

Science.
Applied to Life.™



# Best Seller

Your everyday challenges solved. Every day.

3M Tape Short-Length Rolls Blister Pack Program.

# 3M Tape Short-Length Rolls Blister Pack Program

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# Best sellers for bonding, fastening and sealing solutions

You have a job to do. You want the best products to help you do it right. 3M offers the simple solutions to help your work run smoothly: Whether it's a bonding, fastening or sealing solution you're looking for, with the "short-length roll blister pack everyday essentials program" you can complete everyday jobs quickly and reliably.



# For smaller jobs and prototypes

Maintenance and repairs go faster when you've got the right products for the job. Whether it's a bonding, fastening or sealing solution you're looking for, with the 3M short-length roll blister pack program you can complete everyday jobs quickly and reliably.

# Always clean – comes in a dirt-protecting blister pack

Due to the reclosable blister packaging, the adhesive tape always stays clean and is ready for immediate use. This protection against dust and dirt makes it ideal for handicraft and industrial operations, where there may be sparks and scraps.

# Always convenient – fits in your toolbox

Thanks to the handy packaging, the short roll fits perfectly in the tool box or toolkit. This means that it's always at hand and exactly where you need it.

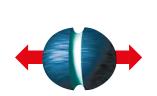




# Types of Stress

#### **Preferred Design**

With tensile and shear forces, entire bond area contributes to strength



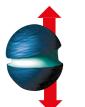
Tensile

Stress acts perpendicular to bond plane



#### **Not Preferred Design**

With both cleavage and peel forces, the stresses are concentrated at the leading edge



Cleavage

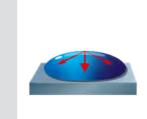
Stress between two rigid substrates



Stress with at least one flexible substrate

# **Surface Energy**

Choose the right tape for the substrate: Adhesives must flow onto the substrate surfaces in order to achieve intimate contact area







**High Surface Energy** Metal, glass

Medium Surface Energy PET, ABS, PVC (rigid), polycarbonate, polyimide, polyurethane (rigid), acrylic rubber, some paints (PMMA), most paints and coatings

# Low Surface Energy Polypropylene, polyethylene, TPO, PTFE, acetyl, PBT, polystyrene, EPDM and coatings (PVDF)

#### 1. Surface Cleaning



• To obtain optimum adhesion, the bonding surfaces must be well unified, clean and dry

**Tape Surface Preparation and Application** 

- Wipe surface using an appropriate cleaning agent and a clean cloth
- For glass surfaces use the 3M Silane Glass Primer

#### 4. Liner Release



- Release the liner in one step (avoid stops)
- Do not touch the adhesive or adhesive surface

### 2. Application



- Apply the tape to the surface. Do not overstretch the tape
- Avoid air pockets
- Do not touch the adhesive or adhesive surface
- Optimum application temperature is between 15°C and 25°C

#### 5. Joining and Contact Pressure



- Apply substrate to the tape
- Avoid air pockets
- Bonding pressure of about 2 kg/cm2

#### 3. Pressure



- Bond strength is dependent upon the amount of adhesive-to-surface contact developed
- Firm application pressure develops better adhesive contact and helps improve bond strength

#### 6. Wait for Final Adhesion



- After application, the bond strength will increase as the adhesive flows onto the surface
- At room temperature, approximately 50% of the ultimate strength will be achieved after 20 minutes, 90% after 24 hours and 100% after 72 hours
- In some cases, bond strength can be increased and ultimate bond strength can be achieved more quickly by exposure of the bond to elevated temperatures (e.g. 66°C for 1 hour)

# 3M VHB High-Strength Bonding Tapes

With 3M<sup>™</sup> VHB<sup>™</sup> Tapes, you can maintain consistency from sketch to construction, eliminating distracting, visible fasteners, like screws and bolts. These high-strength, double-sided acrylic foam tapes let you quickly and easily create a long-lasting bond that actually builds strength over time.







- Invisible bond: Enhance your design appearance with virtually invisible bonding
- Simplifies and speeds up production processes as it provides immediate handling strength and allows to rout bonded parts faster through manufacturing operations as no curing time is needed
- Allows the use of thinner, lighter weight and dissimilar materials
- A durable difference: With a bond that's built to withstand the rigours of exposure, 3M<sup>™</sup> VHB<sup>™</sup> Tapes resist hot, cold and cycling temperatures, UV light, moisture, and solvents.
- Demanding strength: For your most demanding bonding applications, 3M™ VHB™ Tapes distribute dynamic or static stress over the entire surface of the design, improving holding strength and eliminating the need for mechanical fasteners
- Energy absorption: Stress and energy is absorbed in the foam and not transferred to the bond line
- Stress relaxation: Over time, stress is relaxed away from the bond, and absorbed by the foam core

# **Suggested Applications**

- Bond panel to frame
- Bond stiffener to panel
- Bond of decorative material, trim, attachments
- Bond of nameplates, logos and signs
- Bond electronic displays
- Bond lens window to housing

- Joining transparent material
- Mount backlit translucent signs
- Assembly of components before heat curing paint processing like powder coating or liquid painting



# **Best Seller Product Portfolio**



#### 3M™ VHB™ Tape 4910

Designed to create durable and reliable bonds of transparent materials or wherever a clear bond is needed.



#### 3M<sup>™</sup> VHB<sup>™</sup> Tape 5952 and 5962

Designed for permanent bonding to powder coated and rigit irregular surfaces. Offers good adhesion to the widest variety of surfaces, including further high and medium surface energy plastics and paints, metals and glass.



#### 3M™ VHB™ Tape LSE-110WF

Permanent bond designed for bonding LSE plastics such as PP, TPO, TPE, and composite materials without primer.



#### 3M<sup>™</sup> VHB<sup>™</sup> Tape GPH-110GF

Designed to create durable and reliable bonds for high temperatures and multi material bonding.



#### 3M™ VHB™ Tape 4991

Designed for permanent bonding with a high bond strength in critical applications on high to medium surface energy materials. Offering plasticiser resistence.

# Product Selection Guide

Product	Properties /	Surface energy			Material	Joint gap	Peel	Key Features	
number	suitable for			strength (N/cm)					
4910	Transparent materials	++	+	-	Max. 1.0 mm	Max. 0.25 mm	26	Strong and durable bonds to a wide variety of high to medium surface energy substrates like paints, metals and glass, acryl glass (PMMA), polycarbonate.	
4991	Metals, Plasticizer resistant	++	+	-	Max. 6.90 mm	Max. 1.15 mm	35	Strong and durable bonds to a wide variety of high to medium surface energy substrates like aluminium, stainless steel, galvanised steel, polycarbonate, ABS.	
5952	Powder- coated paints	++	++	-	Max. 3.30 mm	Max. 0.55 mm	39	Excellent adhesion to the widest variety of surfaces, including most powder coated paints metals, glass, sealed wood, acrylic, polycarbonate, ABS.	
5962	Powder- coated paints	++	++	-	Max. 4.65 mm	Max. 0.77 mm	39	Excellent adhesion to the widest variety of surfaces, including most powder coated paints metals, glass, sealed wood, acrylic, polycarbonate, ABS.	
GPH-110GF	High tem- perature resistance	++	+	-	Max. 3.30 mm	Max. 0.55 mm	37	Excellent temperature resistance when bonding metal parts prior to heat cured paint processing.	
LSE-110WF	PP, TPO, TPE, composite materials	+	++	++	Max. 3.30 mm	Max. 0.55 mm	44	Offers a superior bonding performance withou primer on difficult to bond substrates such as PP, TPO, TPE, and composite materials.	

<b>V</b> ™ VHB™ High-Strength Bonding Tapes	Width	Length	Thickness	Colour
N™ VHB™ Tape 4910 esigned to create durable bonds of transparent materials.	19 mm	11 m	1.0 mm	Clear
N™ VHB™ Tape 5952 Inding to powder coated paints, metals and glass and rigit irregular surfaces.	19 mm	11 m	1.1 mm	Black
N™ VHB™ Tape 5962 unding to powder coated paints, metals and glass and rigit irregular surfaces.	19 mm	8 m	1.6 mm	Black
N™ VHB™ Tapes LSE-110WF Irable and reliable bonds to PP, TPO, TPE without primer.	19 mm	11 m	1.1 mm	White
N™ VHB™ Tapes GPH-110GF urable and reliable bonds for high temperature applications.	19 mm	11 m	1.1 mm	Grey
<b>/</b> ™ VHB™ Tape 4991 Inding to aluminium, stainless steel, galvanised steel. Offering plasticiser resistence.	19 mm	5.5 m	2.3 mm	Grey

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# **Reclosable Fastening Solutions**

3M™ Reclosable Fasteners are the easy alternative to traditional fastening methods such as screws, nuts or bolts. Super strength. Ultimate ease. Durable enough to last through repeated opening and closing.





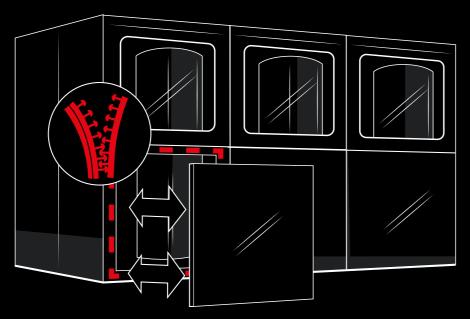
## **End User benefits**

- Super strength: five times the tensile strength of typical hook-and-loop fasteners
- Clean, smooth "behind the scenes" hold for aesthetic improvements – flexibility to fit your designs
- Maintain surface integrity with no holes to invite moisture, corrosion or dirt
- Simple to apply, use and maintain
- Ability to join dissimilar materials without corrosion and contamination
- Vibration absorption and security, no loosening or failing attachments
- Durable for repeated opening and closings, hundreds of reattachments
- Allows for precise alignment before final closure
- Gives haptic and noise feed back for proper closure
- Reliable performance indoors and outdoors

# **Suggested Applications**

- Panel and cover plate attachment
- Interior signage
- Office partitions
- Graphic attachment
- Access panels
- Specialty vehicles (interior attachments)

- L-bracket edging, repositionable shelving
- Hang signage
- Decorative appliance trim attachment
- Point of purchase display and signage
- Securing fabric to furniture cushions
- Construct composite assemblies
- Attach cushioning panels



# **Best Seller Product Portfolio**



## 3M™ Dual Lock™ Reclosable Fastener SJ354B

Designed for use for plastics (acrylic, polycarbonate and ABS), powder-coated paints and low-surface energy materials (polypropylene and polyethylene). Indoor use.



#### 3M™ Dual Lock™ Reclosable Fastener SJ355B

Bonds to a variety of substrates including metals and plastics such as acrylics, polycarbonate and ABS. Indoor and outdoor use.



#### 3M™ Dual Lock™ Reclosable Fastener SJ356B

Designed to give a translucent appearance that bonds to a variety of substrates including metals, glass and plastics such as acrylics, polycarbonate and ABS. Indoor and outdoor use.



#### 3M™ Dual Lock™ Reclosable Fastener SJ387B

Bonds well to a variety of substrates including metals, powder-coated paints and plastics such as acrylics, polycarbonate and ABS. Indoor and outdoor use.



#### 3M™ Hook & Loop Fastener SJ352B

Alternative to a wide variety of reclosable attachment methods. including zips, screws, snaps, hooks and more.

# **Product Selection Guide**

Product	Properties /	Surface energy			Closure	Holding	Engaged	Indoor	Key Features	
number	suitable for	High Medium Low cycle life*		thickness	and outdoor use					
SJ352B	Flexible & bendable	++	++	++	5.000 x		<b>↓</b> 1.6 mm ± 15%		Attachment alternative to a wide variety of closures, including zippers, screws, snaps, hooks and more.	
SJ354B	Polypropylene & polyethyl- ene	++	++	++	1.000 x	أأالنه	5.7 mm ± 15%		Bonds well to many low surface energy materials (polypropylene, polyethylene) and critical paints.	
SJ355B	Metals & plastics	++	+	-	1.000 x	أللت	↓ 5.45656565656 ↑  5.7 mm ± 15%		Bonds well to high and medium surface energy substrates such as metals, glass, plastics (e.g. acrylic, polycarbonate, ABS)	
SJ356B	Translucent materials	++	+	-	1.000 x	[	5.7 mm ± 15%		Translucent material is ideal for fastening transparent material.	
SJ387B	Powder- coated paints	++	++	-	1.000 x		₩ 15.45.45.45.45.45.4 ↑ 6.1 mm ± 15%		Bonds well to a variety of substrates including metals, powder-coated paints and plastics such as acrylics, polycarbonate and ABS.	

<sup>\*</sup> Closings before losing 50% of original tensile strength

3M™ Reclosable Fastening Solutions	Width	Length	Thickness	Colour
3M™ Dual Lock™ Reclosable Fastener SJ355B Bonds to a variety of substrates including metals and plastics such as acrylics, polycarbonate and ABS.	25 mm	2.5 m	5.7 mm	Black
3M™ Dual Lock™ Reclosable Fastener SJ356B Designed to give a translucent appearance (glass, acryl glass (PMMA), polycarbonate).	25 mm	2.5 m	5.7 mm	Transluscent
3M™ Dual Lock™ Reclosable Fastener SJ354B  For use with many plastics (polypropylene, polyethylene, acrylic, polycarbonate and ABS) and powder-coated paints.	25 mm	2.5 m	5.7 mm	Black
3M™ Dual Lock™ Reclosable Fastener SJ387B  For use with powdercoated paints, metals and plastics such as acrylics, polycarbonate and ABS.	25 mm	2.5 m	6.1 mm	Black
3M™ Hook and Loop Fastener SJ352Bbk (Black) Alternative to zippers, screws, snaps, hooks and bolts.	25 mm	1.25 m / each	3.6 mm	Black
3M™ Hook & Loop Fastener SJ352Bwk (White) Alternative to zippers, screws, snaps, hooks and bolts.	25 mm	1.25 m / each	3.6 mm	White

# Maintenance, Repairs & Sealing

From rain gutters to flashing and vents, rooftops to underground cable enclosures, 3M™ Extreme Sealing tape ensures a quick and robust bond. It creates water tight seals and sticks on contact to numerous substrates without drying time, dripping, oozing or mess.



## **End User benefits**

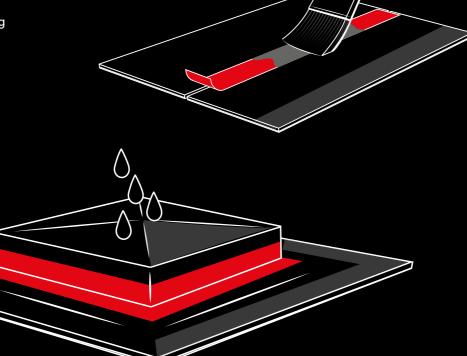
#### **Extreme Sealing Tapes**

- Protect and seal with confidence: sticks on contact to many metals and plastics without drying time, dripping, oozing and clean-up
- Conforms over contours, edges, rivets and screw heads for a water tight seal
- Durable sealing that withstands harsh environmental conditions resist UV light, moisture, and solvents for years
- Paintable: you can match most existing colors to blend seamlessly into the surrounding area

# **Suggested Applications**

#### **Extreme Sealing Tapes**

- Use for difficult sealing applications like joints, seams or penetration
- Truck and trailer roof sealing
- Skylights sealing
- Window and door sealing
- 'Roof-to-trim' sealing



# **Best Seller Product Portfolio**



# 3M™ Extreme Sealing Tape 4411N

Professional seal over an existing joint or seam which can be exposed to direct sunlight, as well as temperature and humidity extremes.

Colour: Transluscent

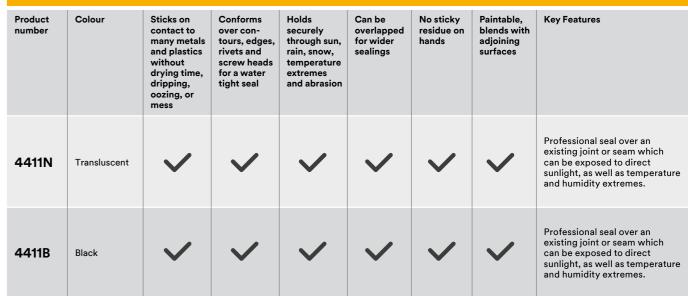


#### 3M™ Extreme Sealing Tape 4411B

Professional seal over an existing joint or seam which can be exposed to direct sunlight, as well as temperature and humidity extremes.

Colour: Black

# **Product Selection Guide**



3M™ Extreme Sealing Tapes	Width	Length	Thickness	Colour
3M™ Extreme Sealing Tape 4411N (Transluscent) Professional seal over an existing joint or seam which can be exposed to direct sunlight, as well as temperature and humidity extremes.	50 mm	5.5 m	1.0 mm	Transluscent
3M™ Extreme Sealing Tape 4411B (Black) Professional seal over an existing joint or seam which can be exposed to direct sunlight, as well as temperature and humidity extremes.	50 mm	5.5 m	1.0 mm	Black









#### **Product Use**

All statements, technical information, and recommendations contained in this document are based upon tests or experience that 3M believes are reliable and are average values not to be used for specification purposes. However, many factors beyond 3M's control can affect the use and performance of a 3M product in a particular application, including the conditions under which the product is used and the time and environmental conditions in which the product is expected to perform. Since these factors are uniquely within the user's knowledge and control, it is essential that the user evaluates the 3M product to determine whether it is fit for a particular purpose and suitable for the user's method or application. All questions of liability relating to this product are governed by the terms of the sale subject, where applicable, to the prevailing law.



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