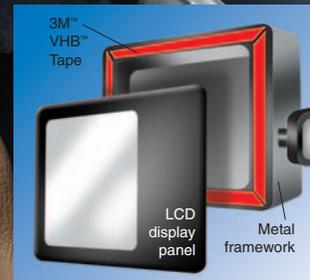
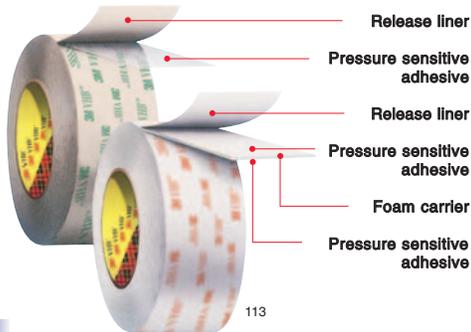




Replace rivets, screws and other mechanical fasteners

For 25 years, industries worldwide have been using 3M™ VHB™ Tapes for high holding power in static and dynamic loads. Viscoelastic properties absorb shock and distribute stress evenly for bonding power that helps eliminate mechanical fastening in many jobs.

In the ever growing product line, there are 3M™ VHB™ Tapes for bonding and sealing aluminum, steel, glass, painted and powder coated surfaces, and plastics such as acrylic and polycarbonate. Flexibility compensates for differential thermal expansion so you can even bond many dissimilar materials with confidence.



3M™ VHB™ Tapes bond the lens on contact in a fish finder and seal against water, moisture, salt, and more. Bonding power eliminates mechanical fasteners for a smooth, clean surface. Viscoelastic properties help absorb shock and vibration for bond reliability.

114



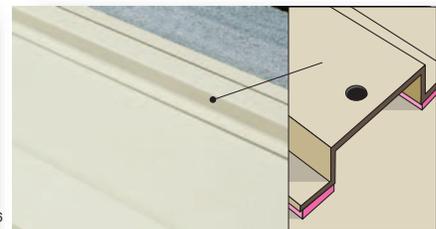
3M™ VHB™ Tapes replace rivets in bonding trailer side panels to stiffeners for a smoother, cleaner appearance and a strong bond. Viscoelastic properties of 3M™ VHB™ tapes can also help reduce vibration in the box.

115



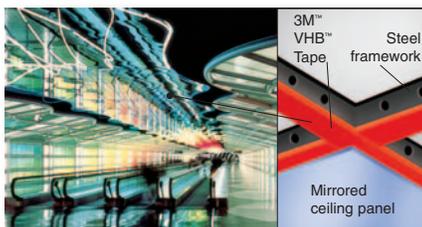
For assembly efficiency, die-cut pieces of 3M™ VHB™ Tapes bond components in a water-resistant video camera case. The foam conforms to help seal the unit.

116



3M™ VHB™ Tapes bond panel stiffeners on contact to pre-painted metal cabinetry. Unlike welding, applying the tape does not damage the finish.

117



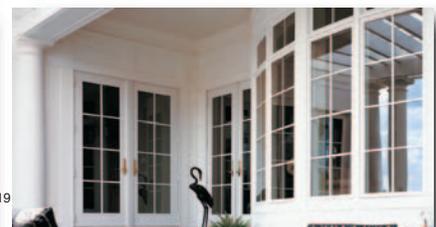
Mirrored ceiling panels are held in place with 3M™ VHB™ Tapes rather than screws. This helps maintain a clean, smooth appearance without distorting the reflective surfaces.

118



For a heat resistant bond, 3M™ VHB™ Tapes bond and seal stainless steel trim to the glass oven door with strength enough to replace mechanical fasteners. Door surface is smooth and attractive.

119

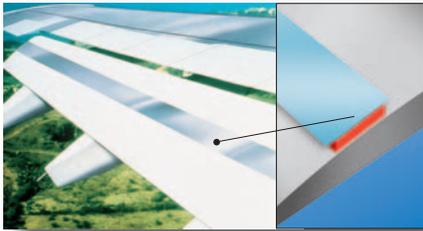


To bond muntin bars to window glass, 3M™ VHB™ Tapes conform to glass with high contact. The bond resists weathering and UV light.

120



3M™ VHB™ Tapes



121

3M™ VHB™ Tapes securely bond 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).



122

Perforated stainless steel plates are bonded to I-beams with 3M™ VHB™ Tapes as they replace rivets or screws for a smooth surface envisioned by the architect.



123

For ease of assembly and precise fit, die-cut 3M™ VHB™ Tapes bond and seal components throughout a GPS unit.



124

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



125

For assembly of an interstate highway sign in the mountains, sheets of 3M™ VHB™ Tapes were drilled and used to attach a precision mask to the LED array. The bond resists cold and extreme weather conditions.



126

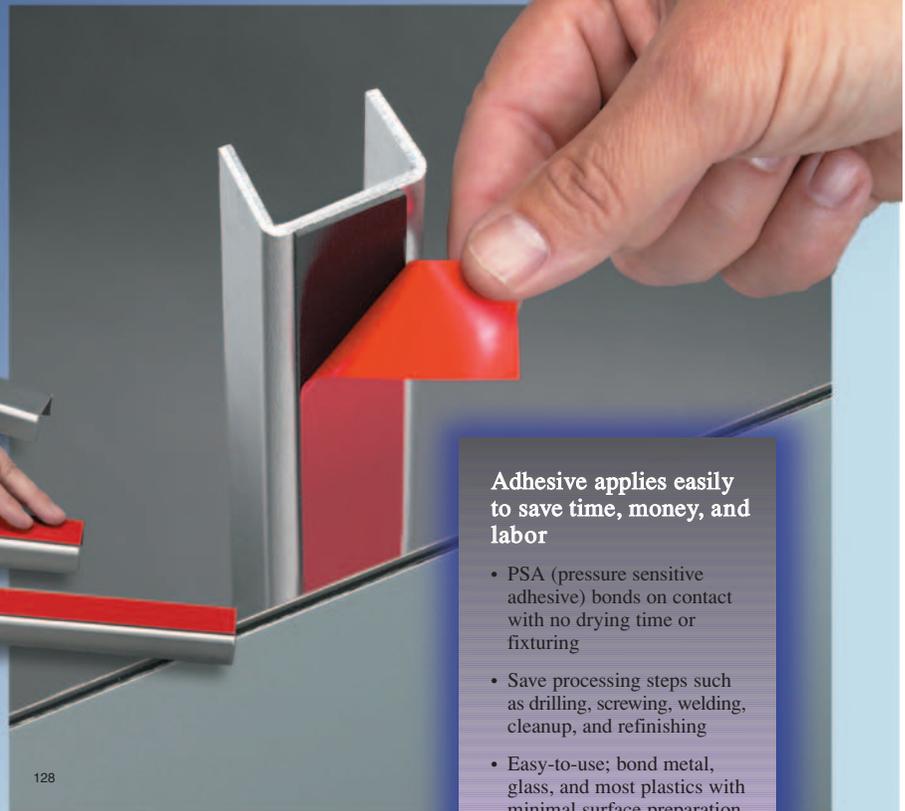
In bonding clear glass steps to a varnished steel frame, clear 3M™ VHB™ Tapes virtually disappear for an architectural effect.

To attach stiffeners to panels, simply clean the surfaces...



127

and apply 3M™ VHB™ Tapes



128

Adhesive applies easily to save time, money, and labor

- PSA (pressure sensitive adhesive) bonds on contact with no drying time or fixturing
- Save processing steps such as drilling, screwing, welding, cleanup, and refinishing
- Easy-to-use; bond metal, glass, and most plastics with minimal surface preparation

Product Information: 3M™ 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			
Conformable Foam Tapes	4926	15 (0.4)	<ul style="list-style-type: none"> Gray, closed-cell acrylic foam carrier Conformable Good adhesion to many painted metals Plasticizer resistant • UL 746C Black version of 4936 tape Black version of 4941 tape Black version of 4956 tape 	Multi-purpose Acrylic	300°F (149°C)	200°F (93°C)	High	High	Med.	Bond muntin bars to windows. Bond and seal polycarbonate lens over LCD. Bond pre-painted metals in truck assembly. Bond and seal plastic windows to pre-painted control panels/switch gear. Mount vinyl wiring ducts and conduit channels.	A	
	4936	25 (0.64)									A	
	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	
	4919F	25 (0.64)									D	
	4947F	45 (1.1)									D	
	4979F	62 (1.6)			B							
	4991	90 (2.3)		250°F (121°C)	200°F (93°C)					D		
	5925	25 (0.64)	<ul style="list-style-type: none"> Black, closed-cell acrylic foam carrier • Very conformable Good adhesion to many painted surfaces, including powder coated paint • UL 746C 	Modified Acrylic	300°F (149°C)	250°F (121°C)	High	High	Med.	Bonds to a variety of plastics and paint systems.	D	
	5952	45 (1.1)									D	
	5962	62 (1.6)									D	
	4943F	45 (1.1)	<ul style="list-style-type: none"> Gray conformable foam Apply as low as 32°F (0°C) 	Low-temp acrylic	300°F (149°C)	200°F (93°C)	High	High	Low	Bond cellular phone antennas. Bond automatic toll tags to vehicle.	C	
	4957F	62 (1.6)									C	
Firm Foam Tapes	4611	45 (1.1)	<ul style="list-style-type: none"> Dark gray, closed-cell acrylic foam carrier • High temperature resistance • UL 746C 	General purpose acrylic	450°F (232°C)	300°F (149°C)	High	High	Low	Pre-powder coat paint applications: hat channels and stiffeners.	D	
		4646									25 (0.64)	D
		4655									62 (1.6)	D
		4920	15 (0.4)	<ul style="list-style-type: none"> White, closed-cell acrylic foam carrier All-purpose adhesive • UL 746C Black version of 4930 Black version of 4950 	General purpose 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
		4929	25 (0.64)									C
		4949	45 (1.1)									C
		4955	80 (2.0)									C
		4959	120 (3.0)			C						
		4945	45 (1.1)	<ul style="list-style-type: none"> White, closed-cell acrylic foam carrier Plasticizer resistant • UL 746C Film liner version of 4945 	Multi-purpose acrylic	300°F (149°C)	200°F (93°C)	High	High	Low	Attach vinyl trim. Bond vinyl extrusions. Bond pre-painted truck and trailer skins.	A
		4946	45 (1.1)									B
		4951	45 (1.1)	<ul style="list-style-type: none"> White, closed-cell acrylic foam carrier Apply as low as 32°F (0°C) 	Low-temp acrylic	300°F (149°C)	200°F (93°C)	High	High	Low	Mount panels to aluminum frames in buildings, trucks, and trailers. Mount trim to portable buildings.	C
	4932	25 (0.64)	A									
	4952	45 (1.1)	<ul style="list-style-type: none"> White, closed-cell acrylic foam carrier Good adhesion to polypropylene and many powder paints 	LSE	200°F (93°C)	160°F (71°C)	High	High	High	Bond powder painted metal stiffeners to office desks and file cabinets. Bond polypropylene and polystyrene.	A	
	4952	45 (1.1)									A	
Clear Tapes	4905	20 (0.5)	<ul style="list-style-type: none"> Clear, acrylic construction for joining transparent material 	General purpose acrylic	300°F (149°C)	200°F (93°C)	High	High	Low	Seal skylight inner/outer dome. Mount backlit translucent signs. Edge-bond resin filled glass.	D	
		4910									40 (1.0)	D
Transfer Tapes	F9460 PC	2.0 (0.05)	<ul style="list-style-type: none"> Clear adhesive transfer tape High shear strength adhesive • UL 746C 	100MP	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	
	F9469 PC	5.0 (0.13)									E	
	F9473 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

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

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

General Purpose Acrylic: Bonds to most higher surface energy substrates including metal, glass, and high surface energy plastics.

Low Temperature Acrylic: Bonds down to 32°F (0°C) compared to 50°F (10°C) for most acrylic adhesives. Bonds most high surface energy substrates including metal, glass, and high surface energy plastics.

Low Surface Energy: High performance synthetic adhesive bonds to many lower surface energy substrates, including many plastics and powder coated paints, plus smooth general purpose substrates.

100MP: Bonds with higher peel strength than most other acrylic formulations. Up to 500°F (260°C) short term heat resistance.