

3M Industrial Adhesives and Tapes

Key Product Guide



Key Product Guide

For Commercial Construction, Graphic Arts, Furniture,
Woodworking, Motor Vehicle Body Assembly, Aviation,
Sign & Display, Printing and General Industry.



Bonding Solutions

3M Industrial Adhesives and Tapes Division represents more than 60 years of experience in helping companies worldwide apply the science of adhesion with improved product design and manufacturing.

3M designs, manufactures and markets a broad range of specialty adhesives, double sided tapes, adhesive transfer tapes and reclosable fasteners. These products are used in many industries and markets including building & construction, general manufacturing, electronics and transportation. 3M Industrial Adhesives and Tapes can provide the following:

Bond strength to match the job - We have a full range of products from repositionable adhesives to permanent solutions that can replace rivets, screws and welds.

Virtually invisible fastening - Aesthetics can be improved through thinner, cleaner bond lines.

Increased material options - Lighter or dissimilar materials can be used with 3M Tapes and Adhesives to achieve a lower total delivered cost.

Increased manufacturing efficiency - Reduce or eliminate riveting, drilling, welding, surface finishing and cleanup in many applications. Often bonding, sealing and gap filling can be incorporated into one step.

Our technical and sales teams can work closely with customers to help optimise production methods, improving productivity and product performance.

Bonding Solutions key product guide



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Knowing when to use 3M™ Adhesives and Tapes to improve your product and process

Based on your answers to the following questions, you can decide if it will be worth your time to evaluate specific 3M adhesives and tapes for your operation.

Q What types of materials are you joining?

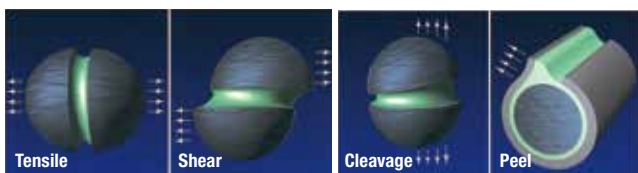
Some materials are harder to bond than others. But with 3M adhesive and tape technologies, even many materials once defined as “hard-to-bond”, such as low surface energy plastics can be bonded, with strength in some cases greater than the materials bonded.

Q Can adhesives hold together the materials you want to join with the strength you need?

Strength can be readily matched to the substrate and stress or “load” characteristics to which the bond will be subjected to. The strength required will be a function of the load applied to the area of bond. 3M have a range of chemistries that give a range of “strengths”. You can match the loads that will be applied to the strength of a 3M adhesive.

Q What type of load will be applied?

Most adhesives and tapes perform better when the primary stress is tensile or shear, however in most industrial applications, a combination of stresses are involved that may include cleavage and peel. Many of the technical data tables provided in this guide include details of shear strength, tensile strength & peel strength, and may assist in selecting adhesives with the right characteristics for the primary load types.



Tensile & Shear loads – the load is evenly distributed over the bond.

Cleavage & Peel – loads are not as evenly distributed.

Q Do you want to eliminate the stress concentration caused by spot welds, rivets, screws, or other mechanical fasteners and maintain surface integrity?

Adhesives distribute stress evenly over the entire bonded area. A rivet or screw hole in the substrate concentrates stress at the hole and can decrease some physical properties of the substrate. With uniform stress distribution of adhesives and tapes, lighter, thinner materials can be used without concerns about distortion, splitting, or crazing at the mechanically fastened site. Elimination of holes in metal also reduces the chance of rust and corrosion.



Q Would invisible fastening improve your products appearance?

3M adhesives and tapes are generally hidden between the bonded substrates. Surfaces stay smooth and clean for a more attractive appearance and less surface refinishing.

Q Do you want to attach dissimilar substrates?

Laminates of dissimilar materials can often produce combinations superior in strength and performance to either substrate alone. The flexibility of many 3M adhesives and tapes compensates for differences in the coefficients of expansion between such materials as aluminum and wood.

Q Is the design of your component right for adhesive bonding?

Adhesives perform better with some component configurations than with others. With the variety of 3M adhesive forms such as pastes, aerosol sprays, and tapes, you should be able to find an adhesive to meet the requirements of most parts that can be assembled with mechanical or fusion fastening. A spray adhesive would be effective, for example, to cover foam cushioning, but would not be a consideration for a part with a narrow bonding area. For cleaner, more efficient application, die-cut pressure sensitive adhesive foam tape can be precisely placed on smaller, irregularly-shaped bonding surfaces.

Q Will your finished assembly be exposed to harsh environmental conditions?

Some adhesives do not hold well when exposed to very low or very high temperatures, high humidity, chemicals, or even water. Other adhesives are specially formulated to resist harsh environments.

Q Do you need high speed bonding?

In some instances, adhesive bonding can be slow and require critical processing. Some epoxies, for example, require heat, pressure and fixturing to bond metal to metal in structural strength assemblies. With the wide range of 3M adhesives and tapes, however, a variety of open times are available. Depending on your end use requirements, you can select 3M pressure sensitive adhesives that bond on contact or a 3M two-part paste adhesive with open times ranging from 2 to 90 minutes. Repositionable formulations are also available for repeated openings and closings.

Q Will your part be subjected to vibration?

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

Q Do you want to cut costs, increase production and simplify your operation?

With 3M adhesives and tapes, you can see cost reduction through reduced material requirements, weight reductions, and elimination of drilling, welding, screwing, finishing, and similar operations.

In most cases, adhesives require minimal training, and many adhesives require little or no investment in major equipment.

Q Do you want to bond and simultaneously seal between the substrates?

With many adhesives and tapes, continuous contact between mating surfaces effectively bonds and seals against dirt, dust, water, and other environmental conditions. Adhesives and tapes also provide a film barrier to reduce or prevent bimetallic corrosion that often occurs in bonding two different types of metal.

Q Does your part need to be disassembled for maintenance or service?

When assembled with most adhesives or tapes, parts are generally difficult or virtually impossible to disassemble without damaging the part. As an exception, hot melt adhesives can be reheated and reused, but in most instances reuse would be messy and impractical. As already noted, repositionable adhesives are available, but application is restricted to lighter duty attachment or closure. Reclosable fasteners are a hybrid technology using mechanical fastening and pressure sensitive adhesive. The adhesive permanently bonds two reclosable mating strips to the substrates that need to be opened and closed.

3M Adhesive and Tape Classifications

Classify by form

3M adhesives are available as liquids, pastes, tapes, films, and shaped solids. Each has characteristics to be considered for application effectiveness and efficiency.

Liquids and pastes readily fill voids to enhance mechanical adhesion. Many liquids can be sprayed to cover large areas. Films and pressure sensitive tapes offer advantages unique to their form:

- Uniform thickness throughout the joint.
- Confinement of the adhesive to the immediate bonding area.
- Clean bonding without dripping or overflow.
- Minimum adhesive waste.
- Die-cut into unique shapes to facilitate bonding of complex parts with narrow bonding surfaces.

Hot melts are supplied as solid sticks, cartridges, pellets, or similar shapes. Handling and storage is easy and neat.

Classify by strength

Another classification for industrial applications is by relative strength and solidification process. Generally, those adhesives that bond through a chemical reaction are stronger than those that bond through a physical change.

Structural adhesives bond by chemical reaction.

3M structural strength adhesives bond the load-bearing parts of a product. As a rule of thumb, structural strength adhesives reach a minimum of 1,000psi overlap shear strength. 3M formulations include the following:

- *Epoxy adhesives* are available in one and two-part liquids and pastes. Of all 3M adhesives, these provide the highest strength and elevated temperature resistance.
- *Acrylic adhesives* are two-part liquids or pastes that bond the widest variety of substrates including hard-to-bond plastics and oily metals. The distinction is high strength bonding without the surface preparation needed for epoxies and urethanes.
- *Cyanoacrylate adhesives* are high strength liquid formulations known as instant adhesives. On rigid plastic, glass, metal, rubber, and other low porosity substrates, they harden in seconds through reaction with surface moisture.

Non-structural adhesives bond with a physical change.

Non-structural adhesives vary in strength from repositionable to equal to or greater than the strength of the substrate being bonded. These adhesives are typically less than 1,000psi and bond materials in cushions, gaskets, insulation, veneers, and general assembly. 3M formulations include the following:

- *Hot melt adhesives* melt and flow under heat to wet the substrates and make bonds quickly upon cooling. Products are available with a variety of characteristics such as short set times, sprayable formulas, and permanent PSA properties. Applications range from sealing to bonding automotive interior trim.
- *Rubber adhesives* are solvent-based or water-based and solidify through evaporation of the carrier. Products are designed for: adhesion to various substrates; a variety of application methods; and environmental resistance.
- *Contact bond adhesives* are usually rolled, brushed, or sprayed on the two surfaces to be mated and permitted to become dry to the touch with a variety of open times. When the surfaces are pressed together, near ultimate bond strength is achieved.

Pressure sensitive adhesives

Pressure sensitive adhesives (PSAs) found in 3M tapes grip immediately to mating services. With dwell time, the adhesive conforms to surface irregularities.

3M hybrid classifications

- *Curing hot melts* (Polyurethane Reactive [PUR] adhesives) are moisture-curing urethanes that apply like a hot melt adhesive but cool to bond strength usually associated with two-part structural adhesives.
- *Reclosable fasteners* combine adhesive and mechanical fastening principles. Pressure sensitive adhesive permanently bonds two reclosable mating strips to the substrates that need to be opened and closed multiple times.

3M™ Scotch-Weld™ Epoxy and Acrylic Adhesives

Structural load bearing formulations for metal, rubber, glass and plastic

Structural adhesives offer many benefits over traditional mechanical and fusion fastening: greater design freedom, cleaner lines, less machining and preparation, lighter weight materials and often less overall cost. Available in duo-pak cartridges for easy pre-mixing of 2-part formulas during application and also available in bulk form.



Benefits

- Fast, clean application
- Improved aesthetics
- Greater design latitude

Ideal Markets

- Commercial Vehicle
- Marine
- Aerospace
- Signage
- General Manufacturing



With a 400mL cartridge, the 3M™ EPX™ Pneumatic Applicator applies 3M™ Scotch-Weld™ Epoxy Adhesive DP420 to bond ABS components of an automotive breather valve. The toughened epoxy at the inlet port seals in the high pressure and air/fuel mixture.



Brush-applied 3M™ Scotch-Weld™ Epoxy Adhesive 2216 B/A provides a tough, flexible bond between honeycomb and the framework in entry step panels of commuter aircraft.



Bonding low surface energy (LSE) simulated wood composite plastic using 3M™ Scotch-Weld™ Acrylic Adhesive DP8005. A range of manual and pneumatic applicators are available for accurate dispensing.



3M™ Scotch-Weld™ Low Odour Acrylic Adhesive DP810 requires minimal surface preparation for bonding metal hinges into awning frames. Reaches handling strength in only 10 minutes.



3M™ EPX nozzles simultaneously mix and dispense. Extended reach helical nozzle is shown here bonding ABS components of a pump housing.



3M™ Scotch-Weld™ Epoxy Adhesive DP460 bonds steel couplings into aluminium tubing of a bicycle frame. Couplings are threaded for easy assembly and disassembly.

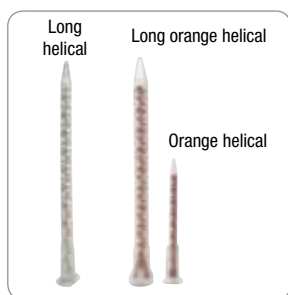
Products

		Product	Key Features	Colour	Plunger Mix Ratio	Viscosity at 24°C (cps)	Approx Worklife at 24°C (min)	Time to Handling Strength at 24°C (min)	Time to Full Cure at 24°C	Overlap Shear Strength at -55°C (psi) ¹	Overlap Shear Strength at 24°C (psi) ¹	Overlap Shear Strength at 82°C (psi) ¹
Duo-Pak Cartridges	Epoxy	DP100	Fast cure, rigid bonds	Clear	1:1	13,000	5	20	24-48hrs	900	1500	300
		DP110	Fast cure, flexible bonds	Clear	1:1	50,000	8	20	24-48hrs	2,500	2,500	200
				Grey	1:1	55,000	8	20	24-48hrs	2,700	3,500	250
		DP190	High performance, flexible bonds	Grey	1:1	80,000	90	10hrs	7 days	1,500	2,500	400
		DP270	Rigid potting compound, non-corrosive	Black, Clear	1:1	12,000	60	3hrs	48hrs	1,200	2,500	300
		DP420	Tough durable bonds, high impact resistance	Black	2:1	30,000	20	2hrs	72hrs	4,500	4,500	1,250
				Off-white	2:1	30,000	20	2hrs	72hrs	4,500	4,500	450
	DP460	Tough durable bonds, high impact resistance	Off-white	2:1	30,000	60	4hrs	24-48hrs	4,500	4,500	700	
	DP460NS	Tough durable bonds, non-sag	Off-white	2:1	125,000	60	4hrs	24-48hrs	4,900	4,650	1,350	
	Acrylic	DP810	Tough durable bonds, high impact resistance	Tan	1:1	20,000	10	20	8-24hrs	1,200	3,600	500
		DP810NS	Tough durable bonds, non-sag	Tan	1:1	95,000	10	20	8-24hrs	1,200	4,000	500
		DP8005	Bonds polyolefins and LSE materials	Off-white	10:1	25,000	3	3hrs	8-24hrs	-	2,400	300
DP8010		Bonds polyolefins and LSE materials	Off-white	10:1	20,000	10	2hrs	8-24hrs	-	1,800	400	
2-Part	Epoxy	1838	Multi-purpose, rigid bonds	Tan	5:6	250,000	60	8hrs	7 days	1,500	2,000	500
				Green	4:5	400,000	60	8hrs	7 days	1,500	3,200	500
		2216	Multi-purpose, very flexible bonds	Grey	2:3	80,000	90	10hrs	7 days	3,000	3,200	400
				Translucent	1:1	10,000	2hrs	14hrs	7 days	3,000	1,700	140
1-Part	Epoxy	3501	Multi-purpose, rigid bonds	Grey	1:1	500,000	7	25	24 hrs	1,500	2,400	300
		2214 HD	Applied as a paste and heat cured in autoclave. High temperature strength. De-aerated, dense bonds	Grey	-	paste	N/A	N/A	N/A	3,000	4,500	4,500
Primer		3901	Adhesion promoter, organo-silane base. Brush or spray	Red	A primer for film and liquid adhesives for improved metal and glass adhesion or improved resistance to environmental exposure with epoxy and urethane adhesives. Protects cleaned surfaces until bonding can be completed. Imparts improved corrosion protection to metal.							

1. When bonding to aluminium.

3M™ Scotch-Weld™ Applicators and Nozzles

Product	Features/Applications	Colour
EPX Plus Manual Applicator	For dispensing Scotch-Weld adhesives in 35-50mL duo-paks. Supplied with 1:1 and 2:1 plungers	
10:1 Plunger	For use with DP8005 and DP8010 acrylic adhesives	
Long orange helical nozzle	For 250mL cartridges of DP8005 and DP8010. For 10:1 mix ratio	Gold
Long helical nozzle	For all Scotch-Weld adhesives in 37mL and 50mL duo-paks. Provides extended reach	White
Orange helical nozzle	For use with 35mL cartridges of DP8005 and DP8010. For 10:1 mix ratio	Orange



3M EPX Applicators

1. 400mL pneumatic applicator
2. 35mL, 37mL, 50mL pneumatic applicator
3. 200mL manual applicator
4. 35mL, 37mL, 50mL manual applicator



Epoxy adhesives provide the highest strength, elevated temperature and chemical resistance.
Acrylic adhesives bond to the widest variety of substrates, including hard to bond plastics and oily metals.

3M™ Scotch-Weld™ Instant Adhesives

Fast bonding combinations for instant performance

For speed and performance, these one-part cyanoacrylate adhesives provide the best combination of bond strength, cure time and viscosity. Ideal for bonding small parts where a single drop per square inch can bond many plastics, rubber and metals with tensile strength up to 5000psi.



Benefits

- Strength in seconds
- Thin bond line
- Bonds small parts

Ideal Markets

- Aerospace
- Commercial Vehicle
- Whitegoods Manufacturing
- General Manufacturing



3M™ Scotch-Weld™ Instant Adhesive CA40 bonding plastic to metal.



3M™ Scotch-Weld™ Instant Adhesive CA50 Gel bonding fiberglass / concrete cast pottery.



3M™ Scotch-Weld™ Instant Adhesive CA8 bonding plastic to metal.

Products

	Product	Key Features	Base	Time to Handling Strength at 24°C (sec)	Viscosity at 24°C (cps)	Average T-Peel at 24°C (piw)	Overlap Shear Strength to Steel at 24°C (psi)
Cyanoacrylate	CA4	Fast setting	ethyl	5-40	150	1-2	2300
	CA5	Higher viscosity version of CA4 for filling gaps	ethyl	15-60	2,000	1-2	2500
	CA7	Very fast setting	methyl	1-30	15-40	2-4	2500
	CA8	Slower setting version of CA7. Meets CID A-A-3907, Type II, Class 2	ethyl	5-50	70-130	2-4	2000
	CA9	Slower setting version of CA8 for wire tacking and coil terminating Meets CID A-A-3907, Type II, Class 3	ethyl	20-70	1,000-1,700	2-4	2000
	CA40	Very fast setting. Ideal for flexible vinyl and EPDM Rubber	ethyl	3-20	20	1-2	1,700
	CA40H	Higher viscosity version of CA40 for filling gaps	ethyl	5-40	400-600	1-2	1,500
	CA50 Gel	High viscosity, non-sag gel. Less sensitive to acidic surfaces	ethyl	60-120	45,000-85,000	1-2	2000
	CA100	High peel and impact strength. High thermal shock and heat resistance	ethyl	20-70	2,500-4,500	15	2000

3M™ Scotch-Weld™ Polyurethane Reactive (PUR) Easy 250 Adhesive System

Hot melt speed with the strength of a structural adhesive

3M™ Scotch-Weld™ PUR Easy 250 Adhesive Applicator and moisture curing polyurethane adhesives combine the benefits of a hot melt system with structural strength bonds. Adhesive is dispensed from a hand held applicator at 121°C providing time to align parts before the adhesive quickly cools, giving rapid handling strength up to 1000psi within minutes. The 100% solids, low VOC formulation eliminates the need for drying and ventilation equipment.



Benefits

- Fast assembly
- Rapid strength build-up
- Thin bond lines

Ideal Markets

- Furniture
- Kitchens/ Joinery
- Boat Building
- Door Manufacturing
- General Manufacturing



For furniture and upholstery, PUR adhesive bonds leather or fabric gimping and seams.



Bond wood components throughout a spa enclosure. Durable bond resists temperature differentials, weathering moisture and chemicals.



With a thin bond line, PUR adhesive makes a secure, aesthetically-pleasing crown moulding assembly.



Easy to use and maintain with disposable nozzle, no tip cap, no grease, and no system purging. Adhesive can stay in applicator at dispensing temperature for up to 16 hours.

Products

	Product	Key Features	Colour	Viscosity at 24°C (cps)	Open time (min)	Set time (sec)	Shore D Hardness	Tensile Strength (psi)	Elongation at break ¹ (%)
PUR	TE030	Very fast set time	Off-white	16,000	1	30	60	3800	725
	TE040	Fast set time. Low viscosity. Strong flexible bonds	Off-white	7,000	2	40	35	2750	860
	TE100	Medium set time. Thin bond lines	Off-white	7,000	2	60	61	4200	675
	TE200	Longest set time. Low viscosity. Thin bond lines	Off-white	3,000	4	120	60	4000	625

¹ Test method: 2ASTM D 638, Die C, measured on .011" - .017" thick films cured 7 days at 77°F (25°C)/50%

Open Time	Set Time
This is the maximum time between the application of the adhesive and when the parts must be joined together. This information is based on 1/8" bead and non-metallic substrates at 75°F (20°C).	Also known as fixturing/clamping time. This is the minimum amount of time required for the adhesive to solidify and hold the parts together (able to support a tensile load of 5 psi).

3M™ Scotch-Weld™ Hot Melt Adhesives and Applicators

Hot melt systems for speed and productivity

3M Scotch-Weld hot melt adhesives are solid resins that become fluid when heated and quickly wet the bonding surface. They cool, harden and reach bond strength in seconds, allowing you to move assemblies immediately to keep production flowing. This helps eliminate clamps, fixturing and drying; saving time, energy and space.



Benefits

- Fast setting
- Solvent free
- Reliable, portable applicator
- Low melt option

Ideal Markets

- Furniture
- POS Display Manufacturing
- Kitchens/ Joinery
- General Manufacturing



Woodworking using 3M™ Scotch-Weld™ Hot Melt Applicator TCQ.



Fabric attachment using 3M™ Scotch-Weld™ Hot Melt Applicator TCQ.



3M™ Scotch-Weld™ Hot Melt Adhesive 3762 is a versatile formulation with 35-second bonding range for production speed.



For versatility in POS assembly, 3M™ Scotch-Weld™ Hot Melt Adhesives bond a variety of plastics, woods, and light gauge metals.

Tip No.	Description
9726	"T" Tip (shown with valve and adapter) for all 3M™ Applicators
9727	"L" Tip (shown with valve and adapter) for all 3M™ Applicators
9916	3 Hole Spreader
9913	2 Hole Spreader (1/4" hole span)
9917	3 Hole 1" Spreader for 3M™ Applicator II only
9946	.072" Brass Extension for 3M™ Applicators PG II and PG II LT only
9785	.070" Tapered Aluminium Extension for all 3M™ Applicators
9725	Mini Extension Tip .072" Opening for all 3M™ Applicators
9922	.063" Fluted Tip
9940	.125" Fluted Tip
9921	.090" Fluted Tip

Hint

- 3M offer a range of applicator tips and accessories to improve productivity



Products

	Product	Key Features	Colour	Applicator	EC Setting	Stick Type	Stick Size (mm)	Qty Sticks per Kg (approx)	Coverage ¹ (metres per stick)	Bonding Range ² (sec)	Temperature resistance ³ (°C)	Shear Strength (kPa)
Low Melt	3762LM	Low melt version of 3762. Fast setting for packaging applications	Light Amber	LTQ, EC	1	Quadrack	15x200	34	7.4	25	54	3,310
	3792LM	General purpose for heat sensitive substrates, e.g POS Displays	Clear	LTQ, EC	1	Quadrack	15x200	34	7.4	40	60	2,410
	3798LM Gummy	Removable 'Gummy Glue' for many substrates. Removes without leaving residue	Light Yellow	LT*	n/a	Pellet	14x50	130	1.9	30	49	n/a
Hot Melt	1747	Economy grade. Fast setting for high surface energy plastics	Opaque Yellow	AE II	n/a	Smooth	11x298	34	7.4	30	50	2,500
	1762	Economy grade. Ideal for cardboard packaging applications	Pale Yellow	AE II	n/a	Smooth	11x298	34	7.4	30	54	4,000
	1792	Economy grade. General purpose applications	Clear	AE II	n/a	Smooth	11x298	34	7.4	50	60	3,160
	3738	High delivery rate and long bonding range	Tan	TCQ, EC	4	Quadrack	15x200	34	7.4	50	54	2,590
	3748	Good thermal shock resistance. Non-corrosive to copper for electrical applications	Off-white	TCQ, EC	4	Quadrack	15x200	34	7.4	45	79	1,730
	3762	Excellent hot-tack for fast setting applications	Tan	TCQ, EC	3	Quadrack	15x200	34	7.4	35	54	3,760
	3762 PG	Excellent hot-tack for fast setting applications	Tan	PG II	n/a	Slug	26x75	27	9.4	35		3,760
	3764	Flexible at low temperatures. Excellent polyolefin plastic bonding.	Clear	TCQ, EC	4	Quadrack	15x200	34	7.4	40	60	2,700
	3789	High performance for plastics. Impact resistant. Good fuel and oil resistance	Brown	TCQ, EC	5	Quadrack	15x200	34	7.4	50	104	3,900

¹ Based on a 3.175mm wide semicircular bead. ² Bonding Range: time available to apply the 2nd substrate when a 3mm semicircular bead is applied to the 1st surface. Test results based on, Douglas Fir to Douglas Fir. Actual results may vary depending on the substrates being bonded and amount of adhesive applied. ³ Heat Resistance - Temperature at which adhesive fails, using SAFT Shear Adhesion Failure Test with birch plywood, 1 inch overlap, 100 grams used, temperature start at 90F and ramped 10F every 10 min. until complete failure. * Quadrack removed and palm trigger kit attached.



3M™ Scotch-Weld™ Hot Melt Applicator AE II.
Low volume.



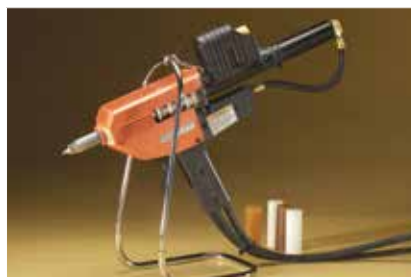
3M™ Scotch-Weld™ Hot Melt Applicator LTQ with
Quadrack™ Converter removed. Medium volume.



3M™ Scotch-Weld™ Hot Melt Applicator TCQ.
Medium volume.



3M™ Scotch-Weld™ Hot Melt Applicator EC.
Medium volume; variable temperature control.



3M™ Scotch-Weld™ Pneumatic Hot Melt Applicator
PG II with Speedloader. High volume.

3M™ Scotch-Weld™ Cylinder Spray Adhesives

Convenience of an aerosol adhesive, productivity of a bulk system

3M cylinders are a convenient, portable and cost effective way to deliver bulk adhesive. The pressurised units help increase productivity without the need for air compressors, time-consuming equipment setup or cleanup. The high solids, high coverage formulations give you more usable adhesive for your money.



Benefits

- Self-contained, portable unit
- Minimal setup and cleanup
- High performance adhesives

Ideal Markets

- Kitchens/ Joinery
- Furniture/ Upholstery
- Shopfitting/ Insulation
- Construction
- Commercial Vehicle



Bond foam to itself with 3M™ Scotch-Weld™ Cylinder Spray Adhesive Foam Fast 74NF.



For HPL countertop assembly, 3M™ Scotch-Weld™ Cylinder Spray Adhesive 94CA dries quickly to reach postformable strength in 1-5 minutes. 1-15 minute open time provides flexibility in assembly speed. Formulated specifically with low telegraphing for thin veneers and glossy laminates.



For fast, easy foam board installation, simply spray and stick with 3M™ Scotch-Weld™ Cylinder Spray Adhesive Holdfast 70. Bonds foam to concrete, waterproofing and more, without damaging the foam.



With 3M™ Scotch-Weld™ Cylinder Spray Adhesive Foam Fast 74NF, a fast light coat bonds quilted fabric to solid core mattress. High coverage reduces application cost. Foam-tearing strength prevents cover spin.

Products

	Product	Key Features	Colour	% Solids with Propellant	VOC's (g/L)	HAPs ¹ (% wt)	Dry Time (min)	Open Time (min) ²	Temp Rating (°C)	Spray Pattern	Size Available ³ (Kg)	Coverage ⁴ (m ²)	Applicator Type ⁵	Applicator Tip Required
Non-flammable ⁶	74NF	Foam Fast 74NF with high tack and foam-tearing strength. Soft, non-dimpling glue line	Clear	22	162	55-65	1-5	1-60	99	Web	Mini 4.7 Large 16.7	99 348	Standard	9501
	98NF	Hi-Strength 98NF for bonding laminates and high strength surfaces. High solids and fast drying formulation	Clear, Red	20	162	55-65	1-5	1-60	104	Web	Mini 4.7 Large 16.7	88 311	Standard	9501
Flammable	70	HoldFast 70 fast tacking adhesive for polystyrene foam bonding	Clear	21	546	0	1-4	1-60	88	Web	Mini 3.8 Large 12.4	74 241	Standard	QSS
	77	Super 77™ fast aggressive tack with high coverage for fiberglass infusion materials, fiberglass fabrics, balsa and foam core	Clear	27	534	4-5	<1	1-30	88	Mist	Large 13.3	339 (678)*	Standard	9501
	94CA	Hi-Strength Postforming 94CA with low VOC formulation suitable for high pressure laminate bonding	Clear	28	79	0	1-5	1-30	93	Pebble	Mini 3.5 Large 11.9	90 309	H	4001
	94ET	More versatility in substrate bonding, higher and stronger tack for easier bonding	Clear	25	672	0	1-2	1-60	99	Pebble	Large 11.9	270	H	4001

¹ Hazardous Air Pollutants. ² For two sided bonding. For single sided options refer to technical data sheet. ³ Weights given for manual handling purposes. Refer to coverage. ⁴ sq.m coverage @ 11g/m² (dry weight). ⁵ Standard applicator comes with 9501 tip, QSS tip sold separately. H (High Pressure) applicator comes with 4001 spray tip. ⁶ Non-Flammable in wet state only. * @ 5.5g/m² is a typical coverage for a mist spray in real life applications.

Effective delivery with adjustable-tip spray gun



Wide web pattern for fast coverage and minimal overspray.



Adjust to narrow web pattern for targeted application.



Pebble spray pattern for smoother finish.



Simplify with one gun and the appropriate tip. You can spray widths of 25mm to 300mm.

Equipment and Accessories

Description

Cylinder Adhesive Applicator (includes 9501 Tip, 95° spray pattern)
Cylinder Adhesive Applicator H (includes 4001 Tip, 65° spray pattern). For Spray 94CA only
6501 Spray Tip
QSS Spray Tip (use with Standard Applicator). For Spray 70 only
Hose Swivel
1.8m Hose
3.6m Hose
7.2m Hose



Adhesive Remover

Offers an easy way to clean and purge cylinder applicators and hoses. May be useful for cleaning and surface preparation prior to bonding, coating or further processing of parts. Evaporates cleanly, leaving no/minimal non-volatile residue. Mild, pleasant citrus odour.



3M™ Industrial Aerosol Adhesives

Bonding power at the touch of a finger

3M industrial aerosol adhesives are always ready when needed. Our job-matched formulations offer premium performance to paper, plastic, foam, metal and more.

Many 3M industrial aerosol adhesives feature an adjustable spray nozzle to control the spray pattern and minimise overspray.



Benefits

- Quick and easy to use
- High coverage per can
- Controlled spray pattern

Ideal Markets

- Furniture/ Upholstery
- Clothing
- Graphic Arts
- POS Display Manufacturing
- Commercial Vehicle



3M™ Spray Adhesive Hi-Strength 90 can bond edge bands in only 1 minute, compared to 15-20 minutes for typical contact adhesives. Strength increases up to 230psi in shear.



3M™ Spray Adhesive Photo Mount 73 is great for adhering photos and paper to cardboard.



3M™ Spray Adhesive Foam Fast 74 creates soft, non-dimpling bond lines to foam within minutes.



3M™ Multipurpose Spray Adhesive Super 77™ has high tack, high coverage and is fast drying. Can be used on most surfaces. Maximise usage by turning spray tip to face dot on rim of can.

Products

	Product	Key Features	Spray Pattern	Colour	Coverage (m²)	Nozzle Type	Solids %	Shear Strength (psi) Initial/ Ultimate	Peel Strength (piw)	Bonding Range		Temp Resistance (°C)
										1 Surface (mins)	Both (mins)	
Adhesives	74	Foam Fast 74 with fast tack, foam tearing strength. Soft non-dimpling glue line for upholstery foam bonding	Lace	Pale Orange	24.0	Adjustable spray width	22.0	40 / 205	20	NR	15	82
	75	Repositionable 75 for temporary repositionable bonding of lightweight materials	Particle	Clear	9.3	-	9.0	15 / 65	5	60	180	49
	76	Hi-Tack 76 is a multipurpose, high temperature resistant product. For applications requiring a quick, strong bond such as headliners in vehicle manufacture	Lace	Clear	9.3	Adjustable spray width	11.4	25 / 100	25	10	60	71
	77	Super 77™ offers high coverage, low soak-in, mist spray. Fast, aggressive tack for bonding many lightweight materials including polystyrene foam	Particle	Clear/ Light Yellow	20.4	-	25.0	25 / 160	15	15	30	66
	80	Rubber and Vinyl 80 is a neoprene based contact adhesive with excellent plasticiser resistance	Lace	Yellow	7.0	-	14.5	50 / 400	35	NR	60	149
	90	High-Strength 90 is a fast, high performance contact adhesive. Ideal for high pressure laminates	Lace	Translucent	9.3	Adjustable spray width	11.5	45 / 230	25	NR	15	121
	94ET	More versatility in substrate bonding, higher & stronger tack for easier bonding	Pebble	Translucent	11.0	-	20.5	-	-	NR	60	99

NR - Not recommended

3M™ Cleaners and Lubricants

Convenience and performance for maintenance and production

3M aerosol and bulk cleaners provide the ultimate surface enhancement in preparation for adhesive bonding. 3M lubricants are ideal for lubricating and inhibiting rust in maintenance and production applications.



Benefits

- Fast and effective
- Aerosol for easy application
- Lubricants to inhibit rust

Ideal Markets

- General Manufacturing
- Aerospace
- Commercial Vehicle



Scotch® Adhesive Cleaner and Solvent 700

Versatile general use solvent in aerosol form. Ideal for cleaning heavily contaminated surface prior to bonding, removal of adhesive residue or dismantling previously bonded articles.



Scotch® hIPA Clean 300

An isopropyl alcohol (IPA) spray that cleans surfaces prior to the application of a 3M tape or adhesive, particularly 3M™ VHB™ Tape.

Citrus Base Cleaner

Useful for cleaning and surface preparation prior to bonding, coating or further processing of parts. It is formulated to replace virtually all commonly used solvents in hand-wipe cleaning processes. Evaporates cleanly, leaving no/minimal non-volatile residue.



Products

	Product	Key Features	Spray Pattern	Colour
Aerosol Cleaners	700	Scotch® Adhesive Cleaner and Solvent 700. Ideal for cleaning heavily contaminated surfaces prior to bonding. Removal of adhesive residue or dismantling previously bonded parts	Particle	Clear
	300	Scotch® hIPA Clean 300 is an isopropyl alcohol (IPA) spray that cleans lightly contaminated surfaces prior to the application of 3M tapes or adhesives. It is the recommended surface preparation for 3M™ VHB™ Tapes	Particle	Clear
	Citrus	Ideal cleaner for removing grease, grime and softening flexible adhesives in preparation for final clean with Scotch® hIPA Clean 300	Particle	Light Orange
Bulk Cleaners	100	Bulk form of Scotch® Adhesive Cleaner and Solvent 700	-	Clear
	Wipes	3M™ VHB™ Surface Cleaner is an IPA impregnated wipe that comes in small sachets (1000 per box) for use on small surface areas. They clean lightly contaminated surfaces prior to the application of 3M tapes, in particular 3M™ VHB™ Tapes	-	Clear
Lubricant	5-Way	This unique product works 5 ways to penetrate, lubricate, demoiseurise, clean and also prevent rust	Particle	Amber
Other	7447	Ultra Fine Industrial hand pad used for blending, cleaning, deburring, finishing or scuffing applications for both timber and metal. Ideal for surface preparation prior to adhesive bonding	n/a	Maroon

Substrates

● Best ● Better ○ Good – Not recommended

		700	300	Citrus	100	Wipes	5-Way Penetrant
Contaminants	Adhesives (flexible)	●	–	●	●	–	–
	Heavy grease and oil	●	–	●	●	–	–
	Light contaminants (final clean)	●	●	–	●	●	–
Surfaces	Metal	●	●	●	●	●	●
	Plastic	–	●	●*	–	●	–
	Rubber	●	○	○	●	○	–

* Sample testing required.

The technical information and data on these pages should be considered representative or typical only and should not be used for specification purposes. Refer to Technical Data Sheets for specific performance measures and surface preparation requirements. For further assistance contact 3M.

Final product selection should be made only after evaluation of samples.

3M™ Scotch-Weld™ Industrial Adhesives and 3M™ Fastbond™ Industrial Adhesives

Performance for non-structural bonding challenges

3M Scotch-Weld and Fastbond adhesives are industrial tools designed to provide innovative solutions to a wide variety of non-structural bonding needs. This line offers a wide range of choices for flexible and contact adhesive applications. Select from bonding ranges, strength, solids content and solvent or water-based formulations to meet requirements for bonding rubber, plastic, wood, laminate, foam and more. In this range you will find the water-based pioneer 3M™ Fastbond™ Contact Adhesive 30NF - proven for over 40 years in carpentry and joinery applications.



Benefits

- Sprayable and brushable
- Rubber and plastic bonding
- Low VOC options

Ideal Markets

- Furniture/ Upholstery
- Air Conditioning
- Aerospace
- Commercial Vehicle
- General Manufacturing



HVAC duct insulation is easy and economical to apply with 3M™ Fastbond™ Insulation Adhesive 49. This single-component, water based pressure sensitive formulation speeds up assembly with instant tack.



To prevent moisture penetration, a pressure flow gun applies 3M™ Scotch-Weld™ Nitrile High Performance Rubber and Gasket Adhesive 847 to a rubber gasket in a commercial light fixture cover.



3M™ Fastbond™ Foam Adhesive 100 is a one-part, water-dispersed formulation for bonding many porous substrates to porous or non-porous substrates with minimal dry time.

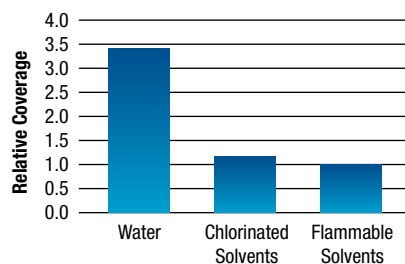


In cabinet assembly, 3M™ Fastbond™ Contact Adhesive 30NF is a proven formulation. Combining an open time of up to 4 hours with high immediate bond strength. Apply with roller, brush, or spray gun.

The 3M™ Fastbond™ Adhesive Story

While competition pressures you to improve productivity, regulatory legislation demands that you move toward more environmentally-responsible technologies and away from traditional solvent-based contact adhesives.

By replacing solvent-based adhesives with a water-based 3M Fastbond adhesive, compliance is getting easier in more and more applications. At the same time, you have a choice of production and end-use characteristics as you can see in the chart at far right.



Carrier	Water	Chlorinated Solvents	Flammable Solvents
% Solids	50%	15%	20%
Density (lbs/gal)	9.1	10.8	6.7
lbs. of adhesive/gal	4.6	1.6	1.3
Relative coverage	3.4	1.2	1.0
Issues		Toxicity	Flammability

Products

		Product	Key Features	Approx Solids (%)	Flash Point (closed cup)	Coverage (m² per Litre @ 2.5 g dry adhesive per sq ft)	Colour	Consistency	Application Method¹	Bonding Range (mins)	Overlap Shear Strength @ 24°C (psi)	Overlap Shear Strength @ 82°C (psi)	Peel Strength @ 24°C (piw)
3M™ Scotch-Weld™ Contact Adhesive – Solvent Based	Plastic Adhesives	1099	Fast drying and heat curable. Resists weathering, water, oil, plasticiser migration, aliphatic fuels	32	-18°C	11	Light tan	Medium liquid	Brush, flow	45	1306	643	31
		4475	Clear, fast tacking, dries quickly. Resists water, plasticisers, detergent, oil and grease	42	-7°C	12	Clear	Medium liquid	Flow	40	-	-	44
		4693	Long tack range. Water and heat resistant bond for many plastics including polyethylene (PE) and polypropylene (PP)	24	-17°C	8	Clear	Thin liquid	Spray, brush	60	-	-	22
	Rubber Adhesives	847	Quick drying and flexible with fuel and oil resistance. Heat and solvent reactivatable. Heat curable	36	-18°C	N/A	Brown	Medium liquid	Flow, brush	15	200	9	40
		847H	Higher viscosity version of 847 adhesive	50	-18°C	N/A	Brown	Thick liquid	Flow, brush	20	200	9	40
		1300L	Immediate strength, fast drying, sprayable adhesive. Heat resistant for rubber and metal	29	-26°C	N/A	Yellow	Thin liquid	Spray, brush	8	549	136	52
		4799	Brushable paste consistency with low soak-in on porous surfaces. Can bond EPDM rubber	36	-26°C	N/A	Black	Thin paste	Brush, trowel	15	-	-	28
	Other	10	Rapid strength build-up. Heat and creep resistant bond. Brushable with higher coverage	22	-26°C	7	Light yellow	Thin liquid	Brush, roller	30 max	482	65	19
		77	Super 77™ bulk adhesive offers high coverage, low soak-in for long lasting bonds. High temperature resistance	37	-29°C	11 55*	Light yellow/clear	Thin liquid	Spray, brush	10 sec - 15 min (One surface application) 10 Sec to 30 min (Two surface application)	160	-	8
		90	Fast, high performance contact bond strength	23	-40°C	7 35*	Clear	Thin liquid	Spray, brush	10 max	230	35	14
1357		Rapid build-up to a very high strength bond for metal. Resists heat and continuous load stress	25	-26°C	8	Grey-green, Light yellow	Thin liquid	Brush, spray	30 max	536	199	42	
3M™ Fastbond™ Contact Adhesive	Water Based	30NF	Long bonding range with high immediate bond strength. High coverage. Low VOC, GREENGUARD™ certified	50	none	17	Green, Neutral	Thin liquid	Spray, brush, roller	4 hrs	480	60	5.9
		FB100	One-part, fast setting with neoprene base. Bonds many porous to non-porous substrates. Low VOC, GREENGUARD™ certified	47	none	20	Lavender, Neutral	Very thin liquid	Spray	20	-	-	1.1
	Solvent	FB49	Fast tacking, high performance pressure sensitive adhesive for lightweight materials. Low VOC, GREENGUARD™ certified	55	none	20	Clear	Thin liquid	Spray, brush, roller	30	-	-	3

¹ Refer to technical data sheet for recommended application method. * Coverage in m² per Litre @ 0.5 g dry adhesive per sq ft for light weight bonding.



Buy only the quantity you need - Depending on the specific adhesive, you can select tubes or drums for large bulk dispensing.

3M™ Polyurethane Sealants

Introducing The POWER Line - for bonding, filling, sealing, waterproofing and more

3M Polyurethane Sealants are advanced, one-part formulations that require no mixing or special application tools. 3M's POWER Line products cure with atmospheric moisture to form durable, resilient, long-lasting bonds.

These products are specifically designed for industrial markets and offer significant advantages over competitive polyurethane products.



Benefits

- Easy to apply
- Stay flexible after cure
- Offer "invisible" fastening
- Bond AND seal in one step

Ideal Markets

- Commercial Vehicle
- Marine
- Construction
- Concrete sealing and expansion joint filling



Extreme flexibility and toughness for both marine repair and OEM construction. 3M's POWER Line offers a complete selection of innovative bonding and sealing formulations to withstand salt spray, sunlight, and potential exposure to fuels and oils.



3M™ 540 Polyurethane Sealant is ideal for sealing a wide range of similar and dissimilar materials in specialty vehicle applications.



3M™ 590 OEM Polyurethane Glass Adhesive Sealant is strong yet flexible, uniquely formulated for the the unique characteristics and requirements of structural glass bonding and window glazing.



3M™ 525 Polyurethane Construction Sealant

- Excellent for concrete sealing
- Extremely pliable and flexible
- 90+ minute skin time



3M™ 540 Polyurethane Sealant

- Excellent cosmetic sealer
- Paintable
- Smoke and flame rated
- 90-minute skin time



3M™ 550 Polyurethane Adhesive Sealant Fast Cure

- Multi-purpose adhesive sealant
- Paintable
- Above/below waterline use
- 60-minute skin time

Product Specifications

	Product	Industry	Skin Time (mins)	Cure Rate	Shore A Hardness	Elongation %	Modulus at 100% (psi)	Tensile Strength (psi)	Density	VOC g/L	Paintability
Polyurethanes (PU)	525	C	90 - 150	3mm/24hr	25	600%	44	N/A	1.17	82.6	Yes - When skin forms
	540	GI, C, SV, M	60 - 90	3mm/24hr	40	600%	58	250	1.17	94.3	
	550	GI, C, SV, M	60 - 90	4mm/24hr	45	>600%	87	300	1.17	105.7	
	551	M, SV	120 - 180	4mm/24hr	45	>600%	87	N/A	1.17	92.2	
	560	GI, SV, M	50 - 60	4mm/24hr	55	>300%	145	580	1.17	73.0	
	590 OEM Glass	M, SV, W	25 - 40	>3.5mm/24hr	60 - 65	>700%	>870	1,000	1.2	34.7	
	4200	M	60 - 90	4mm/24hr	45	>600%	87	300	1.17	32	
	5200	M	>48 hrs	<1mm/24hr	68	>800%	N/A	700	1.36	40	

Industry Index: C = Construction, CWW = Custom Woodworking, GI = General Industrial, M = Marine, SV = Specialty Vehicle, W = Window

		Colour	Viscosity	Solids (%)	VOC g/L	Active Ingredient
Primers and Cleaners	P590 Fritted Glass Primer	Black	12-15 sec (DIN cup)	28.5	687	NCO/MEK
	P591 Plastic Primer	Black	12-15 sec (Ford Cup)	36.5	613	NCO/MEK
	P592 Metal Primer	Clear	Extremely low	1.5	790	Silane/Ethanol
	P595 Teak & Glass Primer	Black	50 mPa*s	29.5	793	NCO/MEK
	C596 Cleaner	Clear	Extremely low	3	798	Silane/Ethanol

PLEASE NOTE: The technical information and data on this page should be considered representative or typical only and should not be used for specification purposes. Properties are measured at 20°C and 50% humidity. Cure time can vary greatly on the substrates bonded.

Cleaners, primers, applicators

Besides a complete range of polyurethane sealants as well as primers, boosters and cleaners, 3M's POWER Line also includes a wide range of applicator guns—both powered and manual—designed to handle the most common cartridge and sausage pack sizes. Your 3M representative can help you select the right guns for your products and applications.



	310	400M	600M	600A
Power Source	Manual	Manual	Manual	Pneumatic
310ml Cartridges	X	X	X	
400ml Sausage Packs		X	X	X
600ml Sausage Packs			X	X



**3M™ 551
Polyurethane
Adhesive Sealant**

- Multi-purpose adhesive sealant
- Medium strength
- 2-3 hour skin time



**3M™ 560
Polyurethane
Adhesive Sealant**

- Panel-bonding adhesive
- Very high strength
- Smoke and flame rated
- 50-minute skin time



**3M™ 590 OEM
Polyurethane Glass
Adhesive Sealant**

- Structural glass bonding
- Crash tested (FMVSS 212)
- 3-hour drive-away time
- 30-minute skin time



**3M™ 5200
Polyurethane
Adhesive Sealant**

- Very high strength
- Watertight bonds
- Above/below waterline use
- 48-hour skin time

3M™ VHB™ Tapes

The ultimate in tape bonding strength

For more than 30 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.



Benefits

- High strength, durable bonds
- Vibration and noise dampening
- Flexible and high expansion
- Seals against moisture

Ideal Markets

- Curtainwall Glazing
- Architectural Panel Bonding
- Interior Fitout
- Aerospace
- Commercial Vehicle
- Commercial Signage
- General Manufacturing



3M™ VHB™ Tapes replace rivets in bonding trailer side panels to stiffeners for a smoother, cleaner appearance and a strong durable bond.



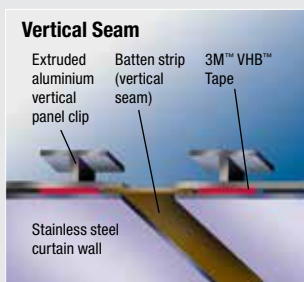
3M™ VHB™ Tapes offer the perfect solution for bonding solar panels to a wide variety of substrates. Offering a reliable bond even in very hot and cold environments.



With high holding power and long-term reliability, 3M™ VHB™ Tape bonds dimensional letters to a painted wall for indoor or outdoor signage.



3M™ VHB™ Tapes securely bond stainless steel scuff strips to aluminium wing flaps despite extreme ground-to-air temperature swings of 65°C to -40°C.



Walt Disney Concert Hall Los Angeles, USA

For quick permanent assembly of cladding and curtain wall panels, 3M™ VHB™ Tapes provide an ideal combination of performance, durability and application ease.

Philips-Headquarters Hamburg, Germany

3M™ VHB™ Structural Glazing Tapes have been proven in thousands of buildings worldwide since 1990 as an alternative to structural silicone and spacer tapes/gaskets.

3M™ VHB™ Structural Glazing Tapes are ideal for both internal and external glazing applications. Providing immediate handling strength means faster throughput and delivery. No mixing or curing simplifies manufacturing.

Bond to a wide range of architectural panel substrates including dissimilar materials. With design flexibility, create visibly stunning facades.

Products

		Product	Key Features	Thickness (mm)	Colour	Acrylic Adhesive Type ¹	Liner Type ²	Solvent Resistance	Temperature Resistance		Plasticiser resistance	Relative adhesion ³ HSE (Metal, Glass)	Relative adhesion ³ HSE (Plastics)	Relative adhesion ³ LSE (Plastics)
									Hours (°C)	Weeks (°C)				
Premium Performance	Structural Glazing Tape	B23F	3M™ VHB™ Structural Glazing Tape B23F is a premium performance structural glazing tape for installing curtainwall glazing units into multi-storey buildings. This product is only available for warranted projects via a 3M Master Distributor	2.3	Black	HP	F (Printed)	High	149	93	Med	High	High	Low
		G23F	3M™ VHB™ Structural Glazing Tape G23F is a premium performance structural glazing tape for installing curtainwall glazing units into multi-storey buildings. This product is only available for warranted projects via a 3M Master Distributor	2.3	Grey	HP	F (Printed)	High	149	93	Med	High	High	Low
	Conformable Foam	4941	Conformable foam provides excellent adhesion to mismatched surfaces. Excellent adhesion to painted metal for attaching panel stiffeners in architectural cladding, bus/truck assembly with recommended surface preparation. Ideal for bonding and sealing plastic windows into pre-painted control panels/ switch gear	1.1	Grey	MP	D	High	149	93	High	High	High	Low
		4956F	Conformable foam provides excellent adhesion to mismatched surfaces. Excellent adhesion to painted metal for architectural panel bonding, bus/truck assembly, with recommended surface preparation	1.6	Grey	MP	D	High	149	93	High	High	High	Low
		4957F	Conformable foam ideal for bonding mismatched surfaces at cold surface temperature, (<10°C), e.g. architectural panels and antennae on vehicles	1.6	Grey	Low Temp	C	High	149	93	High	High	Med	Low
		4991F	Conformable foam provides excellent adhesion to mismatched surfaces. Excellent adhesion to painted metal for architectural panel bonding, bus/truck assembly, with recommended surface preparation	2.3	Grey	MP	F (Printed)	High	121	93	Good	High	High	Low
High Performance	Firm Foam Tapes	4929	Black version of 4930. Ideal for closely matched surfaces, such as bonding stiffeners in air-conditioning units, letter and sign attachment	0.64	Black	GP	C	High	149	93	Low	High	Med	Low
		4930	Good general purpose tape. Ideal for closely matched surfaces, such as bonding stiffeners in furniture, trucks and buses	0.64	White	GP	A	High	149	93	Low	High	Med	Low
		4945	Plasticiser resistant for vinyl trim in window extrusions in construction, truck and bus assembly	1.1	White	MP	A	High	149	93	High	High	High	Low
		4949	Black version of 4950. Ideal for closely matched surfaces, such as bonding stiffeners in furniture, trucks and buses	1.1	Black	GP	C	High	149	93	Low	High	Med	Low
		4950	Good general purpose tape. Ideal for closely matched surfaces, such as bonding stiffeners in furniture, trucks and buses	1.1	White	GP	A	High	149	93	Low	High	Med	Low
		4951	Ideal for bonding at cold surface temperature, (<10°C), e.g. stiffeners on architectural panels and e-tags on vehicles	1.1	White	Low Temp	C	High	149	93	Low	High	Med	Low
		4959	High temperature resistant tape. Ideal for bonding aluminium frames and ducting	3	White	GP	C	High	204	149	Low	High	Low	Low
		4611	3M™ AFT 4611 is ideal for bonding metal prior to powdercoating	1.1	Dark Grey	GP	D	Yes	232	149	Med	High	Low	Low
	Conformable Foam	5952	Bonds to the widest range of substrates. Modified acrylic adhesive on both sides of very comfortable foam, providing adhesion to the broadest range of substrates, including most powder coated paints. For use in metal fabrication, commercial vehicle, signage and appliance applications	1.1	Black	M	D	High	149	121	Low	High	High	Low
		5958FR	Modified acrylic for flame retardant applications in aerospace, marine and rail applications	1	Black	M	D	High	149	121	Low	High	Med	Low
	Clear Foam	4905	Clear construction for joining clear materials such as skylights, lightboxes and translucent signs	0.5	Clear	GP	D	High	149	93	Low	High	Med	Low
		4910	Clear construction for joining clear materials such as skylights, lightboxes and translucent signs	1	Clear	GP	D	High	149	93	Low	High	Med	Low
	Transfer Tapes	F9469PC	High temperature resistant, high strength adhesive transfer tape for bonding decorative trim to metal, flexible circuits to aluminium rigidisers or heat sinks	0.13	Clear	100MP	E	High	260	149	Low	High	Med	Low
		F9473PC	High temperature resistant, high strength adhesive transfer tape for bonding decorative trim to metal, flexible circuits to aluminium rigidisers or heat sinks	0.25	Clear	100MP	E	High	260	149	Low	High	Med	Low
Auxiliary	Primers	AP111	An isopropyl alcohol based solution used to promote better and faster adhesion of 3M VHB Tapes to bare metals, galvanized steel and painted surfaces											
		AP115	An isopropyl alcohol based silane solution used to protect uncoated glass surfaces in humid or wet environments from water vapour undercutting the bondline and interfering with normal adhesion forces											
		Primer 94	To increase the adhesion of VHB Tapes to LSE surfaces											
	Other	7447	Scotch-Brite™ Hand Pad features a conformable web and the finest silicon carbide available. Excellent for final finishing, light cleaning and surface preparation. May be used by hand or with a hand block. Abrasive mineral: Ultra fine grade silicon carbide. Colour: Maroon											
		PA-1	This inexpensive, reusable squeegee-type applicator is flexible yet durable. When hand applying film or premask, this tool is the perfect solution for FRP or other textured surfaces											

¹ HP - High performance acrylic, MP - multi-purpose acrylic, M - Modified acrylic, GP - General purpose acrylic. ² 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# Polycated Kraft Paper, F - 5 mil Red Printed Polyethylene Film. ³ Relative adhesion with substrate cleaning only. Note: - Adhesion and plasticiser resistance can be improved on some substrates with additional surface preparation, such as abrasion and priming. Refer to Technical Bulletin for use of VHB tapes and recommended surface preparation.

3M™ VHB™ Tape RP Range

RP16, RP25, RP32, RP45, RP62

All Star Performance at a Competitive Price

All acrylic construction gives 3M™ VHB™ RP extraordinary strength, conformability and versatility indoors and outdoors.

Available in the following thicknesses: 0.4mm, 0.6mm, 0.8mm, 1.1mm and 1.6mm.

Unlimited Design and Application Possibilities

The 3M™ VHB™ RP family is ideal for General Industrial, Interior Fitout and Signage applications, and features a paper liner for die cutting solutions. The 3M™ VHB™ RP family bonds to a wide variety of surfaces

The 3M™ VHB™ RP family bonds to a wide variety of surfaces, including:

- Glass
- Metal
- Many plastics
- Composites
- Sealed wood
- Painted surfaces



	Product	Key Features	Thickness (mm)	Colour	Acrylic Adhesive Type ¹	Liner Type ²	Solvent Resistance	Temperature Resistance		Plasticiser resistance	Relative adhesion ³ HSE (Metal, Glass)	Relative adhesion ³ HSE (Plastics)	Relative adhesion ³ LSE (Plastics)
								Hours	Weeks				
								(°C)	(°C)				
General Purpose VHB™ Tapes	RP16	The 3M VHB RP family is ideal for general industrial, Interior Fitout and Signage applications, and features a paper liner for die cutting solutions. All acrylic construction gives 3M VHB RP excellent strength, conformability and versatility indoors and outdoors. Note: DK Paper liner not recommended for exterior applications where liner is exposed to weather/ moisture for any prolonged period.	0.4	Grey	MP	A (printed)	High	121	93	Good	High	High	Low
	RP25		0.6	Grey	MP	A (printed)	High	121	93	Good	High	High	Low
	RP32		0.8	Grey	MP	A (printed)	High	121	93	Good	High	High	Low
	RP45		1.1	Grey	MP	A (printed)	High	121	93	Good	High	High	Low
	RP62		1.5	Grey	MP	A (printed)	High	121	93	Good	High	High	Low

¹ MP - multi-purpose acrylic. ² Liner Types: A - 3 mil 54# Densified Kraft Paper. ³ Relative adhesion with substrate cleaning only. Note: - Adhesion and plasticiser resistance can be improved on some substrates with additional surface preparation, such as abrasion and priming. Refer to Technical Bulletin for use of VHB tapes and recommended surface preparation.

Selecting the right 3M™ VHB™ Tape for your application is easy.

Factors to consider when choosing a 3M™ VHB™ tape:

1. What are you bonding together?
2. What performance demands are there?
3. What kind of environmental conditions will the finished product be subject to?



3M™ Extreme Sealing Tape 4412 and 4411 Series

A revolutionary acrylic tape which bonds and seals, offering a wide range of benefits over traditional sealants.

Extremely Fast Clean and Easy - 3M™ Extreme Sealing Tape is a single coated, pressure sensitive adhesive tapes designed for difficult sealing applications. The backing on this tape is an ionomer film that is very tough yet flexible and abrasion resistant. The very soft and thick acrylic adhesive has excellent sealing properties and good outdoor durability.



Benefits

- **Fast** - extremely fast, easy to apply, no drying time, dripping, oozing and clean up
- **Conformable** - over contours, edges, rivets and screw heads
- **Clean** - no mess, no caulking guns and no empty cartridges, clean or store
- **Paintable** - colour blend with adjoining surfaces
- **Durable** - stays flexible, holds for the long haul
- **Saves time and money** - no caulking guns to buy, no waste, improves productivity
- **Aesthetic** - neat and precise looking for aesthetics
- **Versatile** - sticks on contact to most metals and plastics

Ideal Markets

- Trailer and RV roofs
- Metal buildings
- Vents stacks and vent windows
- Gutters and downpipes
- Roofing and skylights
- Patching and emergency repairs
- Plumbing and waterproofing
- Metal enclosures
- Parapet walls / waterproofing



Conforms over contours, edges, rivets and screw heads for a water tight seal. From rain gutters to flashing and vents a sure winner over traditional sealants. This single coated tape is designed to seal over an existing joint, seam, or penetration.



From rooftops to underground cable enclosures – durable sealing through heat, cold, and weather without cracking or edge lifting. Stays flexible to compensate for vibration and thermal expansion/contraction.



Paintable to colour blend with the adjoining surfaces.



From trailer, bus and rail car roof seams to metal enclosures, Extreme Sealing Tape provides a neat and precise look for aesthetics.

Products

Product/Colour	Comments	Backing/Adhesive	Tape Thickness (mm)	Tensile Strength (N/cm)	90° Peel Strength (N/cm)			
					Aluminium	Steel	PVC	ABS
4411G	Colour matched to metal	Ionomer film/ Pressure sensitive acrylic	1.0	220	26.7	27.3	25.8	27.1
4411N	Low profile for economical applications				25.6	26.4	27.2	28.1
4412G	Colour matched to metal		2.0	110	30.8	30.7	32.1	32.2
4412N	Most robust sealing performance				31.7	31.5	33.5	32.3

N=Neutral/Translucent G = Grey. Note: This technical information and data should be considered representative or typical only and should not be used for specification purposes.

3M™ Double Coated Foam Tapes

Flexible foam carriers fill gaps and 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 dampens vibration, resists impact, withstands a wide temperature range and provides good insulating qualities.



Benefits

- Cushioning and gap filling
- Surface matched adhesives
- Interior and outdoor options

Ideal Markets

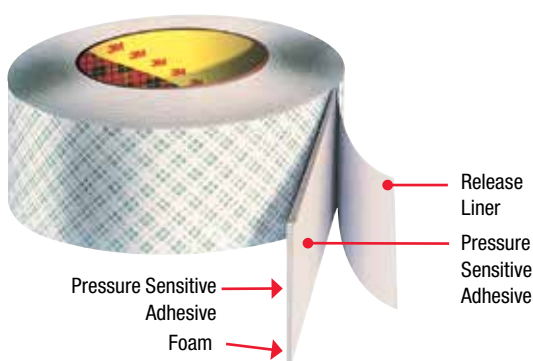
- Commercial Signage
- Shopfitting
- Construction
- Commercial Vehicle
- Factory Maintenance



3M™ Double Coated Urethane Foam Tape 4016 is ideal for mounting flexible posters and signs.



To permanently mount a coat rack to a textured wall, extra thick 3M™ Double Coated Urethane Foam Tape 4008 bonds on contact and fills gaps between the surfaces.



Products

	Product	Key Features	Thickness (mm)	Colour	Adhesive Type	Liner Type ¹	UV Stability	Solvent Resistance	Temperature Resistance		Relative Adhesion (HSE)	Relative Adhesion (LSE)
									Hours (°C)	Weeks (°C)		
General Purpose	4004	High shear adhesive tape, ideal for bonding acoustic panels, air fresheners, soap dispensers and nameplates	6.4	Off-white	100	G	No	Medium	193	104	Excellent	Poor
	4008	High shear adhesive tape for bonding items such as signs, nameplates and electrical channels to mirrors and walls	3.2	Off-white	100	G	No	Medium	193	104	Excellent	Poor
	4016	Gap filling, high shear adhesive tape for bonding signs and items to rough or irregular surfaces	1.6	Off-white	100	G	No	Medium	193	104	Excellent	Poor
	4032	Gap filling, high shear adhesive tape for bonding signs and items to rough or irregular surfaces	0.8	Off-white	100	G	No	Medium	193	104	Excellent	Poor
	4085	High tack adhesive that is excellent for bonding to LSE plastics	1.1	Off-white	740	H	No	Medium	93	52	Excellent	Good

¹ Liner Types: G - White 3.0 mil 62# densified kraft paper – green plaid, H - Tan 3.0 mil densified kraft paper.

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.



Benefits

- Bonds to a variety of substrates
- Strong reliable bonding solutions

Ideal Markets

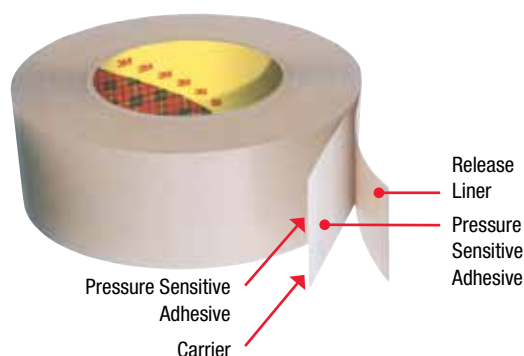
- Commercial Signage
- POS Display Manufacturing
- Commercial Vehicle



High tack side of 3M™ Removable/Repositionable Tape 9415PC “permanently” adheres to cores for winding up paper or film. Low tack side releases the paper or film when unwinding.



3M™ Double Coated Paper Tape 410M is a quick, convenient way to bond golf club grips to shafts.



Products

	Product	Key Features	Thickness (mm)	Carrier	Colour	Liner Type ¹	Solvent Resistance	Temperature Resistance	
								Hours (°C)	Weeks (°C)
800 Natural Rubber	401M	A thick flatstock paper carrier with a high tack adhesive. Ideal for mounting printing plates	0.23	Paper	Off White	54# DK	Medium	82	65
	410M	A smooth adhesive film on both sides for core starting/end tabbing of papers, films and foils	0.06	Paper	Off White	54# DK	Medium	93	65
400 Acrylic	415	High tack adhesion to paper and many other surfaces. Ideal for splicing paper, films and foils	0.1	Polyester Film	Translucent	60# DK	Medium	82	65
Silicone	9731	High performance acrylic/silicone adhesive with a double liner for silicone rubber attachment. Ideal for printer toner refurbishment	0.14	Polyester Film	Translucent	PET/PCK	Medium	177	121
Repositionable	9415PC	High tack/low tack (400/1000) with 1 mil polyester film carrier. Ideal for core starting/end tabbing, envelope closure and holding credit cards into mailers	0.05	Polyester Film	Translucent	78# PCK	Low	82	65
	9425	High tack/medium tack (420/1050) with clear UPVC film carrier. Ideal for backlit signs, posters, POS displays, closing polybags and envelopes, attaching novelties, labels	0.14	Polyester Film	Translucent	58# PCK	Low	52	38
General Purpose Acrylic	9075	Medium tack tissue tape, ideal as general purpose laminating tape to lightweight materials	0.08	Tissue	White	Paper	Low	93	65
	CT6348	High tack tissue tape, ideal as a laminating adhesive for lightweight industrial materials such as plastic, foam, paper, rubber and textiles	0.09	Tissue	White	Paper	Low	93	65

¹ Liner Types: DK - densified kraft, PET - polyester, PCK - polycoated kraft.

3M™ Adhesive Transfer Tapes

High performance, thin bonding made easy

3M adhesive 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 and liners are available to meet requirements for applications such as nameplate attachment to high and low surface energy plastics, appliance graphic overlays that perform in high temperatures, foam gasketing, web splicing and more.



Benefits

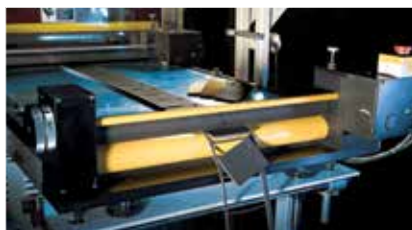
- High performance adhesives
- Easy release liners
- Smooth bond lines
- Ideal for die-cutting

Ideal Markets

- Screenprinting
- Gasket Manufacturing
- Commercial Signage
- Web Splicing



Polycoated kraft lay-flat liner resists moisture.



High strength adhesives are ideal for foam laminating.



Adhesive transfer tape for durable graphics.

Products

	Product	Key Features	Thickness (mm)	Solvent Resistance	Liner Type ¹	Temperature Resistance	
						Hours (°C)	Weeks (°C)
100MP	F9469PC	High shear strength and temperature resistance for use in harsh environments and outdoors. Applications include industrial joining and metal fabrication	0.13	High	58# PCK	260	149
	F9473PC	High shear strength and temperature resistance for use in harsh environments and outdoors. Applications include industrial joining and metal fabrication	0.25	High	58# PCK	260	149
200MP High Performance	467MP	High performance, high temperature formulation featuring a rotary die-cuttable liner. Ideal for general industrial joining. Industry standard for graphic attachment and die-cut parts	0.05	High	58# PCK	204	149
	468MP	High performance, high temperature formulation featuring a rotary die-cuttable liner. Ideal for general industrial joining. Industry standard for graphic attachment and die-cut parts	0.13	High	58# PCK	204	149
300 High Strength	9471	For use with smooth LSE plastics. Applications include gasket attachment, foam fabric and/or coated papers	0.05	Low	60# DK	121	65
	9472	For use with smooth LSE plastics. Applications include gasket attachment, foam fabric and/or coated papers	0.13	Low	60# DK	121	65
300LSE High Strength	9671LE	High bond to plastics with high temperature holding. Ideal for bonding graphics to powder coatings, LSE plastics and oily metal, as well as general industrial bonding of LSE materials	0.05	High	83# PCK	149	93
	9672LE	High bond to plastics with high temperature holding. Ideal for bonding graphics to powder coatings, LSE plastics and oily metal, as well as general industrial bonding of LSE materials	0.13	High	83# PCK	149	93
350 High Holding	9485PC	High tack, high shear and high temperature performance, giving excellent adhesion to LSE plastics and foams. Ideal for laminating high performance plastics and difficult substrates, and splicing metal coils	0.13	High	62# PCK	232	149
400 Acrylic	463	High tack, with excellent adhesion to most paper stocks, flexible to -51°C. Applications include paper splicing, general office and commercial joining, validation labels and parking permits on car windows	0.05	Medium	60# DK	121	82
	465	High tack, with excellent adhesion to most paper stocks, flexible to -51°C. Applications include paper splicing, general office and commercial joining, validation labels and parking permits on car windows	0.05	Medium	60# DK	121	82
Specialty	F9465PC	Medium tack, plasticiser resistant. Ideal for bonding plasticised vinyl gaskets, decals and moldings	0.13	Medium	58# PCK	93	71

¹ Liner Types: DK - densified kraft, PCK - polycoated kraft.

Scotch® ATG Adhesive Systems

Versatile, convenient and fast adhesive application

With Scotch® ATG Hand Dispenser 700 a touch of the finger triggers a quick, controlled application of Scotch® ATG Tape at the same time as the liner rewinds into the applicator. There is no mess and no cleanup. 3M advanced acrylic adhesive bonds on contact and is formulated with a choice of properties such as high temperature resistance, differential tack, adhesion to low surface energy plastic and more.



Benefits

- Fast and easy to apply
- Minimal cleanup and wastage

Ideal Markets

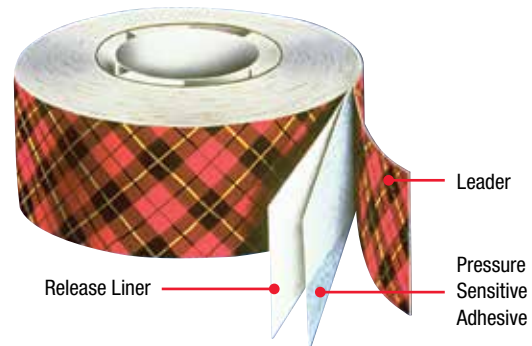
- Upholstery
- POS Display Manufacturing
- Art and Craft



High performance Scotch® ATG Tape 926 bonds foam cushioning inside a portable power tool carrying case.



Scotch® ATG Tape 924 is ideal for core starting most paper stock.



Products

	Product	Key Features	Thickness (mm)	Solvent Resistance	Temperature Resistance	
					Hours (°C)	Weeks (°C)
300 High Tack	969	High tack, excellent adhesion to most plastics. Ideal for assembling point of purchase displays, bonding trim strips to furniture or luggage, bonding labels to plastic toys and attaching gaskets or foams.	0.13	Medium	121	65
	926	High performance, excellent temperature and solvent resistance. Ideal for bonding fabric or trim to window blinds, splicing aluminium coils, bonding foam insulation and mounting nameplates on award plaques.	0.13	High	232	149
350 High Performance	904	High tack, with excellent adhesion to most paper stocks, flexible to -51°C. Applications include paper splicing, general office and commercial joining, validation labels and parking permits on car windows.	0.05	Medium	121	82
	924	General purpose, excellent adhesion to most paper stocks. Ideal for sealing pockets in folders, bonding mat board in picture frames, splicing paper, films and foils, and general purpose bindery attaching.	0.05	Medium	121	82
400 General Purpose	928	Differential tack and repositionable. Ideal for attaching credit cards to mailers, core start/end tab paper, films and foils and attaching temporary labels.	0.05	Medium	82	65
400/1000 Repositionable						

3M™ Dual Lock™ Reclosable Fasteners

Unlock the hidden strength and replace mechanical fasteners

When the 2 sides are pressed together, hundreds of mushroom-shaped stems interlock. 'Snap' announces that the fastener is engaged, with a closure strength that is high enough to replace mechanical fasteners in many applications.



Benefits

- Hidden fastening
- Fast, easy assembly
- High strength system
- Up to 1000 openings/closings

Ideal Markets

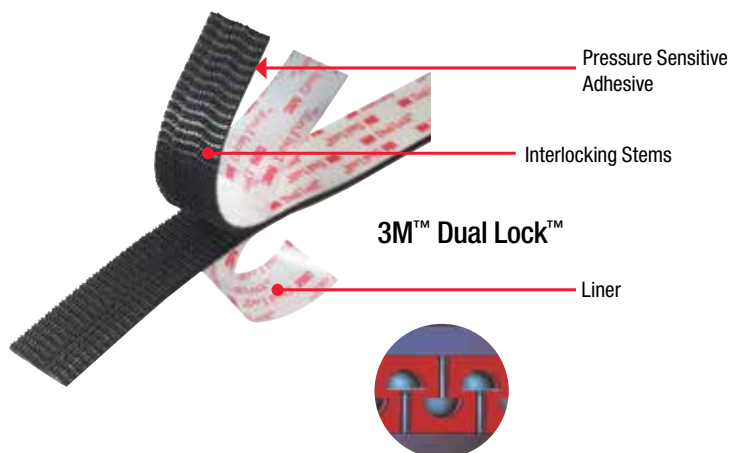
- POS Display Manufacturing
- Commercial Signage
- Commercial Vehicle
- Aerospace

Hint

- 3M™ Dual Lock™ has 5 x more holding power than 3M Hook and Loop.



To mute the sound of automated equipment, 3M™ Dual Lock™ Reclosable Fasteners attach acoustic control panels to the frame of an equipment enclosure. Panels remove for access or reconfiguration of the enclosure.



Products

	Product Type 170	Product Type 250	Product Type 400	Product Low Profile Type 705	Key Features	Dual Lock Colour	Adhesive	Liner Type ¹	Engaged Thickness (mm)	Closure Life	Temperature Performance ² @ 1,000g (°C)
Acrylic	SJ3552	SJ3550	SJ3551		Conformable tacky adhesive adheres better to textured or irregular surfaces. Interior/exterior	Black	White Acrylic	I	5.7	1000	93
		SJ3560	SJ3561		Translucent fastener for general bonding to most medium and high energy surfaces. Interior/exterior	Clear	Clear Acrylic	I	5.7	1000	93
				SJ4570	Low Profile version for thin bonds to low LSE surfaces. Liner has '3M' printed in green and is good for die cutting	Clear	Clear Acrylic	J	2.5	100	70
Synthetic Rubber	SJ3542	SJ3540	SJ3541		For interior bonding to most surfaces including LSE plastics	Black	Synthetic Rubber	K	5.7	1000	49
	MP3541/2		MP3541/2		SJ3541/3542 combination pack for medium locking strength	Black	Synthetic Rubber	K	5.7	1000	49

¹ Liner Types: I – Clear 4.0 mil polyolefin with silicone release coating, J – White 5.0 mil polyolefin with silicone release coating, K – Brown 83# polycoated kraft liner printed with '3M™ Dual Lock™' in green. ² Able to support 1,000g in a 1 square inch system static overlap shear for 10,000 minutes, at indicated temperature.

3M™ Hook and Loop Reclosable Fasteners

Industrial-strength fasteners for easy opening and closing

When your products require easy openings and secure closings, 3M™ Hook and Loop Reclosable Fasteners provides you choices that improve your product and save production time. When closing, tiny stiff hooks of one side of the fasteners mesh with pliable loops on the other. For opening, simply peel one side away.

Benefits

- Easy opening & closing
- Hidden fastening
- Fast, easy assembly

Ideal Markets

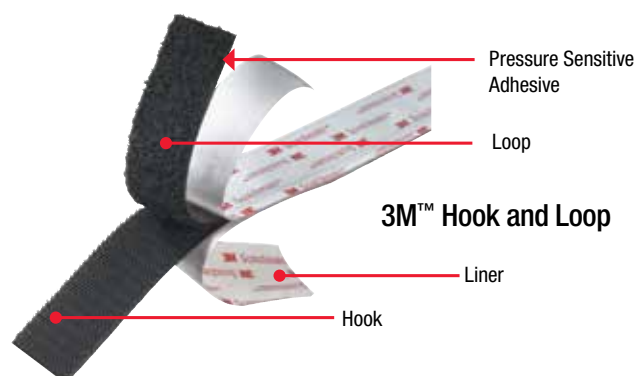
- Point of Sale
- Commercial signage
- Commercial Vehicle



3M™ Reclosable Fasteners with pressure sensitive adhesive attach easily to plastic curtains on refrigerated displays. It resists low temperatures and moisture. Plasticiser-resistance assures long-term performance.



Readjustable braces with 3M™ Reclosable Fasteners fit securely and comfortably. The fasteners can be opened and closed thousands of times.



Products

	Hook	Loop	Key Features	Colour	Backing Material	Liner Type ¹	Engaged Thickness (mm)	Closure Life	Temperature Performance ² @ 1,000g (°C)
Acrylic	SJ3572	SJ3571	Premium performance PSA nylon. Use for high temperature closures. High shear and HSE, medium peel and low LSE. Ideal for many static load applications where temperatures may reach 93°C. Provides reliable performance over a wide range of temperature and environmental extremes	Black, White	Nylon	L, M	3.8	5000+	93
	SJ3576	SJ3577	Premium performance PSA polyester. Excellent for outdoor or humid conditions	Black	Polyester	L, M	3.8	1000+	93
Synthetic Rubber Flame-Resistant	SJ3519FR	SJ3518FR	Flame resistant, rubber adhesive nylon. Bonds to most surfaces. Ideal for use on aircraft seating and aircraft curtain closure	Black	Flame-resistant nylon	O	3.8	5000+	38
Synthetic Rubber	SJ3526N	SJ3527N	Firm rubber adhesive for general attachment to most surfaces. High performance adhesive is designed for great temperature, solid shear and peel performance in a convenient small package	Black, White	Nylon	O, M	3.8	5000+	38
Plainback no adhesive	SJ3401	SJ3402	Sewable, plain backed, nylon hook fastener. Provides a tailored appearance for garments and fabrics. Adjustable closure is washable/dry cleanable	Beige	Nylon	N/A	3.3	5000+	104

¹ Liner Types: L – Clear 4.0 mil polypropylene film with white embossed 3M logo, M – Brown 83# polycoated kraft liner with no printing. Good for die cutting, N – Brown 83# polycoated kraft liner printed with '3M™' in green. Good for die cutting directly against liner, O – White 3.0 mil polyethylene film printed with '3M™ Scotchmate™' in red. ² Able to support 1,000g in a 1 square inch system static overlap shear for 10,000 minutes, at indicated temperature.

Substrates and Adhesion

Adhesives attach to the surfaces of two substrates, unlike a process that fuses substrates into a unified whole such as welding metal or solvent activation of plastics. In selecting a 3M adhesive or tape, surface condition must be considered: roughness, smoothness, porosity, coated, uncoated, cleanliness, flexibility, size of the part and surface energy of the part.

Adhesive paste, for example, flows readily into a rough surface for improved effective adhesion. Flexible materials such as paper or thin gauge metal can be bonded with a thin adhesive transfer tape. Large rigid parts with smooth clean surfaces can be bonded with a variety of 3M products ranging from double coated foam tapes to two-part structural adhesives. Some plastics have plasticisers which migrate to the surface and degrade the bond over time, so a plasticiser-resistant adhesive or tape is essential. If the substrate has been powder coat painted, the coating is the bonded surface rather than the substrate and you

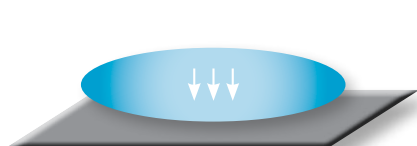
would want to consider a 3M tape or adhesive developed specifically for that surface.

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

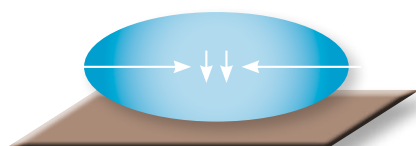
As a rule of thumb, the higher the surface energy, the greater the strength of adhesion.

Specially formulated adhesives are available for low surface energy surfaces. The following illustrations and surface rankings give you an idea of relative surface energy.

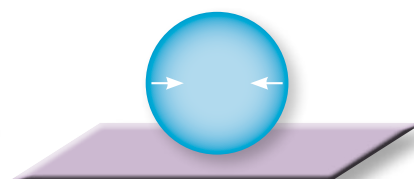
Regardless of surface energy, the substrate must be unified, dry, and clean to maximise adhesive contact.



(High Surface Energy)



(High Surface Energy)



(Low Surface Energy)

METAL SURFACES

Metals	Surface Energy Dynes/cm
Copper	1103
Aluminium	840
Zinc	753
Tin	526
Lead	543
Glass Porcelain	250-500
Stainless Steel	700-1100

HSE PLASTICS

HSE Plastics	Surface Energy Dynes/cm
Kapton®	50
Phenolic	47
Nylon	46
Alkyd Enamel	45
Polyester	43
Epoxy Paint	43
Polyurethane	43
ABS	42
Polycarbonate	42
PVC Rigid	39
Noryl	38
Acrylic	38
Polane Paint	38

LSE PLASTICS

LSE Plastics	Surface Energy Dynes/cm
PVA	37
Polystyrene	36
Acetal	36
EVA	33
Polyethylene	31
Polypropylene	29
Polyvinyl Fluoride Film	28
PTFE Fluoropolymer	18
Powder Coatings	**

** Broad range of surface energy

Tape Selection Guide

Tape adhesive family selection based on surface energy

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

Metal Surfaces (High Surface Energy)										
Adhesive	1	2	3	4	5	6	7	8	9	10
100										
100MP										
200MP										
300										
300LSE										
300MP										
350										
400										
420										
800 Series										
1000 Series										

HSE Plastics (High Surface Energy)										
Adhesive	1	2	3	4	5	6	7	8	9	10
100										
100MP										
200MP										
300										
300LSE										
300MP										
350										
400										
420										
800 Series										
1000 Series										

LSE Plastics (Low Surface Energy)										
Adhesive	1	2	3	4	5	6	7	8	9	10
100										
100MP										
200MP										
300										
300LSE										
300MP										
350										
400										
420										
800 Series										
1000 Series										

1 = Lowest Performance 10 = Highest Performance

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

Tape adhesive family selection based on other surface conditions

Shear Strength at Room Temperature										
Adhesive	1	2	3	4	5	6	7	8	9	10
100										
100MP										
200MP										
300										
300LSE										
300MP										
350										
400										
420										
800 Series										
1000 Series										

Ultimate Peel Strength										
Adhesive	1	2	3	4	5	6	7	8	9	10
100										
100MP										
200MP										
300										
300LSE										
300MP										
350										
400										
420										
800 Series										
1000 Series										

UV Resistance										
Adhesive	1	2	3	4	5	6	7	8	9	10
100										
100MP										
200MP										
300										
300LSE										
300MP										
350										
400										
420										
800 Series										
1000 Series										

Humidity Resistance										
Adhesive	1	2	3	4	5	6	7	8	9	10
100										
100MP										
200MP										
300										
300LSE										
300MP										
350										
400										
420										
800 Series										
1000 Series										

Chemical Resistance										
Adhesive	1	2	3	4	5	6	7	8	9	10
100										
100MP										
200MP										
300										
300LSE										
300MP										
350										
400										
420										
800 Series										
1000 Series										

Short Term Temperature Resistance °C										
Adhesive	82	93	121	149	177	204	232	260	288	
100										
100MP										
200MP										
300										
300LSE										
300MP										
350										
400										
420										
800 Series										
1000 Series										

Product Selection Tables

3M™ Scotch-Weld™ Epoxy and Acrylic Adhesives

● Best Choice ● Good ○ Special surface preparation required – Not recommended

		DP100	DP110	DP190	DP270	DP420	DP460	DP460NS	DP810	DP810NS	DP8005	DP8010	1838	2216	3501	2214 HD
Glass & Metal	Glass & Ceramics, Polished Stone	○	●	●	●	●	●	●	●	●	○	○	○	○	○	–
	Bare Aluminium	●	●	●	●	●	●	●	●	●	○	○	●	●	●	●
	Brass/Copper	○	●	●	●	●	●	●	●	●	○	○	●	●	●	●
	Bare Steel	●	●	●	●	●	●	●	●	●	○	○	●	●	●	●
Plastic	Low Surface Energy (PP - PS)	–	–	–	–	–	–	–	–	–	●	●	–	–	–	–
	Medium Surface Energy (Acrylic - ABS)	○	○	●	○	○	○	○	●	●	●	●	●	●	●	–
	High Surface Energy (PC - PU)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	FRP	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Nylon	●	●	●	○	●	●	●	●	●	–	–	●	●	●	●
	Flexible Vinyl	●	○	●	○	●	●	●	●	●	●	●	●	●	●	–
	Polyurethane Foam	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	Painted Surface (PU, Acrylic)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	Painted Surface (Powdercoat)	○	○	○	○	–	○	○	●	●	●	●	○	○	○	–
	Expanded Polystyrene Foam (EPS)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Rubber	EPDM	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	Neoprene , Natural Rubber	○	○	●	○	○	●	●	○	○	●	●	○	●	○	–
	Santoprene	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	Silicone Rubber	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Other	Wood	●	●	●	●	●	●	●	●	●	●	●	●	●	●	–
	Leather	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	Fabric	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	Paper / Cardboard	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	Glass wool Insulation	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

3M™ Scotch-Weld™ Instant Adhesives

● Best Choice ● Good ○ Special surface preparation required – Not recommended

		CA4	CA5	CA7	CA8	CA9	CA40	CA40H	CA50 Gel	CA100
Glass & Metal	Glass & Ceramics, Polished Stone	–	–	–	–	–	–	–	–	–
	Bare Aluminium	●	●	●	●	●	●	●	●	●
	Brass/Copper	●	●	●	●	●	●	●	●	●
	Bare Steel	●	●	●	●	●	●	●	●	●
Plastic	Low Surface Energy (PP - PS)	–	–	–	–	–	–	–	–	–
	Medium Surface Energy (Acrylic - ABS)	●	●	●	●	●	●	●	●	●
	High Surface Energy (PC - PU)	●	●	●	●	●	●	●	●	●
	FRP	●	●	●	●	●	●	●	●	●
	Nylon	●	●	●	●	●	●	●	●	●
	Flexible Vinyl	–	–	–	–	–	●	●	–	–
	Polyurethane Foam	–	–	–	–	–	–	–	–	–
	Painted Surface (PU, Acrylic)	–	–	–	–	–	–	–	–	–
	Painted Surface (Powdercoat)	○	○	○	○	○	○	○	○	○
	Expanded Polystyrene Foam (EPS)	–	–	–	–	–	–	–	–	–
Rubber	EPDM	●	●	●	●	●	●	●	●	●
	Neoprene , Natural Rubber	●	●	●	●	●	●	●	●	●
	Santoprene	–	–	–	–	–	●	●	–	–
	Silicone Rubber	–	–	–	–	–	–	–	–	–
Other	Wood	–	–	–	–	–	–	–	–	–
	Leather	–	–	–	–	–	–	–	–	–
	Fabric	–	–	–	–	–	–	–	–	–
	Paper / Cardboard	–	–	–	–	–	–	–	–	–
	Glass wool Insulation	–	–	–	–	–	–	–	–	–

IMPORTANT NOTE: These tables describe the relative adhesion to the listed surface within the product group, you may need to take into consideration factors such as:

Gap filling, ultimate joint strength, joint flexibility or joint thickness, environmental resistance, small or large surface area coverage, application methods, positioning time or cure time.

Please refer to individual product technical datasheets for more complete details of typical product performance.

The technical information and data on these pages should be considered representative or typical only and should not be used for specification purposes. Refer to Technical Data Sheets for specific performance measures and surface preparation requirements. For further assistance contact 3M.

Final product selection should be made only after evaluation of sample bonds.

3M™ Scotch-Weld™ Polyurethane Reactive (PUR) Adhesives

● Best Choice ● Good ○ Special surface preparation required – Not recommended

		TE030	TE040	TE100	TE200
Glass & Metal	Glass & Ceramics, Polished Stone	○	●	○	○
	Bare Aluminium	●	●	●	●
	Brass/Copper	●	●	●	●
	Bare Steel	●	●	●	●
Plastic	Low Surface Energy (PP - PS)	–	–	–	–
	Medium Surface Energy (Acrylic - ABS)	●	●	●	○
	High Surface Energy (PC - PU)	●	●	●	○
	FRP	●	●	●	●
	Nylon	○	○	○	○
	Flexible Vinyl	●	●	●	●
	Polyurethane Foam	–	–	–	–
	Painted Surface (PU, Acrylic)	–	–	–	–
	Painted Surface (Powdercoat)	○	○	○	○
Rubber	Expanded Polystyrene Foam (EPS)	●	●	●	●
	EPDM	–	–	–	–
	Neoprene , Natural Rubber	●	●	●	●
	Santoprene	–	–	–	–
Other	Silicone Rubber	–	–	–	–
	Wood	●	●	●	●
	Leather	●	●	●	●
	Fabric	●	●	●	●
	Paper / Cardboard	–	–	–	–
	Glass wool Insulation	–	–	–	–

At least one surface should be porous or partially porous. Don't bond metal or glass to themselves. Apply adhesive to the non-metal surface first.

3M™ Scotch-Weld™ Hot-Melt Adhesives

● Best Choice ● Good ○ Special surface preparation required – Not recommended

		3762LM	3792LM	Gummy*	1747	1762	1792	3738	3748	3762	3764	3789
Glass & Metal	Glass & Ceramics, Polished Stone	–	●	●	–	–	–	–	–	–	●	–
	Bare Aluminium	–	–	●	–	–	–	–	–	–	–	●
	Brass/Copper	–	–	●	–	–	–	–	●	–	–	●
	Bare Steel	–	–	●	–	–	–	–	–	–	–	●
Plastic	Low Surface Energy (PP - PS)	●	●	●	●	●	●	–	●	●	●	–
	Medium Surface Energy (Acrylic - ABS)	●	●	●	●	●	●	●	●	●	●	–
	High Surface Energy (PC - PU)	●	●	●	●	●	●	●	●	●	●	●
	FRP	–	–	–	–	–	–	●	●	–	●	●
	Nylon	–	–	–	–	–	–	–	–	–	–	–
	Flexible Vinyl	–	–	–	–	–	–	–	–	–	–	●
	Polyurethane Foam	–	–	–	–	–	–	–	–	–	–	–
	Painted Surface (PU, Acrylic)	●	●	●	●	●	●	●	●	●	●	●
	Painted Surface (Powdercoat)	○	○	○	○	○	○	○	○	○	○	○
Rubber	Expanded Polystyrene Foam (EPS)	●	●	●	–	–	–	–	–	–	–	–
	EPDM	–	–	–	–	–	–	–	–	–	–	–
	Neoprene , Natural Rubber	–	–	–	–	–	–	–	–	–	–	–
	Santoprene	–	–	–	–	–	–	–	–	–	–	–
Other	Silicone Rubber	–	–	–	–	–	–	–	–	–	–	–
	Wood	●	●	●	●	●	●	●	●	●	●	●
	Leather	–	–	–	–	–	–	–	–	–	–	●
	Fabric	●	●	●	●	●	●	●	●	●	●	●
	Paper / Cardboard	●	●	●	●	●	●	●	●	●	●	–
	Glass wool Insulation	–	–	–	–	–	–	–	–	–	–	–

* Low peel strength, removable adhesive. Note: Bonding Metals - thin, light gauge only. Do not bond metal to metal. Apply the adhesive to the non-metal surface first.

IMPORTANT NOTE: These tables describe the relative adhesion to the listed surface within the product group, you may need to take into consideration factors such as:

Gap filling, ultimate joint strength, joint flexibility or joint thickness, environmental resistance, small or large surface area coverage, application methods, positioning time or cure time.

Please refer to individual product technical datasheets for more complete details of typical product performance.

The technical information and data on these pages should be considered representative or typical only and should not be used for specification purposes. Refer to Technical Data Sheets for specific performance measures and surface preparation requirements. For further assistance contact 3M.

Final product selection should be made only after evaluation of sample bonds.

3M™ Scotch-Weld™ Cylinder Spray Adhesives

● Best Choice ● Good ○ Special surface preparation required – Not recommended

		74NF	98NF	70	77	94CA	94ET
Glass & Metal	Glass & Ceramics, Polished Stone	–	–	–	●	●	●
	Bare Aluminium	–	●	●	–	●	●
	Brass/Copper	–	○	○	○	○	–
	Bare Steel	–	●	●	●	●	●
Plastic	Low Surface Energy (PP - PS)	●	●	●	–	–	–
	Medium Surface Energy (Acrylic - ABS)	●	●	●	●	●	●
	High Surface Energy (PC - PU)	●	●	●	●	●	●
	FRP	●	●	●	●	●	●
	Nylon	–	–	–	–	–	–
	Flexible Vinyl	– *	– *	–	–	–	– *
	Polyurethane Foam	●	●	●	–	–	–
	Painted Surface (PU, Acrylic)	–	–	●	●	●	●
	Painted Surface (Powdercoat)	–	–	●	●	●	●
	Expanded Polystyrene Foam (EPS)	–	–	●	●	–	–
Rubber	EPDM	–	–	–	–	–	–
	Neoprene , Natural Rubber	●	●	●	●	●	●
	Santoprene	–	–	–	–	–	–
	Silicone Rubber	–	–	–	–	–	–
Other	Wood	●	●	●	●	●	●
	Leather	●	●	●	●	●	●
	Fabric	●	●	●	●	●	●
	Paper / Cardboard	–	–	–	●	–	–
	Glass wool Insulation	●	●	●	–	●	●

At least one surface should be porous or partially porous - for example, when bonding to metal, the second surface could be wood. Bonding two non-porous surfaces can result in incomplete strength build-up.

* May work on some supported fabric backed vinyls - testing required.

3M™ Industrial Aerosol Adhesives

● Best Choice ● Good ○ Special surface preparation required – Not recommended

		73	74	75	76	77	80	90	94ET
Glass & Metal	Glass & Ceramics, Polished Stone	–	–	●	–	–	–	●	●
	Bare Aluminium	●	–	●	●	–	●	●	●
	Brass/Copper	–	–	–	–	○	–	–	–
	Bare Steel	●	–	●	●	●	●	●	●
Plastic	Low Surface Energy (PP - PS)	–	●	–	●	–	–	●	–
	Medium Surface Energy (Acrylic - ABS)	–	●	●	●	●	–	●	●
	High Surface Energy (PC - PU)	●	●	●	●	●	●	●	●
	FRP	●	●	●	●	●	●	●	●
	Nylon	–	–	–	–	–	●	●	–
	Flexible Vinyl	–	–	–	– *	–	●	–	– *
	Polyurethane Foam	–	●	–	●	–	–	–	–
	Painted Surface (PU, Acrylic)	●	●	●	●	●	●	●	●
	Painted Surface (Powdercoat)	–	–	–	–	–	–	●	●
	Expanded Polystyrene Foam (EPS)	●	–	●	–	●	–	–	–
Rubber	EPDM	–	–	–	–	–	–	–	–
	Neoprene , Natural Rubber	–	●	–	–	●	●	●	●
	Santoprene	–	–	–	–	–	–	–	–
	Silicone Rubber	–	–	–	–	–	–	–	–
Other	Wood	–	●	–	●	●	●	●	●
	Leather	–	●	–	–	●	●	–	●
	Fabric	●	●	●	●	●	–	●	●
	Paper / Cardboard	●	–	●	–	●	–	–	–
	Glass wool Insulation	–	●	–	●	–	–	●	●

At least one surface should be porous or partially porous - for example, when bonding to metal, the second surface could be wood. Bonding two non-porous surfaces can result in incomplete strength build-up.

* May work on some supported fabric backed vinyls - testing required.

IMPORTANT NOTE: These tables describe the relative adhesion to the listed surface within the product group, you may need to take into consideration factors such as:

Gap filling, ultimate joint strength, joint flexibility or joint thickness, environmental resistance, small or large surface area coverage, application methods, positioning time or cure time.

Please refer to individual product technical datasheets for more complete details of typical product performance.

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Final product selection should be made only after evaluation of sample bonds.

3M™ Scotch-Weld™ Industrial Adhesives and 3M™ Fastbond™ Industrial Adhesives

● Best Choice ● Good ○ Special surface preparation required – Not recommended

		1099	4475	4693	847	847H	1300L	4799	10	77	90	1357	30NF	FB100	FB49
Glass & Metal	Glass & Ceramics, Polished Stone	–	●	●	–	–	–	–	–	–	●	–	–	–	–
	Bare Aluminium	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Brass/Copper	–	●	●	–	–	–	–	–	–	–	–	–	–	–
	Bare Steel	●	●	●	●	●	●	●	●	●	●	●	○	○	●
Plastic	Low Surface Energy (PP - PS)	–	–	●	–	–	–	–	–	●	●	–	–	–	–
	Medium Surface Energy (Acrylic - ABS)	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	High Surface Energy (PC - PU)	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	FRP	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Nylon	●	–	●	–	–	–	–	–	–	●	–	–	–	●
	Flexible Vinyl	●	●	–	–	–	●	–	●	–	–	●	●	●	–
	Polyurethane Foam	–	–	–	●	–	●	–	–	–	–	–	●	●	●
	Painted Surface (PU, Acrylic)	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Painted Surface (Powdercoat)	●	●	●	–	–	–	–	–	–	●	–	–	–	●
	Expanded Polystyrene Foam (EPS)	–	–	–	–	–	–	–	–	●	–	–	●	●	●
Rubber	EPDM	–	–	–	–	–	–	●	–	–	–	–	–	–	–
	Neoprene , Natural Rubber	●	●	●	●	●	●	●	●	–	●	●	●	●	–
	Santoprene	○	–	○	–	–	–	●	–	–	–	–	–	–	–
	Silicone Rubber	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Other	Wood	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Leather	●	●	●	●	●	●	●	●	–	–	●	●	●	–
	Fabric	–	–	–	–	–	●	–	–	●	●	●	●	●	●
	Paper / Cardboard	–	–	–	–	–	–	–	–	●	–	–	–	–	–
	Glass wool Insulation	–	–	–	–	–	–	–	–	–	–	–	●	●	●

When bonding metals or glass, the second surface must be porous, such as wood, and some plastics for example. Bonding two non-porous surfaces such as metal and glass can result in incomplete strength build-up.

3M™ VHB™ Tapes

● Best Choice ● Good ○ Special surface preparation required – Not recommended

		B23F	G23F	4941F	4956F	4957F	4991	4929	4930	4945	4949	4950	4951	4959	5652	5958FR	4905	4910	4611
Glass & Metal	Glass & Ceramics, Polished Stone	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Bare Aluminium	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Brass/Copper	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	Bare Steel	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Plastic	Low Surface Energy (PP - PS)	–	–	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	Medium Surface Energy (Acrylic - ABS)	–	–	●	●	○	●	○	○	●	○	○	○	○	●	○	○	○	○
	High Surface Energy (PC - PU)	–	–	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	FRP	–	–	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Nylon	–	–	○	○	○	○	○	○	○	○	○	○	○	●	○	○	○	○
	Flexible Vinyl	–	–	●	●	–	●	–	–	●	–	–	–	–	–	–	–	–	●
	Polyurethane Foam	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	Painted Surface (PU, Acrylic)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Painted Surface (Powdercoat)	○	○	○	○	○	○	○	○	○	○	○	○	○	●	○	○	○	○
	Expanded Polystyrene Foam (EPS)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Rubber	EPDM	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	Neoprene , Natural Rubber	–	–	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	Santoprene	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	Silicone Rubber	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Other	Wood	–	–	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	Leather	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	Fabric	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	Paper / Cardboard	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	Glass wool Insulation	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

Minimum surface preparation for glass is to clean with 3M™ AP-115. Please refer to the 3M™ VHB™ Surface Preparation Guide - adhesion to most surfaces can be improved with some surface preparation.

IMPORTANT NOTE: These tables describe the relative adhesion to the listed surface within the product group, you may need to take into consideration factors such as:

Gap filling, ultimate joint strength, joint flexibility or joint thickness, environmental resistance, small or large surface area coverage, application methods, positioning time or cure time.

Please refer to individual product technical datasheets for more complete details of typical product performance.

The technical information and data on these pages should be considered representative or typical only and should not be used for specification purposes. Refer to Technical Data Sheets for specific performance measures and surface preparation requirements. For further assistance contact 3M.

Final product selection should be made only after evaluation of sample bonds.

3M™ VHB™ Tapes - RP Range

● Best Choice ● Good ○ Special surface preparation required – Not recommended

		RP16	RP25	RP32	RP45	RP62
Glass & Metal	Glass & Ceramics, Polished Stone	●	●	●	●	●
	Bare Aluminium	●	●	●	●	●
	Brass/Copper	○	○	○	○	○
	Bare Steel	○	○	○	○	○
Plastic	Low Surface Energy (PP - PS)	○	○	○	○	○
	Medium Surface Energy (Acrylic - ABS)	●	●	●	●	●
	High Surface Energy (PC - PU)	●	●	●	●	●
	FRP	●	●	●	●	●
	Nylon	○	○	○	○	○
	Flexible Vinyl	●	●	●	●	●
	Polyurethane Foam	–	–	–	–	–
	Painted Surface (PU, Acrylic)	●	●	●	●	●
	Painted Surface (Powdercoat)	○	○	○	○	○
	Expanded Polystyrene Foam (EPS)	–	–	–	–	–
Rubber	EPDM	–	–	–	–	–
	Neoprene , Natural Rubber	○	○	○	○	○
	Santoprene	–	–	–	–	–
	Silicone Rubber	–	–	–	–	–
Other	Wood	○	○	○	○	○
	Leather	–	–	–	–	–
	Fabric	–	–	–	–	–
	Paper / Cardboard	–	–	–	–	–
	Glass wool insulation	–	–	–	–	–

Minimum surface preparation for glass is to clean with 3M™ AP-115. Please refer to the 3M™ VHB™ Surface Preparation Guide - adhesion to most surfaces can be improved with some surface preparation.

IMPORTANT NOTE: These tables describe the relative adhesion to the listed surface within the product group, you may need to take into consideration factors such as: Gap filling, ultimate joint strength, joint flexibility or joint thickness, environmental resistance, small or large surface area coverage, application methods, positioning time or cure time. Please refer to individual product technical datasheets for more complete details of typical product performance. The technical information and data on these pages should be considered representative or typical only and should not be used for specification purposes. Refer to Technical Data Sheets for specific performance measures and surface preparation requirements. For further assistance contact 3M. Final product selection should be made only after evaluation of sample bonds.

3M™ Double Coated Urethane Foam Tapes

● Best Choice ● Good ○ Special surface preparation required – Not recommended

		4004	4008	4016	4032	4085
Glass & Metal	Glass & Ceramics, Polished Stone	●	●	●	●	●
	Bare Aluminium	●	●	●	●	●
	Brass/Copper	●	●	●	●	○
	Bare Steel	●	●	●	●	●
Plastic	Low Surface Energy (PP - PS)	○	○	○	○	●
	Medium Surface Energy (Acrylic - ABS)	○	○	○	○	●
	High Surface Energy (PC - PU)	●	●	●	●	●
	FRP	●	●	●	●	●
	Nylon	○	○	○	○	●
	Flexible Vinyl	–	–	–	–	–
	Polyurethane Foam	–	–	–	–	–
	Painted Surface (PU, Acrylic)	●	●	●	●	●
	Painted Surface (Powdercoat)	○	○	○	○	●
	Expanded Polystyrene Foam (EPS)	–	–	–	–	–
Rubber	EPDM	–	–	–	–	–
	Neoprene , Natural Rubber	○	○	○	○	○
	Santoprene	–	–	–	–	–
	Silicone Rubber	–	–	–	–	–
Other	Wood	○	○	○	○	○
	Leather	–	–	–	–	–
	Fabric	–	–	–	–	–
	Paper / Cardboard	–	–	–	–	–
	Glass wool Insulation	–	–	–	–	–

IMPORTANT NOTE: These tables describe the relative adhesion to the listed surface within the product group, you may need to take into consideration factors such as:

Gap filling, ultimate joint strength, joint flexibility or joint thickness, environmental resistance, small or large surface area coverage, application methods, positioning time or cure time.

Please refer to individual product technical datasheets for more complete details of typical product performance.

The technical information and data on these pages should be considered representative or typical only and should not be used for specification purposes. Refer to Technical Data Sheets for specific performance measures and surface preparation requirements. For further assistance contact 3M.

Final product selection should be made only after evaluation of sample bonds.

3M™ Double Coated Tapes

● Best Choice ● Good ○ Special surface preparation required – Not recommended

		401M	410M	415	9731 *	9415PC**	9425**	9075	CT6348
Glass & Metal	Glass & Ceramics, Polished Stone	–	–	–	●	●	●	●	●
	Bare Aluminium	●	●	–	●	●	●	●	●
	Brass/Copper	–	–	–	●	–	–	–	–
	Bare Steel	●	●	–	●	●	●	●	●
Plastic	Low Surface Energy (PP - PS)	●	●	–	–	–	–	●	●
	Medium Surface Energy (Acrylic - ABS)	●	●	–	●	●	●	●	●
	High Surface Energy (PC - PU)	●	●	●	●	●	●	●	●
	FRP	●	●	●	●	●	●	●	●
	Nylon	●	●	●	●	●	●	●	●
	Flexible Vinyl	–	–	–	–	–	–	–	–
	Polyurethane Foam	–	–	–	–	–	–	●	●
	Painted Surface (PU, Acrylic)	●	●	●	●	●	●	●	●
	Painted Surface (Powdercoat)	●	●	–	○	○	○	●	●
	Expanded Polystyrene Foam (EPS)	–	–	●	–	–	–	●	●
	EPDM	–	–	–	–	–	–	–	–
Rubber	Neoprene , Natural Rubber	●	●	–	–	–	–	–	–
	Santoprene	–	–	–	–	–	–	–	–
	Silicone Rubber	–	–	–	●*	–	–	–	–
	Wood	●	●	●	●	–	–	●	●
Other	Leather	–	–	–	–	–	–	–	–
	Fabric	●	●	●	–	●	●	●	●
	Paper / Cardboard	●	●	●	–	●	●	●	●
	Glass wool Insulation	–	–	–	–	–	–	–	–

* 9731 cannot bond silicone rubber to itself ** Removable adhesive

In general terms, use of adhesive transfer tapes should be limited to lightweight and/or thin and flexible substrates. The degree of surface contact may be limited when bonding rigid and large parts with thin tapes.

3M™ Adhesive Transfer Tapes

● Best Choice ● Good ○ Special surface preparation required – Not recommended

		F9469PC	F9473PC	467MP	468MP	950	9471	9472	9671LE	9672LE	9485PC	463	465	F9465PC
Glass & Metal	Glass & Ceramics, Polished Stone	●	●	●	●	–	●	●	●	●	●	–	–	●
	Bare Aluminium	●	●	●	●	–	●	●	●	●	●	–	–	●
	Brass/Copper	●	●	●	●	–	○	○	○	○	○	–	–	–
	Bare Steel	●	●	●	●	–	●	●	●	●	●	–	–	●
Plastic	Low Surface Energy (PP - PS)	○	○	○	○	–	●	●	●	●	●	–	–	–
	Medium Surface Energy (Acrylic - ABS)	○	○	●	●	–	●	●	●	●	●	–	–	●
	High Surface Energy (PC - PU)	●	●	●	●	●	●	●	●	●	●	●	●	●
	FRP	●	●	●	●	●	●	●	●	●	●	●	●	●
	Nylon	○	○	○	○	●	●	●	●	●	●	●	●	●
	Flexible Vinyl	–	–	–	–	–	–	–	–	–	–	–	–	●
	Polyurethane Foam	–	–	–	–	–	●	●	●	●	●	–	–	–
	Painted Surface (PU, Acrylic)	●	●	●	●	●	●	●	●	●	●	●	●	●
	Painted Surface (Powdercoat)	○	○	○	○	–	●	●	●	●	●	–	–	●
	Expanded Polystyrene Foam (EPS)	–	–	–	–	●	●	●	●	●	●	●	●	–
Rubber	EPDM	–	–	–	–	–	–	–	–	–	–	–	–	–
	Neoprene , Natural Rubber	○	○	○	○	–	●	●	○	○	●	–	–	–
	Santoprene	–	–	–	–	–	–	–	–	–	–	–	–	–
	Silicone Rubber	–	–	–	–	–	–	–	–	–	–	–	–	–
Other	Wood	○	○	○	○	●	●	●	●	●	●	●	●	–
	Leather	–	–	–	–	–	–	–	–	–	–	–	–	–
	Fabric	–	–	–	–	●	●	●	●	●	●	●	●	–
	Paper / Cardboard	–	–	–	–	●	●	●	–	–	●	●	●	–
	Glass wool Insulation	–	–	–	–	–	●	●	–	–	●	–	–	–

In general terms, the use of adhesive transfer tapes should be limited to lightweight and/or thin and flexible substrates. The degree of surface contact may be limited when bonding rigid and large parts with thin tapes.

IMPORTANT NOTE: These tables describe the relative adhesion to the listed surface within the product group, you may need to take into consideration factors such as:

Gap filling, ultimate joint strength, joint flexibility or joint thickness, environmental resistance, small or large surface area coverage, application methods, positioning time or cure time.

Please refer to individual product technical datasheets for more complete details of typical product performance.

The technical information and data on these pages should be considered representative or typical only and should not be used for specification purposes. Refer to Technical Data Sheets for specific performance measures and surface preparation requirements. For further assistance contact 3M.

Final product selection should be made only after evaluation of sample bonds.

Scotch® ATG Tapes

● Best Choice ● Good ○ Special surface preparation required – Not recommended

		969	926	904	924	928
Glass & Metal	Glass & Ceramics, Polished Stone	●	●	–	–	●
	Bare Aluminium	●	●	–	–	●
	Brass/Copper	●	●	–	–	–
	Bare Steel	●	●	–	–	●
Plastic	Low Surface Energy (PP - PS)	●	●	–	–	–
	Medium Surface Energy (Acrylic - ABS)	●	●	–	–	●
	High Surface Energy (PC - PU)	●	●	●	●	●
	FRP	●	●	●	●	●
	Nylon	●	●	●	●	●
	Flexible Vinyl	–	–	–	–	–
	Polyurethane Foam	●	●	–	–	–
	Painted Surface (PU, Acrylic)	●	●	●	●	●
	Painted Surface (Powdercoat)	●	●	–	–	○
	Expanded Polystyrene Foam (EPS)	●	●	●	●	–
	EPDM	–	–	–	–	–
Rubber	Neoprene , Natural Rubber	●	●	–	–	–
	Santoprene	–	–	–	–	–
	Silicone Rubber	–	–	–	–	–
	Wood	●	●	●	●	–
Other	Leather	–	–	–	–	–
	Fabric	●	●	●	●	●
	Paper / Cardboard	●	●	●	●	●
	Glass wool Insulation	●	●	–	–	–

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3M Australia Pty Ltd
Industrial Business
Bldg A, 1 Rivett Road
North Ryde NSW 2113
Australia
Phone: 136 136
www.3M.com

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