

Rethink what's possible.

Explore the industrial adhesives and tapes bonding portfolio

Start







3M adhesives & tapes

In the dynamic realm of design and engineering, practitioners face daily challenges in enhancing both designs and manufacturing processes. Addressing this demand, 3M presents a transformative range of tapes and adhesives.

Empowering the utilization of diverse materials in product design, our solutions contribute to elevated aesthetics, lighter constructions, and enhanced end performance. These innovative adhesive and tape solutions empower customers to craft products with creativity, efficiency, and effectiveness.

Spanning a wide array of applications and substrates, 3M's adhesives and tapes are versatile, offering tailored solutions to optimize your assembly process.

Find your product



Your design

Your parts, your design and production experts



Our technology

Our science and our team of adhesive experts



3M™ Thin Bonding Tapes

Complete solution

One complete solution for your application







Product family finder

Weld"

Structural

Adhesives

Sealants.

(Please visit

our website

for further

info.)

Step 1: What type of assembly are you bonding? Gasketing Panel to frame / Large surface Small joint **Potting** Mounting and trim Stiffener to panel lamination assembly Adhesive flows around Bonding an object to a Prevents fluids or gases Attaching a preformed A panel applied to a rigid Two substrates of similar Very small overlap a component or fills in larger surface (e.g., namefrom passing through gasket, or choosing an frame (e.g. trailer panels), size are bonded over area for bonding a chamber to protect plates, electronics bezels) the joint (e.g., roof and adhesive that acts as a or a stiffening bar applied the whole surface (e.g., golf club head components (e.g., elecpanel seaming) gasket (e.g., air and liquid tronics encased in plastic) to a panel for support (e.g. (e.g., plywood or to shaft) filters) traffic signs) furniture cushions) Step 2: Should the adhesive Are you attaching a Is there no gap/ Does the bond require What be in a precise spot preformed gasket or small gap (< 1.6 mm) structural strength without squeezing to using the adhesive as a requirements between surfaces, (overlap shear spread it, or can the gasket? or does the adhesive strength > 6.9N/mm²) are important placement be 'close need to fill a larger or is lower strength to you? enough' and spread acceptable? gap? on contact? Gap No gap Lower Structural Precise location Spread on cotact filling or small strengh strengh required okay gap Is there no gap/ small gap (< 1.6 mm) Will the parts separate between surfaces. Step 3: and reattach or is the bond Will the parts separate or does the adhesive permanent? Select your and reattach or is the need to fill a portfolio. bond permanent? larger gap? (click) Separate Separate Gap No gap Permanent Adhesive Permanent Attach performed filling and and reator small bond bond gasked as gasket reattach tach required gap Online product selector For more detailed information, please visit ЗМ™ ЗМ ЗМ™ ЗМ™ ЗМ™ ЗМ™ 3M¹¹ ЗМ™ ЗМ™ ЗМ™ ЗМ™ ЗМ ЗМ™ ЗМ™ ЗМ™ our online selector VHB" VHB™ VHB™ VHB™ Adhesive Dual-Lock™ Scotch-Thin Scotch-Dual-Lock™ Thin Scotch-Adhesive Scotch-Thin



Weld™

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Bonding

Tapes





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Tapes

Advantages of 3M tapes and adhesives over mechanical fastening



Equalizing unevenness

- Components are joined completely and without gaps
- No restoring forces, stress-free compensation of tolerances after dwell time
- Surface roughness and unevenness can be compensated by tapes and adhesives



Individual customer solutions

 Tapes can be converted into specific shapes according to your requirements



Joining material combinations

 Different thermal expansion coefficients can be compensated (e.g. plastic and metal)



Sealing function

 Protection against the ingress of dirt or water into the joint construction



Damping effect

 The closed and complete bond inhibits noise and reduces vibrations



Learn more about the benefits of adhesives and tapes bonding.



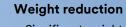






Even stress distribution

 Rather than concentrated stress across several fastener points, the substrate is evenly stressed over the area of the bond.



 Significant weight advantage compared to mechanical fastening

Freedom of design

 Compared to screws or rivets, tapes and adhesives remain invisible

Quick and easy mounting

 Speeds up production processes and reduces labor costs – less pre and post processing required

Minimize the risk of corrosion

 With tapes and adhesives, no holes are required for fastening. The surface remains undamaged and protected (e.q. zinc, paint).





Elevate your bonds with proper surface preparation

Surface Preparation

Surface preparation is essential for achieving optimal bonding performance with adhesives and tapes, ensuring a clean, contaminant-free substrate that promotes strong and durable connections.

Surfaces are prepared by one of the following procedures:

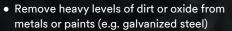
- 1. Degrease only
- 2. Degrease, abrade, and solvent clean
- 3. Degrease and chemically pre-treat

Degrease



3M™ Industrial Cleaners and Adhesive Removers are ideal for helping dissolve and remove dirt, grease, tar, and many non-curing type adhesives.

Abrade



- Create additional surface area that can increase adhesion
- Smooth a surface to obtain more flatness, allowing improved contact area

Solvent clean



Most substrates are best prepared by cleaning with a 50:50 mixture of isopropyl alcohol (IPA) and water prior to applying 3M Tapes. There are exceptions! For special surfaces or soiling, simply ask our 3M Bonding Experts for advice.

Chemically pre-treat



But to obtain maximum strength, reproducibility and resistance to deterioration, a chemical or electrolytic pretreatment is required. Please reach out to our 3M Bonding Experts to learn more.

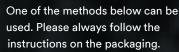
The use of Primer

Priming the surface is particularly necessary for adhesive and tape bonding when dealing with challenging surfaces or specific requirements, as it enhances adhesion by creating a receptive substrate, improving wetting, and promoting a secure and long-lasting bond.



1. Surface preparation
See details on the left







• Primer on a disposable towel



Dauber bottle

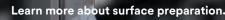


Foam brush



Let dry before taping











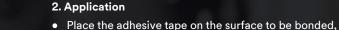
How to apply your tape

Learn more about how to apply tapes.





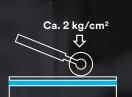






do not stretch it

- Avoid air pockets
- Do not touch adhesive & bonding surface • Optimum processing temperature: 15 to 25 °C



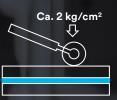
3. Proof pressure

• Press/roll on the adhesive tape well with approx. 2 kg/cm²



4. Remove liner

- Remove the line in one piece (to avoid "stop marks")
- Do not touch the adhesive surface



5. Joining & pressing

- Apply the joining material
- Avoid air pockets
- Apply pressure with approx. 2 kg/cm²





6. Wait for final adhesive strength

- Only load after dwell time
- 50 % of the final adhesive strength after approx. 20 minutes
- Final adhesive strength at 20 °C is achieved
- Heat accelerates the process (e.g. final bond strength at 65 °C after one hour)











3M™ VHB™ Tapes

3M™ VHB™ Tapes are advanced adhesive tapes designed for bonding a wide range of materials with exceptional strength and durability. These tapes can provide a versatile alternative to traditional fastening methods such as screws and welds.

3M™ VHB™ Tapes offer a seamless and aesthetically pleasing solution, effectively eliminating the need for visible fasteners. Known for their ease of application, these tapes have become a trusted choice across various industries for creating robust and invisible bonds between different surfaces, including metals, plastics, glass, and composites.





The 3M™ VHB™ Tape is viscoelastic

A key advantage of 3M™ VHB Tapes™ over foam tapes is their visco elasticity, allowing them to absorb energy and relieve stresses. Unlike foam tapes, 3M™ VHB™ Tapes can stretch up to 50% of their thickness without tearing or delaminating.



Regular foam tape

- Stress in the bond
- · Foam carrier susceptible to cracks

3M™ VHB™ Tapes:

- · Stress-free bonding
- Absorbs energy and relieves stresses

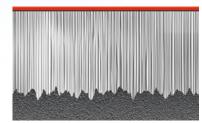
While foam tapes have only a thin adhesive film on the upper or lower side, 3M™ VHB™ Tapes are entirely made of adhesive. The viscoelastic structure of the 3M™VHB™ Tapes allows it to flow into the surface. It does not cure but remains flexible, establishing a 100 % wetting.

vs.



Foam tape

- Can be open or closed cell
- Can only compensate for minimal surface roughness or tolerances



3M™ VHB™ Tapes

• Surface roughness and tolerances are compensated by the adhesive flowing into the surface





	Product no	Thickness (mm)	Adhesion to steel (N/cm)	Temperature Long term (days, weeks)	resistance (°C) Short term (minutes, hours)	Density (kg/m³)	Colour	Certificates
Ideal for multi-material bonding								
 For bonding high-energy materials such as metals (including steel), many plastics and soft PVC 	<u>4936</u>	0.64	30.0	90	150	720		UL 746C
For indoor and outdoor use	4941	1.10	35.0	90	150	720		UL 746C
Good plasticizer resistance	4956	1.55	35.0	90	150	720		UL 746C
	<u>4991</u>	2.30	35.0	90	150	720		UL 746C
\bigcirc	<u>4947</u>	1.10	35.0	90	150	720	\circ	UL 746C
	4979	1.55	35.0	90	150	720	\circ	UL 746C
For powder coated surfaces								
For bonding low-energy materials such as powder coatings and high energy materials such as metals (including steel).	<u>5909</u>	0.30	21.0	90	120	750	\circ	
and high-energy materials such as metals (including steel) and many plastics	<u>5925</u>	0.64	35.0	120	150	590	\circ	UL 746C
Offers optimum adaptability to the surfaces to be bonded	<u>5952</u>	1.10	35.0	120	150	590	\circ	UL 746C
For indoor and outdoor use	<u>5962</u>	1.55	35.0	120	150	640	\circ	UL 746C
For high temperatures and before powder coating								
For applications under high operating temperatures, such	RP+040GP/F	0.40	31.0	121	230	800		
 as before processing in a powder coating line For high- and medium-energy materials such as metals 	<u>GPH-060GF</u>	0.60	25.0	150	230	710		
(e.g. steel) and various plastics (e.g. PA, acrylic glass/	RP+080GP/F	0.80	45.0	121	230	750		
PMMA, ABS) • For interior and exterior use	<u>GPH-110GF</u>	1.10	37.0	150	230	710		
o For interior and exterior ase	<u>GPH-160GF</u>	1.60	34.0	150	230	710		
	RP+230GP/F	2.30	57.0	121	230	705		
For critical plastics and composite materials								
 For bonding difficult-to-bond LSE substrates without primer, such as PP, TPO, GRP, CFRP and polyester coatings 	LSE-060WF	0.60	30.0	100	150	715		
 Adhesion at low temperatures from 0 °C (frost-free) 	LSE-110WF	1.10	44.0	100	150	715		
For indoor and outdoor use	<u>LSE-160WF</u>	1.60	54.0	100	150	715		
For transparent materials								
 For joining transparent materials such as glass and many plastics 	<u>4905</u>	0.5	21.0	90	150	960	0	UL 746C
For indoor and outdoor use	<u>4910</u>	1.0	26.0	90	150	960	0	UL 746C
	<u>4915</u>	1.5	26.0	90	150	960		
	<u>4918</u>	2.0	26.0	90	150	960		
3M™ VHB™ Extrudable Tape								
The 3M [™] On Demand Bonding System featuring 3M [™] VHB [™] Extrudable Tape:	Extrudable Tape							
Simple, automated solution	GP	variable	86.0	90	100	970	\circ	UL746C
Easily integrates into your assembly line								
Low VOC								
 85% reduction in VOCs compared to common acrylic foam tapes 	LVO-060BF	0.6	38	93	121	540	\bigcirc	FDA, VDA278
80% reduction in fog compared	LVO-110BF	1.1	38	93	121	540		FDA, VDA278
to common acrylic foam tapes	LVO-160BF	1.6	38	93	121	540	\circ	FDA, VDA278





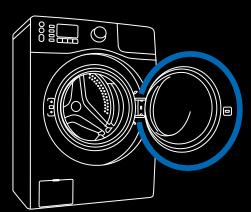








Mounting







Contact us to request a free sample.



Converted parts

Need a specific shape or size? Dive into details.



Online product selector

For more detailed information, please visit











3M™ Thin Bonding Tapes

Discover the advantages of 3M's thin bonding solutions

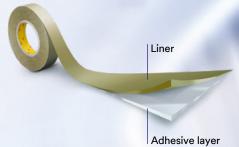
Crafted with precision, these products boast a thickness of 0.25 mm or less, offering a sleek and streamlined solution for various applications. Ideal for finished products requiring a reduced overall profile.

Experience exceptional conformability

Our thin bonding tapes are designed for versatility, featuring exceptional conformability that makes them perfect for intricate surface geometries. Whether you're working with complex shapes or demanding surfaces, 3M's thin bonding tapes deliver reliable adhesion and adaptability.

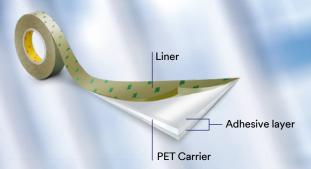






3M™ Adhesive Transfer Tapes

- Thickness: 25 250 μm
- Without (intermediate) carrier
- High flexibility and conformability
- Compensates for surface roughness very effectively
- Higher temperature resistance than doublecoated tapes
- Automated processing recommended for large areas
- More difficult to handle and to die-cut (edge picking) than double coated tapes (thread reinforced adhesive transfer tapes available for easier handling)



3M™ Double Coated Tapes

- Thickness: 25 250 μm
- With (intermediate) carrier
- Lower flexibility and conformability than adhesive transfer tape
- Compensates for surface roughness less effectively than adhesive transfer tape
- Carrier limits temperature resistance
- Increased internal stability thanks to carrier
- Easier to handle and to die-cut
- Better dispensability
- Different adhesives on both sides possible
- Levelwound rolls possible









3M™ Thin Bonding Tapes	Product no	Thickness (mm)	Temperature resistance (°C) short term	Weather resistance	Double coated tape / Adhesive transfer tape	Liner material	Colour	Certificates
General purpose solution								
Ideal general purpose industrial thin bond tape for a wide range of applications and substrates such as:	<u>GPT-020</u>	0.200	190	+++	Double coated tape with PP film	Polycoated kraft		
Stainless Steel, HDPE, ABS, Acrylic PP, Polycarbonate, Aluminium, Glass	<u>GPT-020F</u>	0.200	190	+++	Double coated tape with PP film	Filmic liner		
Metals / Easy-to-stick surfaces								
For Metal and High Surface Energy Substrates such as:	<u>467MP</u>	0.058	200	++	Adhesive transfer tape	Polycoated kraft		UL 746C UL 969
 Aluminium, Powder-coated metals: Copper, Stainless steel and Zinc, Composites, Carbon Fibre, Ceramic, Acrylic, Fibreglass, 	<u>467MPF</u>	0.058	200	++	Adhesive transfer tape	PET film		UL 746C UL 969
Plastics: Polycarbonate, Polyester, Polyimide, Polystyrene and Rigid Vinyl	<u>7952MP</u>	0.058	200	++	Adhesive transfer tape	Polycoated kraft		UL 746C UL 969
	<u>468MP</u>	0.132	200	++	Adhesive transfer tape	Polycoated kraft		UL 746C UL 969
	<u>7955MP</u>	0.132	200	++	Adhesive transfer tape	Polycoated kraft		UL 746C UL 969
	<u>7956MP</u>	0.167	150	+++	Double coated tape	Polycoated kraft		UL 746C UL 969
Plastics / Hard-to-stick surfaces								
Designed specifically to bond low surface energy substrates securely and reliably with high initial tack and high shear strength such as:	<u>9471LE</u>	0.058	150	++	Adhesive transfer tape / No carrier	Polycoated kraft		UL 746C UL 969
ABS Plastic, Nylon Coated Aluminium, Coated Paper, EPDM Rubber, Foam, Graphite, Metal Mesh, Painted Surfaces, PET Film, Coated Polycarbonate, Polypropylene, Powder-Coated Surfaces, Printed Metal, Rubber Polyurethane, SIS Rubber and Wood	<u>9472LE</u>	0.132	150	++	Adhesive transfer tape / No carrier	Polycoated kraft		UL 696
	93010LE	0.100	150	+++	Double coated tape with PET film	Polycoated kraft		UL 746C
	93015LE	0.150	150	+++	Double coated tape with PET film	Polycoated kraft		UL 746C
	93020LE	0.200	150	+++	Double coated tape with PET film	Polycoated kraft		UL 746C
	<u>9495LE</u>	0.170	150	++	Double coated tape with PET film	Polycoated kraft	•	UL 696
High temperatures / Harsh environments								
Delivers in high temperatures and other challenging environments:	F9460PC	0.058	260	+++	Adhesive transfer tape	Polycoated kraft		UL 746C
 Short-term temperature tolerance up to 260 °C Operating temperature tolerance of up to 150 °C 	F9469PC	0.132	260	+++	Adhesive transfer tape	Polycoated kraft		UL 746C
 Durable adhesive is chemical, UV and solvent resistant 	<u>F9473PC</u>	0.269	260	+++	Adhesive transfer tape	Polycoated kraft		UL 746C
Print your tape								
3M [™] Printable UV Curing Pressure Sensitive Adhesive SP7202. This unique UV curable liquid can be printed with robot dispensing in the required shape and after UV curing it's a Pressure Sensitive Adhesive (PSA) with the performance of an adhesive transfer tape.	<u>SP7202</u>	Variable	n/a	n/a	Pressure sensitive adhesive	No liner		
- and an order tapor								









Transparent White









Mounting and trim







Contact us to request a free sample.



Converted parts

Need a specific shape or size? Dive into details.



Online product selector

For more detailed information, please visit our online selector



Looking for a reclosable solution?

3M™ Dual Lock™ Reclosable Fasteners

When you need a strong, reliable, yet removable closure or attachment, 3M™ Dual Lock™ Reclosable Fasteners are the

simple alternative to traditional fastening methods such as screws, nuts

requirements, including temperature, moisture, UV and flame resistance.

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or bolts. A wide range of products are available to meet your specific

Mix and match products to achieve the required holding strength.



Design flexibility

- Lightweight and low profile
- Fastener is hidden beneath the surface and does not interfere with the integrity of the design
- No holes or traditional fastener marks

up to

Reliable performance

- · Strong, interlocking mushroom-shaped heads connect with an audible "snap"
- Peel apart to open
- Durable up to 1,000 openings and closings before losing 50% of original tensile strength
- Interlocking mushroom-shaped heads have 5X the tensile strength of hook-and-loop products



Noise reduction through vibration damping

 The viscoelastic properties of 3M[™] Acrylic Foam Tape in combination with the polyolefin mushroom heads of 3M™ Dual Lock™ dampens vibrations



Quick and easy to Install

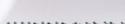
- Adhesive sticks on contact to a variety of materials without special tools
- · No drilling, screwing, sewing
- Non-adhesive product also available

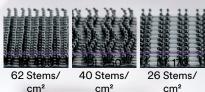
Customize for your application

- · Mix and match stem densities for the ideal closure strength
- Choose from a variety of widths and adhesive options
- Application and maintenance ease

Stem density combinations

Strongest DL 250: DL 400 DL 250: DL 250 or Stronger DL 170: DL 400 DL 170: DL 250 Strong Not DL 170: DL 170 or recom-DL 400: DL400 mended





Interchangeable strength combinations







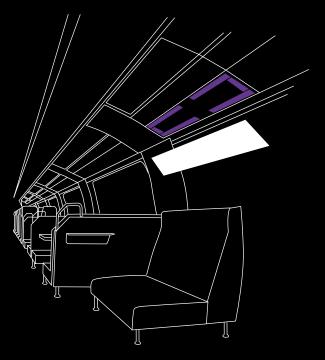
3M™ Dual Lock™	Product no	Engaged thickness (mm)	Adhesive type	Stem density (per cm²)	Holding power	Temperature resistance (°C)	Closure cycle life	Indoor/ outdoor use	Colour
For plastic materials									
Bonds to a variety of substrates including:	SJ3540	5.7	Rubber	40	9	49	1,000 x	Indoor	\circ
PolypropylenePolyethylene	SJ3541	5.7	Rubber	62	9	49	1,000 x	Indoor	\bigcirc
Folyethylene	<u>333341</u>	5.7	Kubbei	02	3	40	1,000 X	muoor	
	<u>SJ3542</u>	5.7	Rubber	26	9	49	1,000 x	Indoor	\circ
Ideal for multi-material joints									
Bonds to a variety of substrates including:			Clear					Indoor &	
 Metals 	SJ3550CF	5.7	acrylic	40	10	93	1,000 x	outdoor	\circ
 Glass and 									
 Plastics (such as acrylics, polycarbonate and ABS) 	<u>SJ3551CF</u>	5.7	Clear acrylic	62	10	93	1,000 x	Indoor & outdoor	\circ
Try mating different combinations of Type 170, Type 250 or Type 400 to achieve the desired strength profile	<u>SJ3552CF</u>	5.7	Clear acrylic	26	10	93	1,000 x	Indoor & outdoor	0
For transparent materials									
A clear version for when a translucent appearance is needed on:									
Metals	C 12500	F 7	Clear	40	40	40.4	1.000	Indoor &	
• Glass	<u>SJ3560</u>	5.7	acrylic	40	10	104	1,000 x	outdoor	
 Plastics (such as acrylics, polycarbonate and ABS) 									
For powder-coated surfaces									
For joining:			Modified					Indoor &	
Low-energy materials such as	<u>SJ3870</u>	6.1	acrylic	40	10	82	1,000 x	outdoor	\circ
 Powder coatings and many plastics 									
High-energy materials such as			NA - J'C' - J					l 0	
 Metals (including steel) 	<u>SJ3871</u>	6.1	Modified acrylic	62	10	82	1,000 x	Indoor & outdoor	\circ
A combo of low & high-energy materials									
Thin bondlines									
Half the thickness and lower weight limit of standard 3M™ Dual Lock™ Reclosable Fasteners. Low surface energy adhesive bonds to:									
Metals	<u>SJ4570</u>	2.31	Modified acrylic	109	7	70	150 x	Indoor & outdoor	
Powder-coated paints			40.7110					0 0 1 0 0 0	
Plastics (broad range)									
Hook & loop options									
Half the thickness and lower weight limit of standard 3M™ Dual Lock™ Reclosable Fasteners. Low surface energy adhesive bonds to:	<u>SJ3526</u> (Hook) & <u>SJ3527</u> (Loop)	3.6	Rubber		4	49	5,000 x	Indoor	$\circ \bullet$
Metals	(=00р)								
Powder-coated paints	<u>SJ3571</u> (Hook)							Indoes 9	
Plastics (broad range)	& <u>SJ3572</u>	3.6	Acrylic		4	93	5,000 x	Indoor & outdoor	\bigcirc
	(Loop)								





Panel to frame / Stiffener to panel

Mounting and trim





Free Samples

Contact us to request a free sample.



Converted parts

Need a specific shape or size? Dive into details.



Online product selector

For more detailed information, please visit our online selector









○ Black ○ Transparent ○ White



3M™ Scotch-Weld™ Structural Adhesives

These adhesives are formulated to provide high strength, durability, and long-term reliability in load-bearing applications.

- Structural adhesives have the highest load bearing capability (compared to other types of adhesives)
- Excellent environmental and chemical resistance
- Generally formulated to be 100% solids (no solvent emissions to deal with)
- Come in a range of cure times and properties.
- Cure in an irreversible process which helps provide excellent temperature and solvent resistance.
- They do not need access to air to dry; nor moisture (like one-part silicone and polyurethane sealants); and thus, have unlimited depth of cure.

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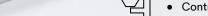
Flexible Bonds

 Absorb vibration and CTE mismatch (Coefficient of thermal expansion)









3M™ Scotch-Weld™ Structural Adhesives

- Variety of cure rates to match your process needs
- Build faster with minimal surface prep

Enhance Productivity

 Withstands high process temperatures

Accurate and Easy

- Control dispensing with 3M™ EPX™ exact proportioning and mixing applicators
- Match your processing needs with a range of viscosities and flow rates
- Manage large applications with automated dispensing equipment



Stronger Bonds

 Toughened adhesives absorb shock for durable bonds

Maria Mari		Product no	Approx. open time* at 24°C	Approx. time to handling strength at	Approx. viscosity at 24°C	Floating roller peel at 24°C		rlap she MPa		Mix ratio (Volume)	Colour	Certificates
Bonds obers alignity ofly metals DP8405NS 5 15 70,000 89 18 28 6 10:1							-55°C	24°C	82°C	B:A		
Per- powdercoat bonding of active metals Injunity	Metal bonding											
High-strength DP840/TNS 7	 Bonds to bare, slightly oily metals 	<u>DP8405NS</u>	5	15	70,000	89	18	28	6	10:1		
Durable bonding of metals, plastics, and composites PE8410NS 10 25 70,000 89 25 28 6 10.1		DP8407NS	7	24	20,000	89	23	31	10	10:1		
Excellent impact resistance P8425NS 25 50 70,000 89 26 26 6 10.1 EN 45545	•	DD0.440NC	10	0.E	70.000	00	OF	00	6	10.1		UL
Easy dispensing P8425NS 25 50 70,000 89 26 6 6 10:1		<u>DP8410IN5</u>	10	25	70,000	89	25	28	О	10:1		
Bonds to low surface energy plastics DP8005 3 180 25,000 n/a 6 14 3 10.1 Comment of the control of the c	Easy dispensing	DP8425NS	25	50	70,000	89	26	26	6	10:1		EN 45545
Low Odour Medium viscosity DBS005 3 180 25,000 n/a 5 15 3 10:1 Medium viscosity DBS005 3 180 25,000 n/a 5 15 3 10:1 Medium viscosity DBS006 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Plastic bonding											
Medium viscosity	Bonds to low surface energy plastics	DP8005	3	180	25,000	n/a	6	14	3	10:1	0	
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## Page 1												
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	 Non-flammable classification Low odour formulation 						-40°C)					





Potting



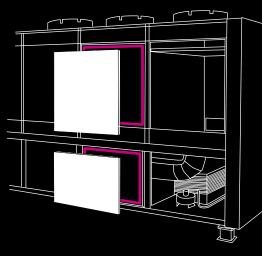
Small joint assembly



Mounting

Mounting and trim







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 eco-friendly production.
- 4. Enhanced performance & ease of application: Optimal adhesive contact for improved performance and user-friendly installation.
- 5. Versatility & quality assurance:

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Bonding automation handbook: Handbook to give you a basic understanding of automating your tape and liquid adhesive processes.

Learn more

Tape



Liquid Adhesive



Basic Tools

Simple basic tools to improve the application process, without automation.



Liquid Adhesive



Process Assist

Simple mechanical or electrical tools to increase productivity of manual application.

Tape





Fixed Automation

Mostly automated operation designed to perform one specific assembly process with the goal of improving accuracy, speed, or labor

Tape



Liquid Adhesive



Flexible Automation

Mostly automated operation designed to perform more than one assembly process or, to be re-purposed later. Often incorporates robotics.

Benefits of automating liquid adhesive or tape applications.

Assembly

- Increase quality
- Improve aestetics
- Increase consistency and accuracy of placement

Process

- Improve traceability
- Decrease operator fatigue
- Difficult to find labor/ Labor shortage
- Increase safety
- Decrease takt time
- Increase throughput
- Complexity of operation

Cost

- Improve operator efficiency
- Reduce high-cost
- labor rate
- Reduce work in process
- inventory







Test your bonds | Get support from the 3M lab team

Our state-of-the-art facilities offer a myriad of tests to ensure the reliability and strength of tapes and adhesives. From shear and peel strength assessments to environmental durability testing, we tailor our analyses to meet your specific needs. Trust 3M to deliver meticulous testing, providing you with the assurance that your bonds will stand the test of time. Explore our comprehensive testing services and elevate the quality and reliability of your projects.

Learn more

Testing capabilities



Tensile, adhesion & cohesion strength

- · Tensile & elongation
- Dynamic shear
- Static shear
- Adhesion (Peel)



Climatic & environmental exposure

- Accelerated weathering
- Climate chamber
- Saltspray
- Weathering
- Deep freezer



Mechanical strain

- Abrasion resistance
- Shear resistance
- Surface test
- Surface cutting



Chemical resistance

- Automotive liquids, wax, diesel, fuel, oil, water etc.
- Flammability



Impact resistance

Pendulum



Miscellaneous

- Thickness
- Scale
- Surface energy
- Press







Simulation-driven design using FEA

Learn more

What is finite element analysis (FEA)?

FEA is a virtual engineering tool used to predict how structures behave under different conditions.

How does it work?

Breaks down complex systems into smaller elements for detailed analysis. Predicts quantities like stresses and strains.

Material data cards in FEA

Utilizes material data cards representing the material behavior in the simulation.

Key benefits

Enables rapid and cost-effective exploration of design iterations. Identifies weaknesses and ensures designs meet safety and performance standards.

Optimizing design

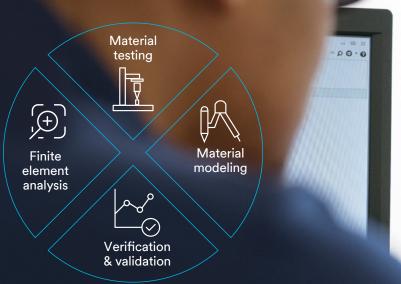
Valuable during the design phase to refine and enhance product reliability.

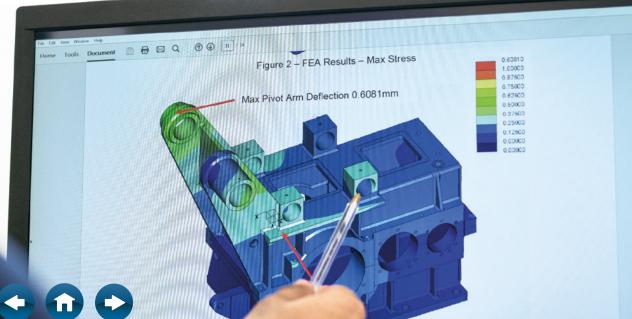
Cost and time savings

Reduces the amount of physical prototypes, saving both time and resources.

Why FEA matters

Informs decision-making, leading to more efficient and reliable designs.









How to start your Project.



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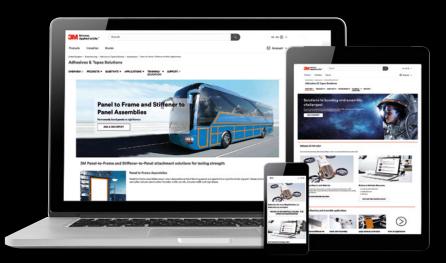
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