 (7.0)	Type 400, black, reinforced fabric backed	200°F (93°C)	158°F (70°C)	High	—	—		—
	SJ-3444	—	160 (4.0)	Type 170, black, reinforced fabric backed	200°F (93°C)	158°F (70°C)	High	—	—		—
	SJ-3460	—	160 (4.0)	Type 250, clear	200°F (93°C)	158°F (70°C)	High	—	—		—
	SJ-3481	—	240 (6.1)	Type 400, rigid strips, black	200°F (93°C)	158°F (70°C)	High	—	—		—
Rubber-based PSA	SJ-3540	Rubber 720	230 (6.0)	Type 250, black with black foam adhesive	158°F (70°C)	120°F (49°C)	Medium	High	High	Fasten display pieces to convention booth.	A
	SJ-3541	Rubber 720	230 (6.0)	Type 400, black with black foam adhesive	158°F (70°C)	120°F (49°C)	Medium	High	High	Attach access panels on computers.	A
	SJ-3542	Rubber 720	230 (6.0)	Type 170, black with black foam adhesive	158°F (70°C)	120°F (49°C)	Medium	High	High	Secure elevator interior panels.	A
	SJ-3540GT	Rubber 720	460 (11.7)	Type 400, black with thicker gray foam adhesive	158°F (70°C)	120°F (49°C)	Medium	High	High		A
	SJ-3541GT	Rubber 720	460 (11.7)	Type 400, black with thicker gray foam adhesive	158°F (70°C)	120°F (49°C)	Medium	High	High		A
	SJ-3542GT	Rubber 720	460 (11.7)	Type 170, black with thicker gray foam adhesive	158°F (70°C)	120°F (49°C)	Medium	High	High		A
Acrylic-based PSA	SJ-3550	Acrylic	230 (6.0)	Type 250, black with white VHB Tape	200°F (93°C)	158°F (70°C)	High	High	Low	Secure windscreen on golf cart.	B
	SJ-3551	Acrylic	230 (6.0)	Type 400, black with white VHB Tape	200°F (93°C)	158°F (70°C)	High	High	Low	Attach clear shield to sign.	B
	SJ-3552	Acrylic	230 (6.0)	Type 170, black with white VHB Tape	200°F (93°C)	158°F (70°C)	High	High	Low	Mount resonator switch to amplifier.	B
	SJ-3560	Acrylic	230 (6.0)	Type 250, clear with clear VHB Tape	200°F (93°C)	158°F (70°C)	High	High	Low	Mount abrasive disks in grinding/polishing equipment.	B
	SJ-3553	Acrylic	230 (6.0)	Type 400, black with gray VHB Tape	200°F (93°C)	158°F (70°C)	High	High	Low	Attach headliner to truck cab.	B
	SJ-3554	Acrylic	230 (6.0)	Type 170, black with gray VHB Tape	200°F (93°C)	158°F (70°C)	High	High	Low		B

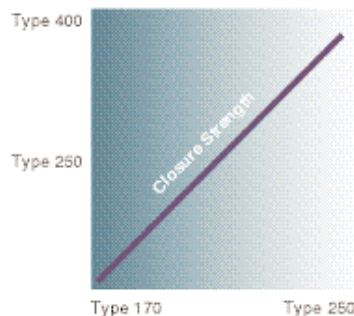
NOTE: The technical information and data provided here should be considered representative or typical only and should not be used for specification purposes. User should evaluate the 3M product to determine whether it is fit for a particular purpose and suitable for user's method of application.

Liner Types:

- A – White Polyethylene film (4.5 mil)
- B – Clear Polyethylene film with Red 3M (3.4 mil)

Relative Adhesion:

HSE – High Surface Energy
LSE – Low Surface Energy
(See p. 28)



Type refers to approximate stems per square inch on one side of the fastener. Type 400, for example, is 400 stems/square inch. You can mix different types as indicated below. Closure strength increases with the total number of stems that interlock.

Closure Strength:
250/400 > 250/250 ≥ 170/400 > 170/250

3M™ Double Coated Tape Dispensers and Selection Guides

Pull-and-cut dispensers

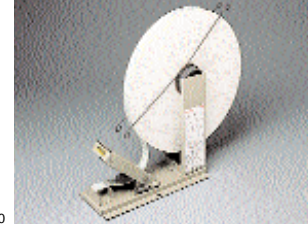
Use of an applicator or dispenser can help improve application quality and reduce the cycle time. The following units allow you to manually dispense and cut the length of 3M™ Tape you need. Use when various lengths of one or more tapes are needed throughout the assembly process.



3M™ P-52 and P-56 Dispensers have multi-roll capability. Weighted versions are available as P-52W, P-56W dispensers.
Tape capacity: Tape widths for P-52: ¼" (6 mm) to 2" (50 mm) Tape widths for P-56: ¼" (6 mm) to 6" (150 mm). Max. roll dia.: 6 1/8" (175 mm).



3M™ M-712 Dispenser. Internally weighted, double-coated tape dispenser winds up release liner as tape is dispensed.
Tape capacity: Tape width: ¼" (6 mm) to 2" (50 mm). Max. roll dia.: 6 1/4" (160 mm).



3M™ M-744 Dispenser is an economical unit for various foam tapes.
Tape capacity: Tape width: ¼" (6 mm) to 2" (50 mm). Max. roll dia.: 16 1/2" (420 mm).

Automatic dispensers

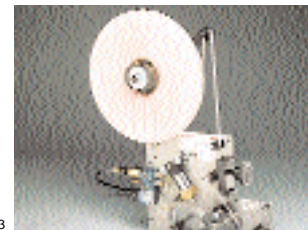
Use of an applicator or dispenser can help improve application quality and reduce the cycle time. The following semi-automatic and automatic units are capable of operating at high speeds to cut and apply predetermined lengths of 3M Tape. 3M will help you incorporate any of these dispensers into your production line for greater speed in assembly.



3M™ S-625 Applicator automatically applies lengths of tape from ½" (12 mm) to 3" (75 mm) at rates up to 80 applications/min. Easily adaptable to hand-fed, semi-automatic operations, as well as automatic assembly systems.
Tape capacity: Tape width: ¼" (6 mm) to 1 1/2" (38 mm). Max. roll dia.: 11 1/2" (290 mm).



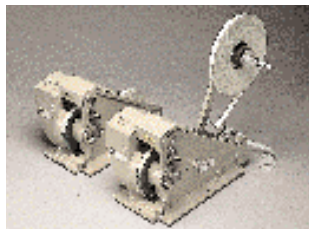
3M™ T646i, T646Wi, T646f Application Systems are semi and automatic equipment that apply programmable lengths of many adhesive transfer and double-coated tapes, with liner, to flat surfaces that 75 ft./min.
Tape capacity: Tape width: ½" (12 mm) to 1" (25 mm) using the T646WH head or 2" (50 mm) using custom T646H2 head. Max. roll dia.: 14" (355 mm).



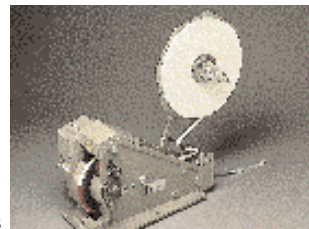
3M™ T646WH, T646H2, T627 Tape Applicator Heads can be mounted on a product conveyor to apply many adhesive transfer and double-coated tapes, liner on, to flats surfaces from 75 to 250 ft./min.
Tape capacity: Tape width: ¼" (6 mm) to 2" (50 mm). Max. roll dia.: 14" (335 mm).

Definite length dispensers

Use of an applicator or dispenser can help improve application quality and reduce the cycle time. When you need to apply predetermined lengths of 3M™ Tape, these electric and manual dispensers can help speed your assembly operation. Just press the lever to measure and cut the length of tape you need every time.



3M™ M-87 Dispenser provides pre-cut lengths of double-coated tapes from ½" (12 mm) to 6" (150 mm), in ½" (12 mm) increments. Optional attachment accommodates long length rolls and dispenses tapes without liner.
Tape Capacity: Tape width: ¼" (6 mm) to 1" (25 mm). Max. roll dia.: without attachment 6 1/2" (165 mm); with attachment 16" (405 mm).



3M™ M-89 Dispenser provides predetermined lengths of double-coated foam tapes from ½" (12 mm) to 6" (150 mm) in ½" (12 mm) increments. Tape can be dispensed with or without liner.
Tape capacity: Tape width: ½" (12 mm) to 1" (25 mm). Max. roll dia.: 16" (410 mm).



3M™ M-96 Dispenser provides predetermined lengths of double-coated tapes from ¾" (20 mm) to 5" (125 mm). Tape is cut manually when lifted from the feed wheel.
Tape capacity: Tape width: ¼" (6 mm) to 1" (25 mm). Max. roll dia.: 5 3/8" (150 mm).

Count on 3M for custom-designed equipment

Your operation may call for a tailor-made tape dispensing system to match your special needs. Often dispensing equipment, modified or built to your special requirements, can help reduce manufacturing costs, improve product quality, increase productivity and give your product greater sales appeal.

3M equipment development and design experts are ready to help you analyze your needs to make sure you get the right dispensing system. And whether your requirements call for modifying existing equipment or developing a custom-designed unit, you can count on 3M for high-performance, cost-efficient results.

3M™ Double Coated Tapes Dispensers and Selection Guides

Pull-and-cut dispensers

3M™ Tape Products	Liner On		Liner Off	
	P52/P56	M744	P52/P56	
M712				
400	•			•
401	•			•
404	•			•
406	•			•
410	•			•
415	•			•
442	•			•
443	•			•
444	•			•
464	•			•
475XL		•		
476XL		•		
665			•	
666	•			•
950, 950EK	•			
4004		•		
4008		•		
4016		•		
4026		•		
4032		•		
4042		•		
4046		•		
4052		•		
4056		•		
4085		•		
4408		•		
4416		•		
4432		•		
4462		•		
4466		•		
4492		•		
4496		•		
4905		•		
4920		2		
4929		2		
4930		2		
4932		2		
4945		2		
4946		2		
4949		2		
4950		2		
4951		2		
4952		2		
4955		2		
4956		2		
4959		2		
4962		2		
4979		2		
9415PC	•			•
9416	•			•
9420	•			•
9425	•			•
9443	•	•		•
F-9460PC	•			•
F-9465PC	•			•
F-9469PC	•			•
F-9473PC	•			•
9482PC	•			•
9485PC	•			•
9500PC	•			•
9576	•			•
9579	•			•
9579	•			•
9731				3
F-9752PC	•			

The following 3M Tapes are not recommended for use with the 3M Tape Dispensers listed above: 409, 463, 465, 465XL, 4910, 4921, 4926, 4936, 4941, 4943, 4957, 4965, 4992, 9429 Tapes.

1. Maximum tape width 1/2" (12 mm).
2. Additional testing or modification required. Contact 3M BSD sales representative for additional information.
3. Removes film liner on the silicone side only.

Automatic dispensers

3M™ Tape Products	Liner On		Liner Off
	S625w/ Attach	T646 T646/Wi	
400	•	•	•
401	•	•	•
404	•	•	•
406	•	•	•
409	•	•	•
410	•	•	•
415	•	•	•
442	•	•	•
443	•	•	•
444	•	•	•
463	•	•	•
464	•	•	•
464XL	•	•	•
465	•	•	•
465XL	•	•	•
466XL	•	•	•
475XL	•	1	•
476XL	•	1	•
665	•	•	•
666	•	•	•
920XL	•	•	•
921XL	•	•	•
922XL	•	•	•
927	•	•	•
950, 950EK	•	•	•
4016	•	•	•
4026	•	•	•
4032	•	•	•
4042	•	•	•
4046	•	•	•
4052	•	•	•
4056	•	•	•
4085	•	•	•
4432	•	•	•
4462	•	•	•
4466	•	•	•
4492	•	•	•
4496	•	•	•
4905	•	•	•
4920	•	•	•
4929	•	•	•
4930	•	•	•
4932	•	•	•
4945	•	•	•
4946	•	•	•
4949	•	•	•
4950	•	•	•
4952	•	•	•
4965	•	•	•
9415PC	•	•	•
9416	•	•	•
9420	•	•	•
9425	•	•	•
9429	•	•	•
F-9465PC	•	•	•
9482PC	•	•	•
9485PC	•	•	•
9500PC	•	•	•
9576	•	•	•
9579	•	•	•
9589	•	•	•
9703	•	•	•
9731	•	•	•
F-9752PC	•	•	•
F-9755PC	•	•	•

The following 3M Tapes are not recommended for use with the 3M Tape Dispensers listed above: 4004, 4008, 4408, 4416, 4926, 4941, 4943, 4951, 4955, 4956, 4957, 4959, 4962, 9443 Tapes.

1. Additional testing or modification required. Contact 3M BSD sales representative for additional information.

Definite length dispensers

3M™ Tape Products	Liner On			Liner Off		
	M87	M89	M96	M87	M87w/ Attach	M89
400	•				•	
401	•				•	
404	•				•	
406	•				•	
409	•				•	
410	•		•		•	
415	•		•		•	
442	•				•	
443	•		•		•	
444	•				•	
463	•				•	
464	•		•		•	
464XL	2		3		•	
465					•	
465XL			3		•	
665			•		•	
666	•				•	
950, 950EK			•		•	
4004		1				
4008		•				1
4016		•				•
4026		•				•
4032		•				•
4042		•				
4046		•				
4052		•				
4056		•				
4085		•				1
4416		•				•
4432		•				•
4462		•				
4466		•				
4492		•				
4496		•				
4905		•				
4910		•				
4920		•				
4921		•				
4926		•				
4929		•				
4930		•				
4932		•				
4936		•				
4941		•				
4943		•				
4945		•				
4946		•				
4949		•				
4950		•				
4951		•				
4952		•				
4955		•				
4956		•	•			
4957		•				
4959		•				
4962		•				
4965		•				
4979		•	•			
4992		•				
9415PC	•					•
9416	•		•			
9420	•					•
9425	•					•
9429	•					•
9443	•					•
F-9460PC	•					•
F-9469PC	•					•
F-9473PC	•		•			
9482PC	•		•			
9485PC	•					
9500PC	•					•
9576	•		•			
9579	•					
9589	•					
9731	•					•

The following 3M Tapes are not recommended for use with the 3M Tape Dispensers listed above: 475XL, 476XL, F-9465PC, 9703, F-9752PC, F-9755PC Tapes.

1. Maximum tape width 1/2" (12 mm).
2. 60-yard rolls only without attachment; 600-yard rolls with attachment.
3. 60-yard rolls only.

Contact your 3M Bonding Solutions Sales Representative for dispensing information on products not listed above.

Information to help you select the right joining system.

There are many different tapes and fasteners in the 3M Bonding Solutions product line. And to help you make sure you're getting the right product for your particular application, you'll want to consider several important factors: adhesive, surface contact, substrates, performance requirements, environmental conditions, and appearance.

Rubber or Acrylic Adhesive:

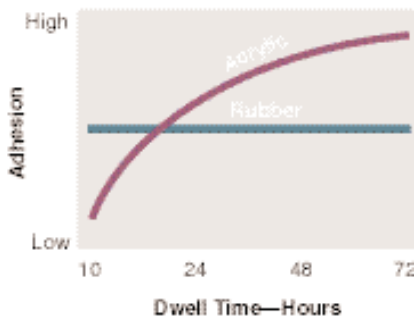
3M tapes and fasteners feature advanced 3M rubber or acrylic adhesive formulations.

To make rubber adhesives, natural or synthetic rubbers are made tacky by mixing with various compounds. Individual elements do not change; components are simply mixed together to produce an adhesive.

To make acrylic adhesives, plastic compounds are formulated to obtain specific chemical structures that are tacky. Unlike rubber formulations, you get an actual chemical change of components. You can formulate acrylics to produce specific performance characteristics.

Rubber or acrylic adhesive...which will meet the demands of your application? Perhaps the following information will help you decide.

Rubber vs. Acrylic Adhesive Bond Buildup



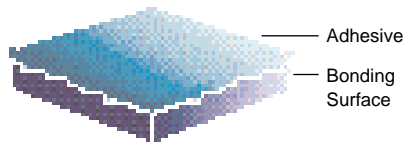
Surface Contact:

This is fundamental to adhesive performance. To maximize contact on a substrate:

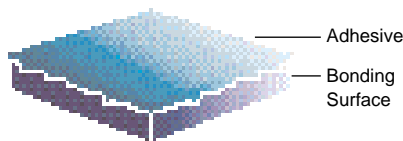
- Substrate must be unified, dry, and free of contamination.
- Firm pressure must be applied to increase the cold flow and contact of the adhesive with the substrate.
- Time and temperature will increase the surface contact and adhesion values.

Adhesive Surface Contact

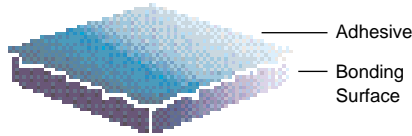
Initial Contact (Minimal Contact)



After Rubdown (More Contact)



After Dwell Time (Excellent Contact)



Acrylic Adhesives

- Fair initial adhesion
- Gradual adhesion build-up
- High shear strength
- High temperature resistance
- Excellent solvent resistance
- Excellent UV resistance
- Excellent durability

Rubber Adhesives

- High initial adhesion
- Some adhesion build-up
- Good shear strength
- Moderate temperature resistance
- Good solvent resistance
- Fair UV resistance
- Moderate durability

Surface Energies:

Adhesion is the molecular attraction between unlike materials, similar to magnetic force. Strength of attraction is determined by the surface energy of the material. The higher the surface energy, the greater the attraction. The lower the surface energy, the weaker the attractive forces. On a high surface energy material the adhesive can flow or "wet out" to assure a stronger bond.

On an automobile unwaxed for years, water spreads on the surface in large puddles. This is high surface energy allowing the water to flow. In comparison, on a freshly waxed car, the water will bead up. This is low surface energy; the liquid (or adhesive) does not flow out.

Metal Surfaces

Dynes/cm*	Surfaces
1103	Copper
840	Aluminum
753	Zinc
526	Tin
458	Lead
700-1100	Stainless Steel
250-500	Glass

High Surface Energy Plastics (HSE)

Dynes/cm*	Surfaces
50	Kapton® Industrial Film
47	Phenolic
46	Nylon®
45	Alkyd Enamel
43	Polyester
43	Epoxy Paint
43	Polyurethane Paint
42	ABS
42	Polycarbonate
39	PVC Rigid
38	Noryl® Resin
38	Acrylic

Low Surface Energy Plastics (LSE)

Dynes/cm*	Surfaces
37	PVA
36	Polystyrene
36	Acetal
35	Polane® Paint
33	EVA
31	Polyethylene
29	Polypropylene
28	Tedlar® Polyvinyl Fluoride Film
18	Teflon® Fluoropolymer

* These values are provided as a guide. Formulation modifications can substantially alter surface energies. Kapton, Nylon, Tedlar and Teflon are registered trademarks of DuPont. Noryl is a registered trademark of General Electric. Polane is a registered trademark of Sherwin-Williams Company.

Substrates:

You must consider surface roughness or smoothness, coated or uncoated, flexibility, and part size. Foam tapes can achieve more surface contact than thin tapes on rougher surfaces. If the surface is coated, the coating's surface energy must be considered. Smaller, more flexible parts can be bonded with thinner products such as adhesive transfer tapes. Larger, more rigid parts require thicker products such as double-coated foam tapes.

Environmental Conditions:

The types of exposure that your bonds will be required to resist must be taken into consideration. These include temperature extremes, sunlight (UV), water, oils or solvents. These environmental conditions will direct your adhesive choice.

Performance Requirements:

You must consider what forms of stresses will be present: tensile, shear, cleavage or peel.

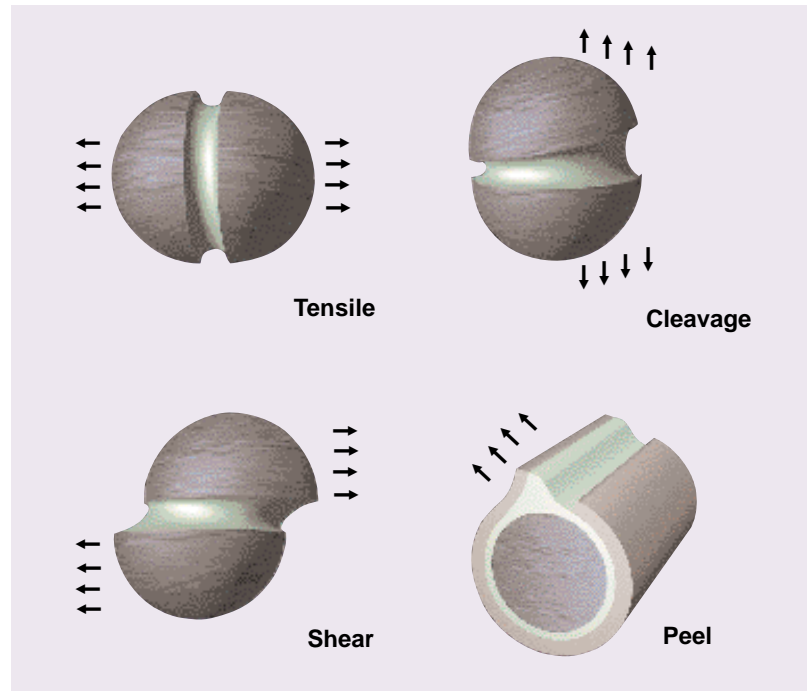
- **Tensile:** Forces perpendicular to the bond plane. Stress is distributed over the entire bond area. All the adhesive contributes to the bond strength.
- **Shear:** Forces parallel to the joint plane. As with tensile, stress is distributed over the entire bond area.
- **Cleavage:** Forces concentrated at the edge of the bond. Not all of the bond area is contributing to the overall strength at one time.
- **Peel:** Forces confined to the edge of the bond. At least one surface is flexible. Even less adhesive contributes to the bond strength than in cleavage.

Appearance:

One of the big benefits of a tape or fastener joining system is that the system is usually out of sight between bonded surfaces. In some instances, however, color or transparency will be important. For example, transparent 3M™ VHB™ Tape 4910 is virtually invisible when used to join clear plastic parts.

In other words, there's likely a tape or fastener in this comprehensive line that will match your exact requirements for appearance.

Typical Stresses



Bonding Systems Adhesive Technology Platforms

100	High Temperature	100, 100VHB
200	High Performance	200, 200MP, 220, 290
300	High Strength	300, 300LSE, 300MP, 320, 340
350	High Holding	350
400	High Tack	400, 420, 430
700	Synthetic Rubber	700, 710, 715, 720, 740, 745, 760, 770
800	Natural Rubber	800, 850, 860
900	Miscellaneous	900A, 900R
1000	Repositionable	1000
2000	Optically Clear	2000MP

Tape Selection Guide

Selecting the right adhesive tape for the job.

To select the right adhesive for the job, several variables must be considered.

For example, in the range from steel to polystyrene to rubber, substrates have vastly different bonding “profiles.” These are the characteristics that determine how well the substrate can be bonded with a certain adhesive for performance in a specific environment.

In the range from thick to thin, you also need the right thickness to make sufficient contact between surfaces, but with no greater thickness than necessary.

In this Tape Selection Guide you will find information to help guide your evaluation in all of these areas. You should be able to narrow choices to two or three possibilities for testing. And your 3M Bonding Solutions representative will be glad to provide tape product samples.

Substrate profile

- **Thin material**
- **Flexible material or small rigid parts**
- **Lightweight**

- **Thick material**
- **Stiff or rigid material**
- **Medium to heavy weight**
- **Irregular surfaces**

General performance characteristics

Thin Tapes

- **Thin bond line**

Thick Tapes

- **Gap filling**
- **Sealing**

Specific performance characteristics by product line

Thin Tapes

3M™ Adhesive Transfer Tapes

- Thinnest bond lines
- High shear strength adhesive available
- Many can be dispensed with Scotch® ATG Applicator for convenience

Thick Tapes

3M™ Double Coated Foam Tapes

- Carrier for easier handling
- Dimensional stability
- Mounting and holding for indoor applications

3M™ Double Coated Tapes

- Carrier for easier handling
- Dimensional stability
- Many offer removability

3M™ VHB™ Tapes

- Carrier for easier handling
- Dimensional stability
- Mounting, holding and joining for outdoor applications
- High bond strength and environmental resistance

Tape Selection Guide

This selection chart will give you a few of our most commonly used tapes for each surface combination. Below are only a handful of the total products in the 3M Bonding Systems Division

Product Line. Please use these products as an introduction. You will want to refer to the individual product information pages for more complete information.

		Surface A														
		Steel Aluminum Glass Ceramics		ABS, Acrylic, Enamel & Epoxy Paints, Kapton® Industrial Film, Noryl Resin, Nylon, Lexan® Polycarbonate, Polyester, Rigid Vinyl		Polystyrene Polypropylene Polyethylene Powder Paints		Plasticized Vinyl		Paper		Cloth		Rubber		
Surface B		Thin	Thick	Thin	Thick	Thin	Thick	Thin	Thick	Thin	Thick	Thin	Thick	Thin	Thick	
Rubber		950/969* 9472LE		950/969 9472LE		950/969 9472LE		950/969		950/969		950/969		950/969 9472LE		
		444 9443 9495LE	Heat Bond	444 9443 9495LE	Heat Bond	444 9443 9495LE	Heat Bond		Heat Bond	444		444 9443		444 9443		
Cloth		950/969 9485/926		950/969 9485/926		950/969 9485/926		950/969		465/924 950/969 9485/926		465/924 950/969 9485/926				
		444 9443		444 9443		444 9443		9443		444 9443		444 9443				
Paper		465/924 950/969		465/924 950/969		950/969		950/969 9465		465/924 950/969						
		410 415 9443		410 415 9443		444 9443				410 415						
Plasticized Vinyl		950/969 9465		950/969 9465		950/969		950/969 9465								
			4941		4941				4941							
Polystyrene Polypropylene Polyethylene Powder Paints		950/969 9485/926 9472LE	4462	950/969 9485/926 9472LE	4462	950/969 9472LE	4462									
		444 9443 9589 9495LE	4952	444 9443 9589 9495LE	4952	444 9443 9495LE	4952									
		950/969 9469 9485/926 468MP	4046/4016 4462 4492	950/969 9469 9485/926 468MP	4046/4016 4462 4492											
		444 9443 9500PC 9495MP	4941 4950	444 9443 9500PC 9495MP	4941 4952											
Steel Aluminum Glass Ceramics		468MP 9469 9485/926	4046/4016 4462 4492													
		9495MP 9500PC	4941 4950													

Thin	Thick
3M™ Adhesive Transfer Tapes Pages 10–13	3M™ Double Coated Foam Tapes Pages 6–7
3M™ Double Coated Tapes Pages 8–9	3M™ VHB™ & VHB™+ Tapes Pages 2–3 Heat Bond Page 5

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.

Kapton is a registered trademark of DuPont. Noryl® and Lexan® are registered trademarks of General Electric.

Product Index

Product Number	Page	Product Number	Page	Product Number	Page	Product Number	Page	Product Number	Page
401	9	SJ-3419	23	4466	7	7965MP	13, 19	9495FL	9
404	9	SJ-3440	25	4492	7	7979	19	9495LE	9
406	9	SJ-3441	25	4496	7	7993MP	19	9495MP	9
409	21	SJ-3442	25	4658F	7, 21	7995MP	19	9497	11
410	9	SJ-3443	25	4905	3	7997MP	19	9499	11
415	9	SJ-3444	25	4910	3	8056	11	9500PC	9
442	9	SJ-3460	25	4920	3	8132LE	13	9502	11
443	9	SJ-3476	23	4921	7	8141	17	9502HL	13
444	9	SJ-3477	23	4926	3	8142	17	9505	11
444PC	9	SJ-3481	25	4929	3	8153LE	13	9505HL	13
450XL	15	SJ-3486	23	4930	3	9045MP	19	9507EK	9
463	13	SJ-3487	23	4932	3	9056MP	19	9552	13
464	9	SJ-3516	23	4936	3	9057MP	19	9555	13
464XL	15	SJ-3518	23	4936F	3	9059MP	19	9567	13
465	11	SJ-3519	23	4941	3	9061MP	19	9568	13
465XL	15	SJ-3522	23	4941F	3	9172MP	13	9573	9
466XL	15	SJ-3523	23	4943F	3	9172PT	13	9576	9
467	11	SJ-3526	23	4945	3	9185MP	13	9579	9
467MP	11	SJ-3527	23	4946	3	9188	13	9586F	9
467MPF	13	SJ-3536	23	4949	3	9244	4	9589	9
467MS	13	SJ-3537	23	4950	3	9245	4	9653	13
468	11	SJ-3540	25	4951	3	9246	4	9653LE	13
468MP	11	SJ-3540GT	25	4952	3	9415PC	21	9665	13
468MPF	13	SJ-3541	25	4955	3	9416	21	9667MP	13
468MS	13	SJ-3541GT	25	4956	3	9420	9	9668MP	13
476XL	15	SJ-3542	25	4956F	3	9425	21	9671	13
501FL	11	SJ-3542GT	25	4957F	3	9429	21	9671LE	13
502FL	11	SJ-3550	25	4959	3	9437	13	9672	13
504FL	11	SJ-3551	25	4962	7	9442	13	9672LE	13
665	21	SJ-3552	25	4965	7	9443	9	9676MP	13
666	21	SJ-3553	25	4974	5	9445	13	9690	9
909	11	SJ-3554	25	4979	3	9447	11	9690B	9
919	9	SJ-3560	25	4981	5	9449	21	9692	13
920XL	15	SJ-3571	23	4992	7	9453	11	9695	13
921XL	15	SJ-3572	23	5301R-1	16	9453LE	11	9703	16
922XL	15	SJ-3576	23	5303R-2	16	9456	9	9713	15
924	14	SJ-3577	23	5403	5	9457	11	9731	9
926	14	SJ-3586	23	5404	5	9458	11	F-9752PC	11
927	11	SJ-3587	23	5406	5	9459W	13	F-9755PC	11
928	14	4004	7	5408	5	9460PC	11	9770	11
941	13	4008	7	6032PC	11	F-9460PC	3	9774	11
941N	13	4016	7	6035PC	11	9461P	11	9784	13
950	11	4026	7	6038PC	11	9462P	13	9820	9
950EK	13	4032	7	7303	16	F-9465PC	11	9828	9
964	11	4042	7	7945MP	19	9469PC	11	9851	9
965	13	4046	7	7951	13	F-9469PC	3	9882	15
966	11	4052	7	7951MP	19	9471LE	11	9885	15
969	14	4056	7	7952MP	13, 19	9472LE	11	9890	15
970XL	14	4085	7	7953MP	19	9473PC	11	9925XL	15
976	14	4233	5	7955MP	13, 19	F-9473PC	3		
992	13	4237	5	7956MP	19	9482PC	11		
992U	13	4408	7	7957MP	19	9485EK	13		
SJ-3401	23	4416	7	7959MP	19	9485PC	11		
SJ-3402	23	4432	7	7961MP	19	9490LE	9		
SJ-3418	23	4462	7	7962MP	13, 19	9495B	9		

The 3M™ Double Coated Tapes, Adhesive Transfer Tapes and Reclosable Fasteners in this guide can help solve a wide range of design and production problems. But 3M takes a broader view than just how one product or one family of products benefits a customer. In many instances, an effective solution is one that integrates a range of technologies, products and services to solve total problems.

The many practical ways to put adhesive solutions to work.

There is a 3M adhesive technology to help solve just about any joining problem. And there are a wide range of very practical ways to put this technology to work. 3M Double Coated Tapes represent one way—adhesive systems on a roll formulated to help improve styling, performance and productivity.

3M™ Dual Lock™ and Scotchmate™ Reclosable Fasteners are a second way—combining adhesive systems with reclosable fastening technology enhancing product accessibility and reuse. Depending on your application, however, you may also consider adhesives from 3M Adhesives Division. You'll find advanced formula liquids, pastes, films, and solids with a range of application methods matched to production volume requirements.

The **integrated adhesive solution** from 3M is the combination of adhesive technology and application method that helps save you time, effort and cost, and still meets your standards of end use quality and performance.

Sharing knowledge and expertise from many markets.

When you work with 3M, you can tap a resource for integrated solutions far beyond adhesives. 3M has more than 30 technology platforms and more than 60,000 products and services that span a huge diversity of markets and businesses. This is knowledge 3M can share with you to help solve your unique problems.

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- Abrasive Systems Division
- Adhesives Division
- Electrical Products Division
- Electrical Specialties Division
- Industrial Tape and Specialties Division
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For direct access to product data, downloadable product data pages, or to request sample product for evaluation:

3m.com/bonding

For additional product information or to arrange personal sales assistance, call toll free:

1-800-362-3550
FAX: 651-733-9175

In Canada: 1-800-364-3577

In Puerto Rico: 1-809-750-3000

In Mexico: 5-728-2180

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3M™ VHB™ TAPES

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3

Bonding Systems Division
3M Center Bldg. 220-7E-01
St. Paul, MN 55144-1000

3M Canada Company
P.O. Box 5757
London, Ontario
Canada N6A 4T1



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