3M Science. Applied to Life.™




# Solutions for your assembly challenges.

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## 3M Industrial Adhesives and Tapes

Design & Production Guide | October 2019

# 5,000+
adhesive and tape SKUs

## Do it your way.

- 3M systems are built around *your* manufacturing processes, not the other way around.
- Whether it's structural or non-structural adhesives, bonding tapes or reclosable fasteners, 3M solutions ensure speed, convenience and ease of use.



# 88,667
employees

## Do it together.

- No matter what you need to bond, you can count on 3M's expertise, technologies and 88,667 dedicated employees to help you find solutions.
- From wood, metal, foil, insulation, foam, fabric and panel lamination to specialty high performance and multipurpose materials of every kind, solutions are one call away.




# 100,000
patents

## Do it boldly.

- 3M has been a world leader in bonding technology for decades and we have the patents to prove it.
- Quality, consistency and reliability — the attributes you look for in a bonding solution — help drive our quest for new innovations.




# 1
chance to do it right



## Do it responsibly.

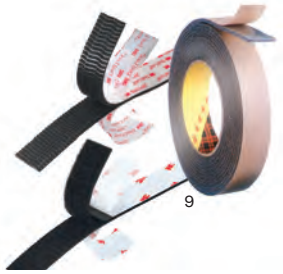
- Sustainability is a natural extension of 3M's corporate values.
- We developed the first water-based contact adhesive ever — more than 40 years ago.
- We have a wide selection of Low VOC products that help contribute to LEED® credits and are GREENGUARD Certified.

# 3M™ Adhesives and Tapes
## for design, assembly and production.



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# What can 3M™ Adhesives and Tapes do for your product and process?

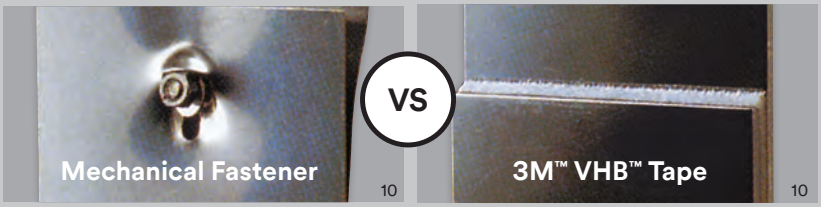
**Build strong, durable products:**
- From repositionable to permanent, 3M has an adhesive or tape that can be readily matched to the substrate and stress characteristics needed in the joint.

**Improve appearance and aesthetics:**
- 3M adhesives and tapes are generally hidden between the bonded substrates, offering nearly invisible fastening.
- Surfaces stay smooth and clean for a more attractive appearance and less surface refinishing.

**Lower production and material costs:**
- Reduce process steps such as weld grinding and sealing individual penetrations from screws, nuts and bolts.
- Use thinner, lighter or less expensive materials that cannot be welded or fastened traditionally.
- Potentially lower capital investment. Many adhesives and tapes do not require major capital to use.
- Manage labor costs. Many tape and adhesive technologies require little operator training.

**Build products with a continuous bond line:**
- Adhesives and tapes uniformly distribute stress along the entire joint. Nuts, bolts and other fasteners concentrate stress at a point which can decrease physical properties of the substrates being assembled.
- Bond and seal simultaneously. Many 3M adhesives and tapes will provide a strong bond, but are also an effective seal against dirt, dust, water and other environmental conditions.
- Good fatigue resistance. If your parts are subject to vibration or other movement, the viscoelastic nature of 3M adhesives and tapes will impart flexibility to a joint or bonded area.

**Wider material selection for assemblies:**
- Lighter and thinner materials can be used. Welding and fastening weaken substrates and require a minimum thickness to retain integrity.
- Bond dissimilar materials. 3M adhesives and tapes bond to a wide range of substrates from metals, wood, glass, plastics and ceramics. This includes “hard to bond,” low surface energy materials.
- Prevent galvanic corrosion. 3M adhesives and tapes can provide a film barrier to reduce or prevent bimetallic corrosion that can occur when joining to different types of metals.




**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 chances for rust and corrosion.**

## 3M™ Adhesives and Tapes Product Family


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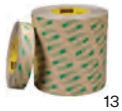
**3M™ VHB™ Tapes**


11

**3M™ Scotch-Weld™ Structural Adhesives**


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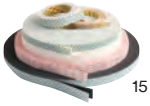
**3M™ Adhesive Sealants**


13

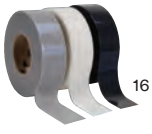
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**3M™ Extreme Sealing Tapes**


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**3M™ Hot Melt Adhesives**


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**3M™ Reclosable Fasteners**


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**3M™ Scotch-Weld™ Gasket Makers**


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**3M™ Scotch-Weld™ Instant Adhesives**


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**3M™ Scotch-Weld™ PUR Adhesives**


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**3M™ Scotch-Weld™ Retaining Compound**


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**3M™ Scotch-Weld™ Threadlockers**

# Considerations when selecting 3M™ Adhesives and Tapes for your product and process.

**A**

### Assembly

What type of assembly is required? (Refer to 7 common assembly types in the right hand column.)

What are the overall performance needs of the assembly (flexibility, high peel strength, etc.)?

**S**

### Substrate

What are the materials that are being bonded together? (Refer to the substrate selectors for each assembly type on pages 4–15.)

Consider the surface condition texture of each material.

**P**

### Process

What is the current assembly and manufacturing process?

Does the solution need to fit into the current process/ equipment or can the process/equipment change?

What are the various process steps and how quickly will the assembly be moved to each step?

At any time, might the assembly bond need to be repositioned? If so, why and when?

Are there any environmental, regulatory or workplace safety restrictions?

**E**

### End-Use

How and where is the final product used?

Will the assembly be exposed to harsh environmental conditions (UV, chemicals, high humidity, very high or low temperatures, etc.)?

**C**

### Cost

Where can improvements be made in the assembly process (labor, reduction of process steps, materials, workflow, etc.)?

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## Assembly Solutions are made up of these common applications:




**Panel to Frame/ Stiffener to Panel**
pg 4




**Small Joint Assembly**
pg 6




**Large Surface Lamination**
pg 8




**Mounting and Trim Attachment**
pg 10




**Gasket Attachment**
pg 12




**Sealing**
pg 14




**Potting and Encapsulating**
pg 14

# What are Panel to Frame Assemblies? What are Stiffener to Panel Assemblies?

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*Panels are used in multiple markets, such as transportation, metalworking and construction.*

**Panel to Frame:** Decorative or load bearing panel that is applied to a rigid frame or support. **Examples include trailer panels, elevator walls and sign boxes.**

**Stiffener to Panel:** Stiffeners are applied to panels to give extra support and rigidity. **Examples include trailer wall panels, traffic signs and large metal enclosures.**

**Possible Adhesive or Tape Requirements:**

- Dead load holding strength
- Flexibility for dynamic loads and thermal expansion mismatch
- Fill a gap or variation in fit from end to end
- Provide a water seal

## Best 3M Solutions for Panel to Frame/Stiffener to Panel Assemblies


8

**3M™ VHB™ Tapes** (pg 72–79)

These high-strength bonding tapes are a proven alternative to screws, rivets, welds and other mechanical fasteners. 3M™ VHB™ Tape offers instant strength, a high ultimate bond and seals simultaneously. 3M™ VHB™ Tape's viscoelasticity allows relative movement of parts for thermal expansion/contraction. Best for flat to flat applications with a consistent bondline thickness.


11

**3M™ Scotch-Weld™ Structural Adhesives** (pg 18–34)

Acrylic, epoxy and urethane structural adhesives that hold over 1,000 psi in overlap shear strength. Best suited for thinner bondlines, irregular shapes and textured surfaces where load-bearing strength is needed. Provides the highest load-bearing strength and environmental resistance.


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**3M™ Adhesive Sealants** (pg 64–68)

Acrylic, polyurethane, nitrile and hybrid one-component adhesive technologies with outstanding sealing properties. These products are capable of filling larger and irregular gaps including rough substrates. Highly flexible formulations allow for relative movement for thermal expansion/contraction.


18

**3M™ Reclosable Fasteners** (pg 96–99)

3M™ Dual Lock™ and 3M™ Hook and Loop Reclosable Fasteners for strong yet easily removable fastening solutions. These products are ideal to allow access for servicing or replacement of a panel. Generally backed with 3M™ VHB™ Tape or other 3M adhesive technologies.

## Performance Factors for Panel to Frame/Stiffener to Panel Assemblies

All 3M technologies in the table below are commonly used in panel applications.
Use the table below as a relative comparison of product performance.

Good = ⊕ Better = ⊕⊕ Best = ⊕⊕⊕

| Attribute | 3M™ VHB™ Tapes | 3M™ Scotch-Weld™ Structural Adhesives | 3M™ Adhesive Sealants | 3M™ Reclosable Fasteners |
|---|---|---|---|---|
| Number of Steps to Apply and Ease of Application | ⊕⊕⊕ | ⊕⊕⊕ | ⊕⊕ | ⊕⊕ |
| Rate of Strength Build | ⊕⊕⊕ | ⊕⊕ | ⊕ | ⊕⊕⊕ |
| Flexibility and Joint Expansion | ⊕⊕⊕ | ⊕ | ⊕⊕⊕ | ⊕⊕⊕ |
| Holding Power | ⊕ | ⊕⊕⊕ | ⊕⊕ | ⊕ |
| Repair/Removal After Cure | ⊕⊕⊕ | ⊕ | ⊕⊕ | ⊕⊕⊕ |

## Panel to Frame/Stiffener to Panel Assembly Solutions

| + | Metals (Aluminum, Steel, Stainless, Galvanized) | Paints (Powder Coat, Painted Metal, Composite Panel) | Glass | Plastics: HSE, MSE (ABS, Acrylic, Polycarbonate, Nylon) | Plastics: LSE (Polypropylene, Polyethylene) |
|---|---|---|---|---|---|
| Metals | 4941, RP45, 5952<br>LSB60NS<br>*550FC + AC61<br>SJ3550/51/52, SJ3571/72 | *4941, *RP45, 5952<br>LSB60NS<br>*550FC + AC61<br>SJ3540/41/42, SJ3526N/27N | *4941, *RP45, *5952<br>LSB60NS<br>*595, *560, *760<br>SJ3560/61/62, SJ3571/72 | *4941, *RP45, 5952<br>LSB60NS<br>*560, *760<br>SJ3550/51/52, SJ3571/72 | *4941, *RP45, *5952<br>DP8010 Blue<br>*560, *760<br>SJ3540/41/42, SJ3526N/27N |
| Paints | *4941, *RP45, 5952<br>DP8810NS<br>*550, *560, *760 | *4941, *RP45, *5952<br>LSB60NS<br>*595, *560, *760 | *4941, *RP45, 5952<br>DP8810NS<br>*560, *760 | *4941, *RP45, *5952<br>DP8010 Blue<br>*560, *760 | |
| Glass | *4941, *RP45, *5952<br>DP460<br>*595 | *4941, *RP45, 5952<br>DP100 Plus Clear<br>*560, *760 | *4941, *RP45, *5952<br>DP8010 Blue<br>*560, *760 | | |
| Plastics: HSE, MSE | *4941, *RP45, 5952<br>DP8405NS<br>*560, *760 | *4941, *RP45, *5952<br>DP8010 Blue<br>*560, *760 | | | |
| Plastics: LSE | *4941, *RP45, *5952<br>DP8010 Blue<br>*560, *760 | | | | |

**Key**
- 3M™ VHB™ Tapes
- 3M™ Scotch-Weld™ Structural Adhesives
- 3M™ Adhesive Sealants
- 3M™ Reclosable Fasteners

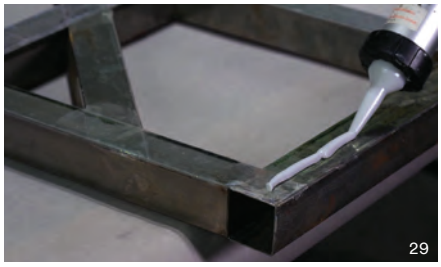
*Primers may also be required in some cases. See specific product pages for primer details.

**For 3M™ VHB™ Tape applications in the Commercial Vehicle market, refer to page 76 for a selection of products.**


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This guide lists products that are commonly used for this specific application. It is important that the customer evaluates these suggested products in their specific application.

# What are Small Joint Assemblies?




*Small joint assemblies exist in multiple markets, such as sporting goods, electronics, furniture, motors and electrical.*

**Small Joint:** Small joints are typically irregularly shaped but only a few inches of overlap area. They may be insertion joints or overlap joints, or some combination. **Examples include sporting goods (e.g., golf club heads to shaft), plastic casings, lens mounting for instrumentation, mortise and tenon furniture joints, thread locking or shaft retailing, magnet bonding and jewelry making.**

**Possible Adhesive or Tape Requirements:**

- Low viscosity for tight fitting parts
- Vibration resistance
- Very high strength
- Bond dissimilar materials

## Best 3M Solutions for Small Joint Assemblies




**3M™ Scotch-Weld™ Structural Adhesives** (pg 18–34)

Acrylic, epoxy and urethane structural adhesives that hold over 1000 psi in overlap shear strength. Best choice for highest strength, fatigue and environmental resistance especially for metal to metal bonds.




**3M™ Scotch-Weld™ Instant Adhesives** (pg 37–39)

One part solvent-free adhesive that reaches handling strength in 5–10 seconds. Best for small bondlines (<10cm2). Commonly used on rubbers and plastics. Very tight bondlines are achievable with near instant strength.




**3M™ Hot Melt Adhesives** (pg 45–51)

100% solid, thermoplastic resins that reach bond strength in seconds. Best for wood and plastic.




**3M™ Scotch-Weld™ PUR Adhesives** (pg 35–37)

One component, hot applied thermosetting adhesive with immediate strength and holding power. Final cured strength over 1,000 psi. Best for wood and plastic.




**3M™ Scotch-Weld™ Retaining Compounds** (pg 41)

One-part anaerobic adhesives cure between metal surfaces. Permanent and removable grades are available.




**3M™ Scotch-Weld™ Threadlockers** (pg 40)

One-part anaerobic adhesives cure between metal surfaces. Permanent and removable grades are available.

## Performance Factors for Small Joint Assemblies

All 3M technologies in the table below are commonly used in small joint applications. Use the table below as a relative comparison of product performance. Good = ⊕ Better = ⊕⊕ Best = ⊕⊕⊕

| Attribute | 3M™ Scotch-Weld™ Structural Adhesives | 3M™ Scotch-Weld™ Instant Adhesives | 3M™ Hot Melt Adhesives | 3M™ Scotch-Weld™ PUR Adhesives | 3M™ Scotch-Weld™ Threadlockers |
|---|---|---|---|---|---|
| Shear and Peel Strength | ⊕⊕⊕ | ⊕⊕ | ⊕ | ⊕⊕⊕ | ⊕⊕ |
| Temperature and Solvent Resistance | ⊕⊕⊕ | ⊕ | ⊕⊕ | ⊕⊕⊕ | ⊕⊕ |
| Aesthetics | ⊕ | ⊕⊕⊕ | ⊕⊕ | ⊕⊕ | ⊕⊕ |
| Rate of Strength Build | ⊕ | ⊕⊕⊕ | ⊕⊕⊕ | ⊕⊕ | ⊕⊕ |
| Rework | ⊕ | ⊕⊕ | ⊕⊕ | ⊕ | ⊕⊕⊕ |

## Small Joint Assembly Solutions

| + | Metal (Unpainted) | Metal (Painted) | Glass, Ceramic, Stones | Rubber, Elastomers | Plastics: HSE, MSE (ABS, Acrylic, Polycarbonate, Nylon) | Plastics: LSE (Polypropylene, Polyethylene) | Wood |
|---|---|---|---|---|---|---|---|
| **Metal (Unpainted)** | ■ DP420NS<br>■ 3747, 3789<br>■ RT09<br>■ TL62 | ■ DP8805NS<br>■ 3747, 3764 | ■ DP420NS<br>■ 3747, 3789 | ■ 2216 | ■ DP8805NS<br>■ 3764, 3747<br>■ TE040, EZ250150 | ■ DP8010 Blue<br>■ 3748, 3764<br>■ TE040, EZ250150 | ■ DP100 Plus<br>■ 3792<br>■ EZ25150 |
| **Metal (Painted)** | ■ DP8805NS<br>■ PR100<br>■ 3747, 3764 | ■ DP8805NS<br>■ PR100<br>■ 3747, 3764 | ■ DP100 Plus<br>■ PR100<br>■ 3764, 3792 | ■ DP620NS<br>■ *PR100 | ■ DP8805NS<br>■ PR100<br>■ 3748, 3764<br>■ TE040, EZ250150 | ■ DP8010 Blue<br>■ *PR100<br>■ 3748, 3764<br>■ TE040, EZ250150 | ■ DP620NS<br>■ SI100<br>■ 3764, 3792<br>■ EZ25150 |
| **Glass, Ceramic, Stones** | ■ DP100 Plus<br>■ PR100<br>■ 3792 | ■ DP100 Plus<br>■ PR100<br>■ 3792 | ■ DP100 Plus<br>■ PR100<br>■ 3792 | ■ DP100 Plus<br>■ *PR100 | ■ DP100 Plus<br>■ PR100<br>■ 3748, 3764 | ■ DP8010 Blue<br>■ *PR100<br>■ 3748, 3764 | ■ DP420NS<br>■ SI100<br>■ 3792<br>■ EZ250120, EZ250150 |
| **Rubber, Elastomers** | ■ *PR100 | ■ *PR100 | ■ DP620NS<br>■ *PR100 | ■ *PR100 | ■ DP620NS<br>■ *PR100 | ■ *PR100 | ■ DP604NS<br>■ *SI100 |
| **Plastics: HSE, MSE** | ■ DP8405NS, DP8805NS<br>■ PR100<br>■ 3748, 3764<br>■ EZ250150 | ■ DP8010 Blue<br>■ *PR100<br>■ 3748, 3764 | ■ DP620NS<br>■ SI100<br>■ 3764, 3792<br>■ EZ250150 | | | | |
| **Plastics: LSE** | ■ DP8010 Blue<br>■ *PR100<br>■ 3748, 3764 | ■ DP8010NS<br>■ *SI100<br>■ 3764, 3792<br>■ EZ250150 | | | | | |
| **Wood** | ■ DP100<br>■ SI100<br>■ 3792<br>■ EZ250120, EZ250060 | | | | | | |

**Key**
- ■ 3M™ Scotch-Weld™ Structural Adhesives
- ■ 3M™ Scotch-Weld™ Instant Adhesives
- ■ 3M™ Hot Melt Adhesives
- ■ 3M™ Scotch-Weld™ PUR Adhesives
- ■ 3M™ Scotch-Weld™ Retaining Compounds
- ■ 3M™ Scotch-Weld™ Threadlockers

*Primers may also be required in some cases. See specific product pages for primer details.



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This guide lists products that are commonly used for this specific application. It is important that the customer evaluates these suggested products in their specific application.

# What are Large Surface Lamination Assemblies?

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*Large surface bonds and laminations exist in multiple markets, such as transportation, appliance, furniture and construction.*

**Large Surface Lamination:** Two surfaces (substrates) of similar size, either rigid or flexible, are bonded or laminated together where a majority of the surface is covered by the adhesive or tape in order to create the bond. **Examples include high pressure laminate to tabletops, fabric to foam for furniture, veneers on wood and flexible transportation flooring.**

**Possible Adhesive or Tape Requirements:**

- Cover full surface
- Flexible when dry; not stiff
- Allow for positioning parts
- Bonds quickly/little or no fixturing

## Best 3M Solutions for Large Surface Lamination Assemblies


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**3M™ Scotch-Weld™ Structural Adhesives** (pg 18–34)
Acrylic, epoxy and urethane structural adhesives that hold over 1,000 psi in overlap shear strength. Best suited for applications where high load-bearing strength is required.


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**3M™ Contact and Spray Adhesives** (pg 52–63)
Solvent and water based adhesives that can be sprayed, brushed or roll applied. Very fast and easy coverage of large areas including irregular and mildly textured shapes. Bonds the widest range of substrates.


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**3M™ Hot Melt Adhesives** (pg 45–51)
100% solid, low VOC thermoplastic resins that reach bond strength in seconds. Long open-time formulations can be spray applied. Bonds irregular shapes and textured surfaces.


21

**3M™ Scotch-Weld™ PUR Adhesives** (pg 35–37)
One component, hot applied thermosetting adhesive with immediate strength and holding power. Final cured strength over 1,000 psi. Long open-time formulations can be spray applied.


13

**3M™ Adhesive Transfer Tapes** (pg 87–92)
A pressure sensitive adhesive on a liner. Can be laminated onto a surface by hand or by automation. Instant adhesion with no mess or waste and very thin bondlines.

## Performance Factors for Large Surface Lamination Assemblies

All 3M technologies in the table below are commonly used in large surface bonding applications. Use the table below as a relative comparison of product performance. Good = ⊕ Better = ⊕⊕ Best = ⊕⊕⊕

| Attribute | 3M™ Scotch-Weld™ Structural Adhesives | 3M™ Contact and Spray Adhesives | 3M™ Hot Melt Adhesives | 3M™ Scotch-Weld™ PUR Adhesives | 3M™ Adhesive Transfer Tapes |
|---|---|---|---|---|---|
| Shear and Peel Strength | ⊕⊕⊕ | ⊕ | ⊕⊕ | ⊕⊕⊕ | ⊕⊕ |
| Temperature and Solvent Resistance | ⊕⊕⊕ | ⊕ | ⊕⊕ | ⊕⊕⊕ | ⊕ |
| Aesthetics and Read Through | ⊕ | ⊕⊕⊕ | ⊕⊕ | ⊕⊕ | ⊕⊕⊕ |
| Speed and Convenience of Application | ⊕ | ⊕⊕⊕ | ⊕⊕ | ⊕⊕ | ⊕⊕ |
| Rate of Strength Build | ⊕ | ⊕⊕⊕ | ⊕⊕⊕ | ⊕⊕ | ⊕⊕⊕ |

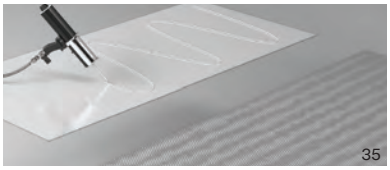
## Large Surface Lamination Assembly Solutions

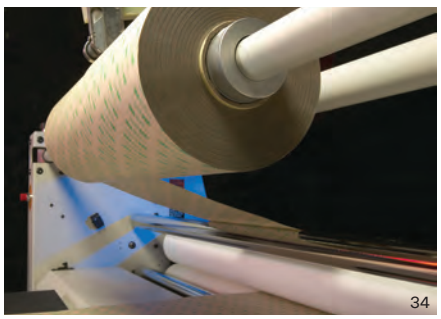
| + | Metals, Paints, Glass | Rubber (EPDM, Santoprene®) | Foam and Cloth (Urethane, Fabrics) | Plasticized Vinyl | Plastics (ABS, Acrylic, Polycarbonate, Nylon) | Wood |
|---|---|---|---|---|---|---|
| Metals, Paints, Glass | ■ LSB60<br>■ 94 CA, 1357<br>■ 6111/6111HT<br>■ TS230, TS115HGS<br>■ F9473PC, 9485PC | ■ 2216<br>■ 1300, 847<br>■ *468MP, 950 | ■ 74, 100NF<br>■ 6111/6111HT<br>■ 6035PC, 950 | ■ 2216<br>■ 4491, 1000NF<br>■ F9467U, F9465PC | ■ 2216<br>■ 94 CA, 4475<br>■ 6111/6111HT, 6116<br>■ TS230, TS115<br>■ 468MP, 9472LE | ■ 2216<br>■ 94 CA, 1357<br>■ 6111/6111HT<br>■ TS230, TS115HGS<br>■ 6035PC, 468MP |
| Rubber | ■ 2216<br>■ 4799<br>■ TS230<br>■ *468MP, 950 | ■ 2216<br>■ 4799<br>■ TS230<br>■ *468MP, 950 | ■ 4799<br>■ TS230, TS115<br>■ 6035PC, 950 | ■ 2216<br>■ 4799<br>■ TS230, TS115<br>■ *F9467U, F9465PC | ■ 2216<br>■ 4799<br>■ TS230, TS115<br>■ *468MP, 9472LE | ■ 2216<br>■ 4799<br>■ TS230, TS115HGS<br>■ *468MP, 950 |
| Foam and Cloth | ■ 74, 100NF<br>■ 6111/6111HT, 6116<br>■ TS230, TS115<br>■ 6035PC, 950 | ■ 74, 100NF<br>■ 6111/6111HT, 6116<br>■ TS230, TS115<br>■ 6035PC, 950 | ■ 4491, 1000NF<br>■ TS230, TS115<br>■ 950, F9465PC | ■ 77, 74<br>■ 6111/6111HT, 6116<br>■ TS230, TS115<br>■ 950, 6035PC | ■ 77, 1000NF<br>■ 6111/6111HT, 6116<br>■ TS230, TS115HGS<br>■ 950, 6035PC | |
| Plasticized Vinyl | ■ 2216<br>■ 4491, 1300<br>■ TS230, TS115<br>■ F9467U, F9465PC | ■ 2216<br>■ 4491, 1300<br>■ TS230, TS115<br>■ F9467U, F9465PC | ■ 2216<br>■ 4491, 1000NF<br>■ TS230, TS115HGS<br>■ F9467U, F9465PC | | | |
| Plastics | ■ 2216<br>■ 94 CA, 4475<br>■ 6111/6111HT, 6116<br>■ TS230, TS115<br>■ 9472LE, 468MP | ■ 2216<br>■ 94 CA, 4475<br>■ 6111/6111HT, 6116<br>■ TS230, TS115HGS<br>■ 9472LE, 468MP | | | | |
| Wood | ■ 2216<br>■ 94 CA, 30NF<br>■ 6111/6111HT, 6116<br>■ TS230, TS115HGS<br>■ 6035PC, 468MP | | | | | |

**Key**
- ■ 3M™ Scotch-Weld™ Structural Adhesives
- ■ 3M™ Contact and Spray Adhesives
- ■ 3M™ Hot Melt Adhesives
- ■ 3M™ Scotch-Weld™ PUR Adhesives
- ■ 3M™ Adhesive Transfer Tapes

*Primers may also be required in some cases. See specific product pages for primer details.


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This guide lists products that are commonly used for this specific application. It is important that the customer evaluates these suggested products in their specific application.

# What are Mounting and Trim Attachment Assemblies?

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*Mounting and trim attachment exists in multiple markets, such as transportation, appliance, furniture, construction and architecture.*

**Mounting:** Applying an object to a surface. Generally, static loads are prevalent and the mounted item is smaller than the surface to which it is bonded. **Examples include small signs, mirrors and white boards, and panel-over-panel with partial adhesive coverage.**

**Trim:** Decoration or identification added to a surface. **Examples include nameplates, edge banding, bezels, rosettes and muntin bars.**

**Possible Adhesive or Tape Requirements:**

- Dead load holding strength
- Aesthetics
- Removability
- Fast bonding/little or no fixturing

## Best 3M Solutions for Mounting and Trim Attachment Assemblies


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**3M™ VHB™ Tapes** (pg 72–79)
High-strength bonding tapes that are a proven alternative to screws, rivets, welds and other mechanical fasteners. Can pre-apply to trim for production flexibility. Ideal for dissimilar substrates.


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**3M™ Scotch-Weld™ Structural Adhesives** (pg 18–34)
Acrylic, epoxy and urethane structural adhesives that hold over 1,000 psi in overlap shear strength. Use for heavy dead-loads with smaller joint areas (Example: brackets on heavy panels, poorly matched parts with high spring-back forces).


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**3M™ Scotch-Weld™ Instant Adhesives** (pg 37–39)
One part solvent-free cyanoacrylate (CA) adhesive that reaches handling strength in 5–30 seconds. Best for small very tight bondlines (<10cm2). Commonly used on rubbers and plastics.


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**3M™ Hot Melt Adhesives** (pg 45–51)
100% solid, thermoplastic resins that reach bond strength in seconds. Best for wood and plastic.


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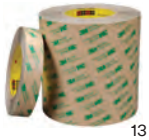
**3M™ Scotch-Weld™ PUR Adhesives** (pg 35–37)
One component, hot applied thermosetting adhesive with immediate strength and holding power. Final cured strength over 1,000 psi. Best for wood and plastic.

**3M™ Reclosable Fasteners** (pg 96–99)


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3M™ Dual Lock™ and 3M™ Hook and Loop Reclosable Fasteners for strong yet easily removable fastening solutions. These products are ideal for quick mounting, trim or sign installation and change out.

**3M™ Adhesive Transfer Tapes** (pg 87–92)


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A pressure sensitive adhesive on a liner. Can be laminated onto a surface by hand or by automation. Can be pre-applied to trim. Provides very thin, aesthetic bondlines. Special formulations for LSE plastics.

**3M™ Double Coated Tapes** (pg 81–85)


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A paper, film or tissue carrier with pressure sensitive adhesive on both sides. Can be laminated onto a surface by hand or by automation. Can be pre-applied to trim. Provides very thin, aesthetic bond-lines. Special formulations for LSE plastics.

## Performance Factors for Mounting and Trim Attachment Assemblies

All 3M technologies in the table below are commonly used in mounting and trim attachment applications. Use the table below as a relative comparison of product performance.

Good = ⊕ Better = ⊕⊕ Best = ⊕⊕⊕

| Attribute | 3M™ VHB™ Tapes | 3M™ Scotch-Weld™ Structural Adhesive | 3M™ Scotch-Weld™ Instant Adhesive | 3M™ Hot Melt Adhesives | 3M™ Scotch-Weld™ PUR Adhesives | 3M™ Reclosable Fasteners | 3M™ Adhesive Transfer Tapes | 3M™ Double Coated Tapes |
|---|---|---|---|---|---|---|---|---|
| Shear and Peel Strength | ⊕⊕ | ⊕⊕⊕ | ⊕⊕ | ⊕⊕ | ⊕⊕⊕ | ⊕ | ⊕ | ⊕ |
| Temperature and Solvent Resistance | ⊕⊕ | ⊕⊕⊕ | ⊕ | ⊕ | ⊕⊕⊕ | ⊕⊕ | ⊕⊕ | ⊕⊕ |
| Aesthetics | ⊕⊕⊕ | ⊕ | ⊕⊕ | ⊕⊕ | ⊕⊕ | ⊕⊕ | ⊕⊕⊕ | ⊕⊕⊕ |
| Repositionability During Application | ⊕ | ⊕⊕⊕ | ⊕ | ⊕ | ⊕⊕ | ⊕⊕ | ⊕ | ⊕⊕ |
| Rate of Strength Build | ⊕⊕⊕ | ⊕ | ⊕⊕⊕ | ⊕⊕⊕ | ⊕⊕ | ⊕⊕⊕ | ⊕⊕⊕ | ⊕⊕⊕ |
| Removable After Cure | ⊕⊕ | N/A | ⊕ | ⊕ | N/A | ⊕⊕⊕ | ⊕⊕ | ⊕⊕ |

## Mounting and Trim Attachment Assembly Solutions

| + | Metals (Aluminum, Steel, Stainless, Galvanized) | Paints (Powder Coat, Painted Metal, Composite Panel, Sealed or Painted Wood) | Glass | Plastics: HSE, MSE (ABS, Acrylic, Polycarbonate, Nylon) | Plastics: LSE (Polypropylene, Polyethylene) | Wood |
|---|---|---|---|---|---|---|
| **Metals** | 4941, 5952, RP45<br>DP8805NS<br>3789, 3747<br>TE040, EZ250150<br>SJ3550/51/52, SJ3571/72<br>468MP, F9473PC<br>9500PC | *4941, 5952, *RP45<br>DP8810NS<br>3764, 3747<br>TE040, EZ250150<br>SJ3540/41/42, SJ3526N/27N<br>9472LE, 9485PC<br>9500PC | *4941, *5952, *RP45<br>DP420NS<br>3789, 3747<br>SJ3560/61/62, SJ3571/72<br>468MP, F9473PC<br>9500PC | *4941, 5952, *RP45<br>DP8805NS<br>3764, 3747<br>TE040, EZ250150<br>SJ3550/51/52, SJ3571/72<br>468MP, 9472LE<br>9500PC | *4941, *5952, *RP45<br>DP8010 Blue<br>3764, 3747<br>SJ3540/41/42, SJ3526N/27N<br>9472LE, 9485PC<br>9500PC | 3792<br>EZ250150 |
| **Paints** | *4941, 5952, *RP45<br>DP8810NS<br>PR100<br>3764, 3792<br>EZ250150<br>SJ3540/41/42, SJ3526N/27N<br>9472LE, 468MP<br>9832, 9500PC | *4941, *5952, *RP45<br>DP420NS<br>3764, 3792<br>EZ250150<br>SJ3560/61/62, SJ3571/72<br>9472LE, 468MP<br>9832, 9500PC | *4941, 5952, *RP45<br>DP8410NS<br>PR100<br>3747, 3792<br>EZ250150<br>SJ3550/51/52, SJ3571/72<br>468MP, 9472LE<br>9832, 9500PC | *4941, *5952, *RP45<br>DP8010 Blue<br>*PR100<br>3748, 3764<br>SJ3540/41/42, SJ3526N/27N<br>9472LE, 9485PC<br>9832, 9500PC | 3764, 3792<br>EZ25150 | |
| **Glass** | *4941, *5952, *RP45<br>DP100 Plus Clear<br>3792<br>SJ3560/61/62, SJ3571/72<br>468MP, F9473PC<br>9500PC | *4941, 5952, *RP45<br>DP100 Plus<br>3748, 3792<br>EZ250150<br>SJ3550/51/52, SJ3571/72<br>468MP, 9485PC<br>9500PC | *4941, *5952, *RP45<br>DP8010 Blue<br>*PR100<br>3748, 3764<br>SJ3540/41/42, SJ3526N/27N<br>9472LE, 9485PC<br>9500PC | 3792<br>EZ250120, EZ250150 | | |
| **Plastics: HSE, MSE** | *4941, 5952, *RP45<br>DP8405NS<br>PR100<br>3748, 3792<br>EZ250150, EZ250030<br>SJ3550/51/52, SJ3571/72<br>468MP, 9472LE<br>9500PC, 9832 | *4941, *5952, *RP45<br>DP8010 Blue<br>*PR100<br>3748, 3764<br>SJ3540/41/42, SJ3526N/27N<br>9472LE, 9485PC<br>9500PC, 9832 | 3764, 3792<br>EZ250150 | | | |
| **Plastics: LSE** | *4941, *5952, *RP45<br>DP8010 Blue<br>*PR100<br>3748, 3764<br>SJ3540/41/42, SJ3526N/27N<br>9472LE, 9485PC<br>9500PC | 3764, 3792<br>EZ250150 | | | | |
| **Wood** | 3792<br>EZ250120, EZ250060 | | | | | |

**Key**

- 3M™ VHB™ Tapes
- 3M™ Scotch-Weld™ Structural Adhesives
- 3M™ Scotch-Weld™ Instant Adhesives
- 3M™ Hot Melt Adhesives
- 3M™ Scotch-Weld™ PUR Adhesives
- 3M™ Reclosable Fasteners
- 3M™ Adhesive Transfer Tapes
- 3M™ Double Coated Tapes

*Primers may also be required in some cases. See specific product pages for primer details.


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**For 3M™ VHB™ Tape applications in the Window and Door market, refer to page 78 for a selection of products.**

This guide lists products that are commonly used for this specific application. It is important that the customer evaluates these suggested products in their specific application.

# What are Gasket Attachment Assemblies?




*Gaskets are used in multiple markets, such as electronics, transportation, fluid handling equipment and appliance.*

**Gasketing:** Attachment of a substrate typically, foam, rubber or paper that acts as an interface or seal between two surfaces. 3M offers solutions for attaching preformed gaskets, and also solutions which can replace gaskets or bond and seal simultaneously. **Examples include air and liquid filters, fluid handling equipment, heat exchangers and ball joints.**

**Possible Adhesive or Tape Requirements:**

- Easy and fast to apply gaskets
- Resist fluids
- High adhesion to foams and rubber

## Best 3M Solutions for Gasket Assemblies




**3M™ VHB™ Tapes** (pg 72–79)
High-strength bonding tapes that can be die-cut into a variety of shapes to replace rubber or foam gaskets, providing an instant, simple solution. Their closed-cell construction provides a watertight barrier between flat parts.



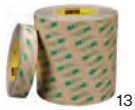

**3M™ Scotch-Weld™ Instant Adhesives** (pg 37–39)
One part solvent-free cyanoacrylate (CA) adhesive that reaches handling strength in 5–30 seconds. Best for small very tight bondlines (<10cm2). Commonly used on rubbers and plastics.



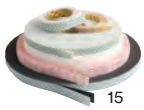

**3M™ Scotch-Weld™ Gasket Makers** (pg 41)
One-part anaerobic adhesives can be applied as a curing liquid gasket between complex metal shapes, replacing pre-formed gaskets.




**3M™ Contact and Spray Adhesives** (pg 52–63)
Solvent and water based adhesives can be sprayed, brushed or roll applied. Very fast, easy and economical coverage of multiple substrates, irregular shapes and mild textures.




**3M™ Adhesive Transfer Tapes** (pg 87–92)
Can be pre-applied to gasketing material which is then die-cut to provide parts. These products provide instant adhesion to flat, untextured substrates.




**3M™ Double Coated Tapes** (pg 81–85)
Can be pre-applied to gasketing material which is then die-cut to provide parts. These products provide instant adhesion.

## Performance Factors for Gasket Assemblies

All 3M technologies in the table below are commonly used in gasket attachment applications. Use the table below as a relative comparison of product performance. Good = ⊕ Better = ⊕⊕ Best = ⊕⊕⊕

| Attribute | 3M™ VHB™ Tapes | 3M™ Scotch-Weld™ Instant Adhesives | 3M™ Scotch-Weld™ Gasket Makers | 3M™ Contact and Spray Adhesives | 3M™ Adhesive Transfer Tapes | 3M™ Double Coated Tapes |
|---|---|---|---|---|---|---|
| High Strength and Rubber Bonding | N/A | ⊕⊕⊕ | N/A | ⊕⊕ | ⊕ | ⊕ |
| Temperature and Solvent Resistance | ⊕⊕⊕ | ⊕ | ⊕⊕⊕ | ⊕⊕⊕ | ⊕⊕⊕ | ⊕⊕⊕ |
| Ease of Application | ⊕⊕⊕ | ⊕⊕ | ⊕⊕ | ⊕ | ⊕⊕⊕ | ⊕⊕⊕ |
| Rate of Strength Build | ⊕⊕⊕ | ⊕⊕⊕ | ⊕ | ⊕⊕⊕ | ⊕⊕⊕ | ⊕⊕⊕ |

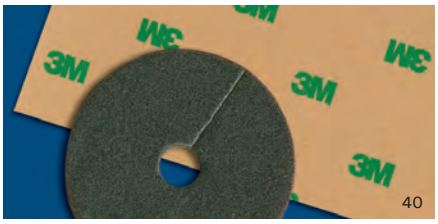
## Gasket Attachment Assembly Solutions

| + | Metal | Glass | Paint | Plastics: HSE | Plastics: LSE |
|---|---|---|---|---|---|
| Rubber (EPDM, Santoprene®) | *PR100<br>4799<br>*468MP, 950<br>9832 | 4799<br>*468MP, 950<br>9832 | *PR100<br>4799<br>*468MP, 950<br>9832 | *PR100<br>4799<br>*468MP, 950<br>9832 | *PR100<br>4799<br>*9472LE, 950<br>9832 |
| Silicone Gaskets | *PR100<br>GM18 replace gasket<br>91022<br>9731, 96042 | 91022<br>9731, 96042 | *PR100<br>91022<br>9731, 96042 | *PR100<br>91022<br>9731, 96042 | *PR100<br>91022<br>9731, 96042 |
| Neoprene | *PR100<br>6035PC, 950<br>9832 | 1300<br>6035PC, 950<br>9832 | *PR100<br>1300<br>6035PC, 950<br>9832 | *PR100<br>1300<br>6035PC, 950<br>9832 | *PR100<br>90<br>6035PC, 950<br>9832 |
| Nylon | PR100<br>9472LE | 1099<br>9472LE | PR100<br>1099<br>9472LE | PR100<br>1099<br>9472LE | *PR100<br>90<br>9472LE |
| PTFE | *PR100<br>GM18 replace gasket<br>950 | 9472LE | *PR100<br>9472LE | *PR100<br>9472LE | *PR100<br>9472LE |

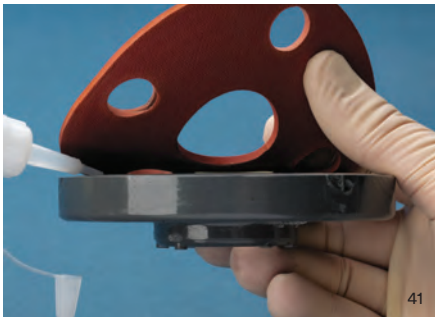
**3M™ VHB™ Tape can replace gaskets on many substrates listed in the chart.**
**3M™ Scotch-Weld™ Gasket Makers are suitable to replace gaskets in metal to metal applications.**

**Key**
- 3M™ Scotch-Weld™ Instant Adhesives
- 3M™ Scotch-Weld™ Gasket Makers
- 3M™ Contact and Spray Adhesives
- 3M™ Adhesive Transfer Tapes
- 3M™ Double Coated Tapes

*Primers may also be required in some cases. See specific product pages for primer details.



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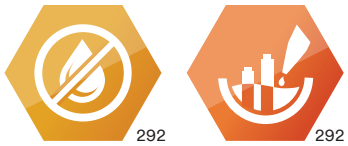

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This guide lists products that are commonly used for this specific application. It is important that the customer evaluates these suggested products in their specific application.

# What is Sealing of Assemblies? What is Potting and Encapsulating of Assemblies?




*Sealing and potting exists in multiple markets, such as transportation, metalworking, electronics, electrical, construction and MRO.*

**Sealing:** Tape or sealant is applied over a seam to prevent fluid ingress or fluid egress. **Examples include roof seams on vehicles, seams on metal enclosures and pipe sealing.**

**Potting and Encapsulating:** Adhesive flows over and around a component or fills in a chamber to protect components therein. **Examples include heavy duty electrical cords and connectors, electronics in plastic cases, circuit boards and concrete repair.**

**Possible Adhesive or Tape Requirements:**

- Highly elongating/flexible
- Fast cure for painting
- Durability

## Best 3M Solutions for Sealing, Potting and Encapsulating




**3M™ Scotch-Weld™ Structural Adhesives** (pg 18–34)
Acrylic, epoxy and urethane structural adhesives are available in a variety of cure times and flow profiles for potting and encapsulation. Available in both rigid and flexible formulations.

**3M™ Hot Melt Adhesives** (pg 45–51)
Extrudable, 100% solid, thermoplastic resins designed for potting and encapsulating electrical components.

**3M™ Adhesive Sealants** (pg 64–68)
Acrylic, polyurethane and nitrile and hybrid are one component sealing technologies. Can be extruded in any shape on a substrate and are non-sag to fill gaps. Some formulations can be painted wet.

**3M™ Extreme Sealing Tapes** (pg 80)
Provides instant sealing and paint-ability when applied over seams or gaps. Conformable over rivets.

## Performance Factors for Sealing, Potting and Encapsulating

All 3M technologies in the table below are commonly used in sealing, potting and encapsulation applications. Use the table below as a relative comparison of product performance.

Good = ⊕ Better = ⊕⊕ Best = ⊕⊕⊕

| | Attribute | 3M™ Scotch-Weld™ Structural Adhesives | 3M™ Hot Melt Adhesives | 3M™ Adhesive Sealants | 3M™ Extreme Sealing Tapes |
|---|---|---|---|---|---|
| Sealing | Flexibility | N/A | N/A | ⊕⊕⊕ | ⊕⊕⊕ |
| | Ease of Application | N/A | N/A | ⊕⊕⊕ | ⊕⊕ |
| | Time to Paint (or handle part) | N/A | N/A | ⊕ | ⊕⊕⊕ |
| | Immediate Rework | N/A | N/A | ⊕⊕⊕ | ⊕ |
| Potting and Encapsulating | Temperature and Solvent Resistance | ⊕⊕⊕ | ⊕⊕ | ⊕ | N/A |
| | Time to Paint (or handle part) | ⊕⊕ | ⊕⊕⊕ | ⊕ | N/A |
| | Flowability* | ⊕⊕⊕ | ⊕⊕ | ⊕ | N/A |
| | Adhesion to Substrates | ⊕⊕⊕ | ⊕⊕ | ⊕ | N/A |

*3M™ Scotch-Weld™ Structural Adhesives and 3M™ Hot Melt Adhesives are used for potting and encapsulating where their flow and conformability allow them to fill into, or dome over, complex shapes. 3M™ Adhesive Sealants are thick and can be dispensed into wide vertical or horizontal gaps, as well as over seams. 3M™ Extreme Sealing Tape seals over seams and narrow gaps but does not flow into gaps. It can conform over low profile objects such as rivet heads.

## Sealing, Potting and Encapsulating Assembly Solutions

| + | Metals (Aluminum, Steel, Stainless, Galvanized) | Paints (Powder Coat, Painted Metal, Composite Panel) | Glass | Plastics: HSE, MSE (ABS, Acrylic, Polycarbonate, Nylon) | Plastics: LSE (Polypropylene, Polyethylene) |
|---|---|---|---|---|---|
| Metals | 2216, DP270<br>3797, 3748 VO<br>*540, *740<br>4411B, 4411N, 4411G | 2216, DP604NS<br>3797, 3748 VO<br>*540, *740<br>4411B, 4411N, 4411G | DP125 Gray, DP100 Plus Clear<br>*540, *740<br>4411B, 4411N, 4411G | 2216, DP604NS<br>3797, 3748 VO<br>*540, *740<br>4411B, 4411N, 4411G | DP8010 Blue<br>3797, 3748 VO<br>*540, *740<br>*4411B, *4411N, *4411G |
| Paints | 2216, DP604NS<br>*540, *740<br>4411B, 4411N, 4411G | | DP125 Gray, DP100 Plus Clear<br>*540, *740<br>4411B, 4411N, 4411G | 2216, DP604NS<br>*540, *740<br>4411B, 4411N, 4411G | DP8010 Blue<br>*540, *740<br>*4411B, *4411N, *4411G |
| Glass | DP125 Gray, DP100 Plus Clear<br>*540, *740<br>4411B, 4411N, 4411G | | | DP125 Gray, DP100 Plus Clear<br>*540, *740<br>4411B, 4411N, 4411G | DP8010 Blue<br>*540, *740<br>*4411B, *4411N, *4411G |
| Plastics: HSE, MSE | 2216, DP604NS<br>3797, 3748 VO<br>*540, *740<br>4411B, 4411N, 4411G | | | | DP8010 Blue<br>3797, 3748 VO<br>*540, *740<br>*4411B, *4411N, *4411G |
| Plastics: LSE | DP8010 Blue<br>3797, 3748 VO<br>*540, *740<br>*4411B, *4411N, *4411G | | | | |

**Key**
- 3M™ Scotch-Weld™ Structural Adhesives
- 3M™ Hot Melt Adhesives
- 3M™ Adhesive Sealants
- 3M™ Extreme Sealing Tapes

*Primers may also be required in some cases. See specific product pages for primer details.


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This guide lists products that are commonly used for this specific application. It is important that the customer evaluates these suggested products in their specific application.

# Substrates and Adhesion — A Surface Phenomenon, So Know Surfaces Well.

Adhesive attaches to the surfaces of two substrates, unlike a process that fuses the substrates into a unified whole such as welding or solvent activation of plastics. When selecting a 3M adhesive or tape, surface condition must be considered: roughness, smoothness, porosity, coated, uncoated, cleanliness, flexibility size of part and surface energy of 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 thin adhesive transfer tape. Large rigid parts with smooth clean surfaces can be bonded with a variety of 3M product ranging from double-coated foam tapes to two-part structural adhesives. Some plastics have plasticizers which migrate to the surface and degrade the bond over time, so plasticizer-resistant adhesive or tape is essential. If the surface has been powder coat painted, the coating is the bonding surface rather than the substrate, and you would want to consider a 3M tape or adhesive developed specifically for the surface.

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

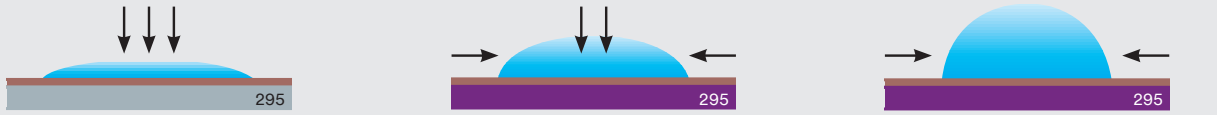
*As a rule of thumb, the higher the surface energy, the greater the strength of the adhesion.*

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

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

## Surface Energy Chart

**Metal Surfaces (High Surface Energy)** | **High Surface Energy Plastics (HSE)** | **Low Surface Energy Plastics (LSE)**




| mJ/m² | Surfaces |
|---|---|
| 1103 | Copper |
| 840 | Aluminum |
| 753 | Zinc |
| 526 | Tin |
| 458 | Lead |
| 700 – 1100 | Stainless Steel |
| 250 – 500 | Glass Porcelain |

| mJ/m² | Surfaces |
|---|---|
| 50 | Polyimide Industrial Film |
| 47 | Phenolic |
| 46 | Nylon |
| 45 | Alkyd Enamel |
| 43 | Polyester |
| 43 | Epoxy Paint |
| 43 | Polyurethane Paint |

| mJ/m² | Surfaces |
|---|---|
| 42 | ABS |
| 42 | Polycarbonate |
| 39 | PVC Rigid |
| 38 | Modified PPE Resin |
| 38 | Acrylic |

| mJ/m² | Surfaces |
|---|---|
| 37 | PVA |
| 36 | Polystyrene |
| 36 | Acetal |
| 33 | EVA |
| 31 | Polyethylene |
| 29 | Polypropylene |
| 28 | Polyvinyl Fluoride Film |
| 18 | PTFE |
| Broad Range | Powder Coated Paints |

**Note:** These values are provided as a guide. Formulation modifications can substantially alter surface energies.

# The best formulas deliver the best performance.

## Powerful Adhesive and Sealant Solutions

3M offers a wide range of innovative adhesives and sealants designed for industrial markets. High quality, precision formulations with proven performance provide reliable, long-term durability for a variety of applications, indoors and out.

3M | Scotch-Weld™ Structural Adhesive

# Design with Confidence. Build to Last.

*In today's world, successful new products demand advancements in design, manufacturing processes and end-use performance. Industrial engineering and design professionals around the world depend on 3M™ Scotch-Weld™ Structural Adhesives to help them design beyond the limits of mechanical fasteners to create next generation products.*

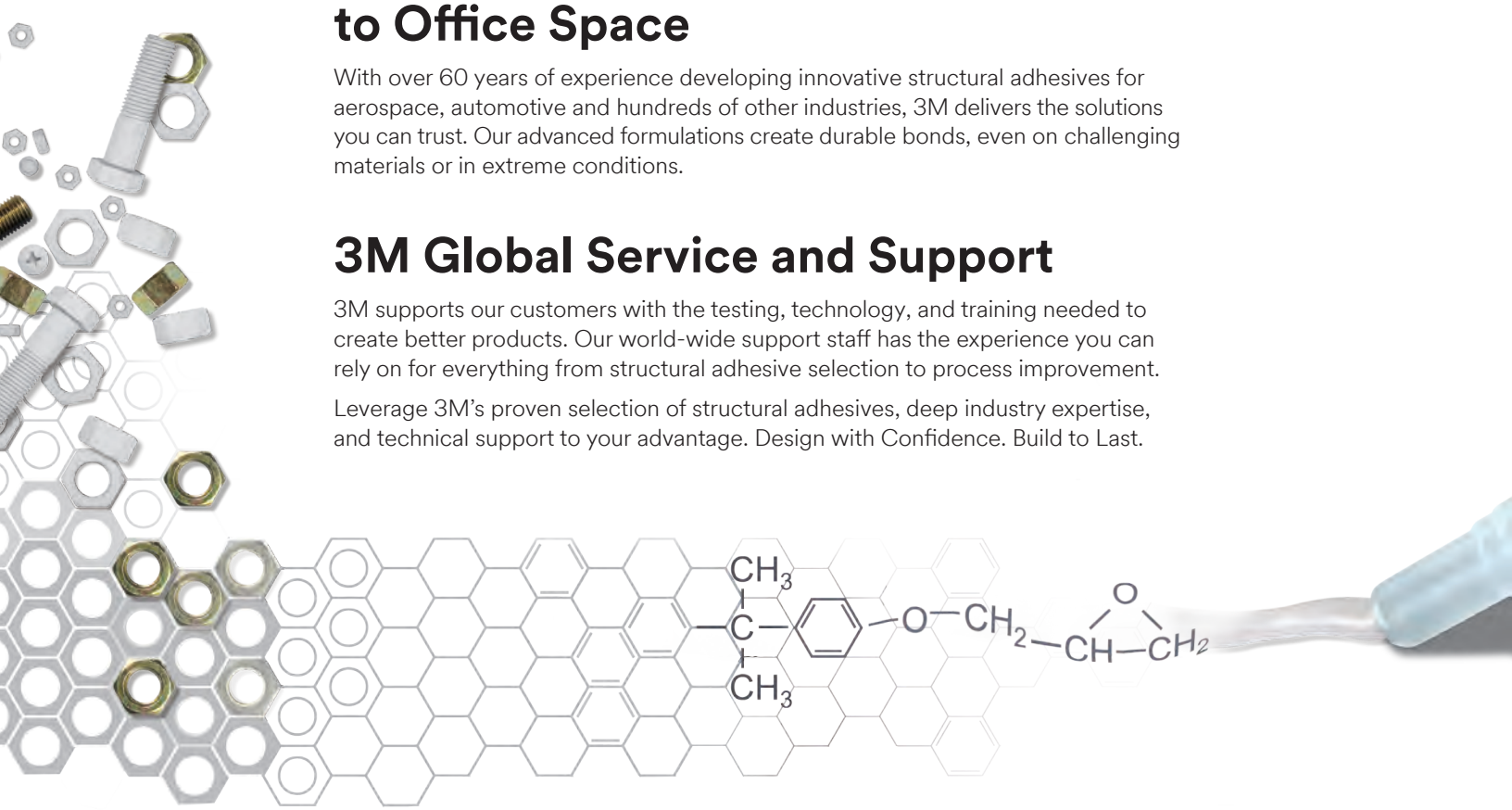
## Trusted Innovations from Aerospace to Office Space

With over 60 years of experience developing innovative structural adhesives for aerospace, automotive and hundreds of other industries, 3M delivers the solutions you can trust. Our advanced formulations create durable bonds, even on challenging materials or in extreme conditions.

## 3M Global Service and Support

3M supports our customers with the testing, technology, and training needed to create better products. Our world-wide support staff has the experience you can rely on for everything from structural adhesive selection to process improvement.

Leverage 3M's proven selection of structural adhesives, deep industry expertise, and technical support to your advantage. Design with Confidence. Build to Last.




## 3M™ Scotch-Weld™ Structural Adhesives are Transforming the Way Engineers Think

# Advancing Design, Process and Performance

*The benefits of designing and building products with 3M™ Scotch-Weld™ Structural Adhesives help drive product success. Eliminating mechanical fasteners provides a wide range of benefits for all stages of product development.*



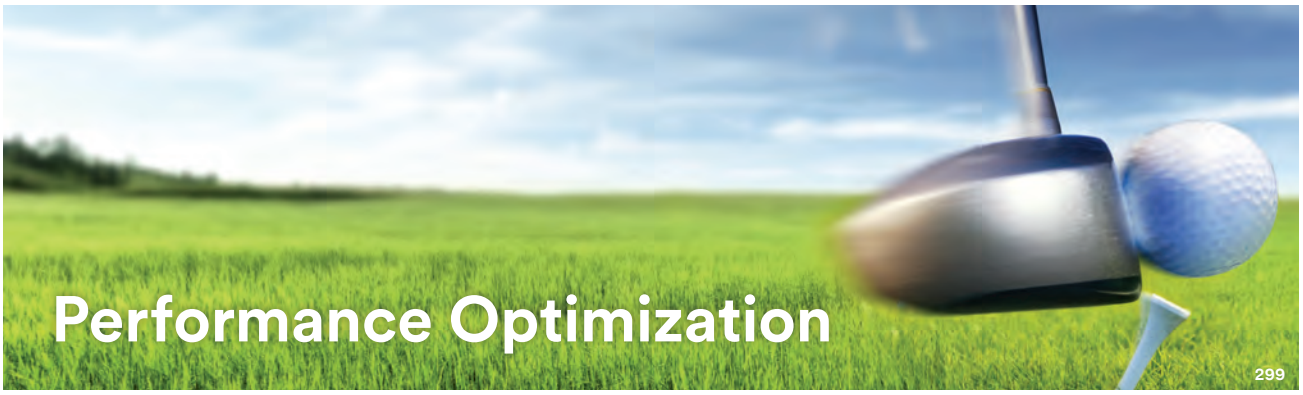

**Improve Aesthetics:** Improve product appearance with invisible joints and smoother bond lines, reduce weight and noise, enhance corrosion and fatigue resistance, and more.

**Freedom of Design:** Join composites to metal, build with hard-to-bond plastics, and use thinner, lighter weight materials.




**Enhance Productivity:** Reduce labor and material costs, build faster with minimal surface prep and match cure rates to your process needs.

**Accurate and Easy:** Dispense by hand or with automated equipment, and choose from a wide range of viscosities and flow rates.




**Strong, Flexible Bonds:** Adhesives bond and seal simultaneously, eliminate stress concentration and absorb shock and vibration for durable bonds.

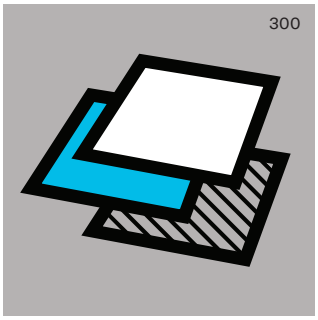
**Increased Durability:** Resist chemicals, environment, galvanic corrosion, fatigue, and material separation along edges or corners.

# Simplifying Adhesive Decisions for Your Application

*The following questions will help you narrow adhesive choices to a few possibilities for evaluation.*

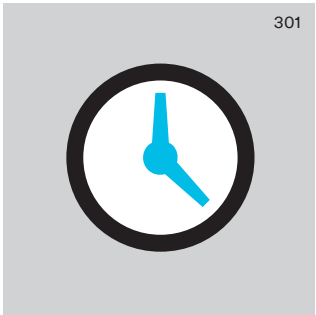
**Q: What materials will be bonded?**

**A:** Structural adhesives work by adhering to the top surface of the bonded parts, so it's important to know the exact material and condition on those surfaces. For metals, will the adhesive be applied to bare metal, or will there be a paint or coating on the surface? For plastics, exactly which base resin? Could there be residual release agents on the surfaces used for mold release?



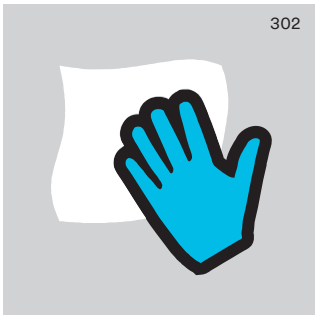

**Q: What is the preferred cure speed?**

**A:** The chosen structural adhesive must have enough work life (open time, pot life) to allow proper mixing and application of the adhesive and assembling of the bonded parts. Smaller assemblies or shorter cycle time production processes may be able to use a faster curing adhesive with a work life of only five minutes or less, while larger assemblies that require alignment and clamping will probably need a work life of 20 minutes or more.



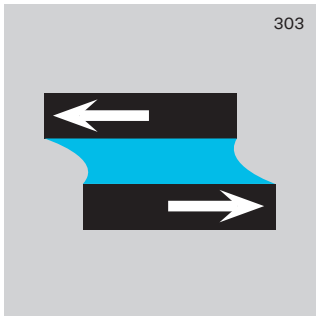

**Q: What surface preparation will be required?**

**A:** Structural adhesives generally prefer clean, rough, dry surfaces for highest bond strength. This typically means either light abrasion and solvent cleaning of the surface, or solvent cleaning followed by chemical etching or applying a primer. Adhesion tests should be performed to determine the adequate surface preparation for a specific application.



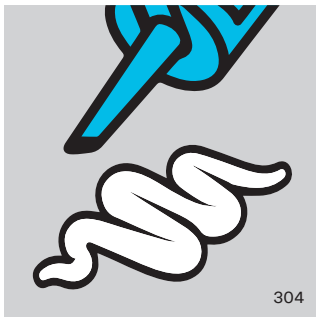

**Q: What types of joints are best for structural adhesives?**

**A:** Joint designs that put the adhesive bond under shear, tension, or compression forces will provide the highest strength. Designs that tend to apply peel or cleavage forces to the adhesive, where the applied stresses are not distributed over the entire bond area, will have lower bond strength, but the bond may still be sufficient for the needs of the application. In addition, optimum bond line thickness typically ranges from 0.005" to 0.020". The adhesive qualification process should always include testing of prototype assemblies to ensure the adhesive will provide enough performance.



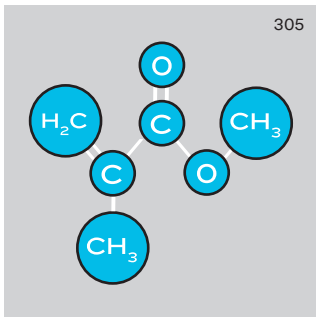

**Q: How are structural adhesives used and applied?**

**A:** Structural adhesives come in many forms, including low viscosity liquids and non-sag pastes, one- and two-component formulations, short and long work lives, and various package sizes and shapes. Most two-part structural adhesives are available in both bulk containers and convenient, easy-to-use cartridge mixing systems.




**Q: What are the general characteristics of the different types of structural adhesives?**

**A:** All structural adhesives provide at least 1,000 psi of overlap shear strength to aluminum, but the different adhesive chemistries have various properties.



**Epoxy adhesives** come in both two-part adhesives (that cure upon mixing the two components) and one-part adhesives (that cure with temperature). They generally have the highest strength and overall performance. They also provide the best resistance to high temperatures, solvents and outdoor weathering. They adhere well to metals, woods and concrete, and the flexible epoxy adhesives also bond to some plastics and rubbers. Epoxy adhesives usually require clean, abraded surfaces to obtain maximum bond strength.

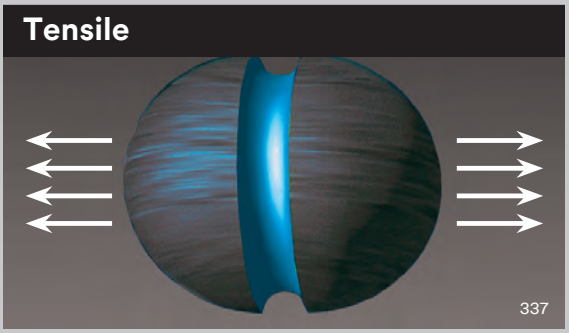
**Acrylic adhesives** are two-part adhesives that provide excellent bond strength and durability, although slightly lower than epoxy adhesives. However, they have several features that make them easier to use in many applications and manufacturing processes. These benefits include a much faster cure speed, higher tolerance for oily or unprepared bonding surfaces and the ability to bond a wide variety of materials, including nearly all plastics. Newer acrylic adhesive formulations are room temperature stable with a long shelf life, and some have much lower odor than regular acrylic adhesives.

**Urethane adhesives** are two-part adhesives that are relatively flexible when cured, and therefore tend to have excellent impact resistance and good adhesion to most plastics. They also bond well to woods, concrete and rubbers, but they tend to have reduced resistance to solvents and high temperatures. Uncured adhesive components are sensitive to moisture.

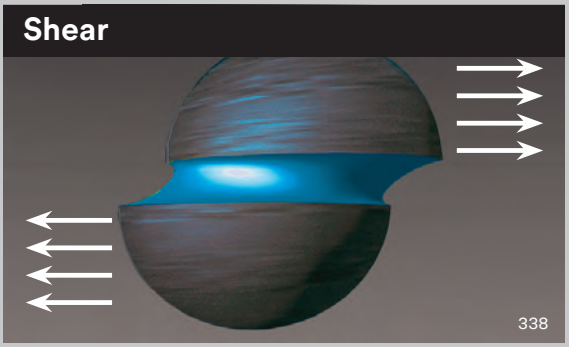
**Cyanoacrylate adhesives** (instant adhesives) are one-component, lower viscosity liquids that cure extremely quickly with just contact pressure and surface moisture. They adhere well, with thin bond lines, to plastics, metals and rubbers. With the use of primers, they can also adhere to low surface energy plastics and elastomers. They tend to have low flexibility, peel strength and impact resistance compared to other structural adhesives. They are generally used for applications such as gasket bonding and smaller assemblies.

**Anaerobic adhesives** are one-part adhesives that cure on active metal surfaces when oxygen gets excluded from the bond line. These products keep your factory running efficiently, reducing maintenance and leakage. They do not bond well to glass, plastics or rubbers, and are primarily used for applications such as locking threads and sealing pipe connections.

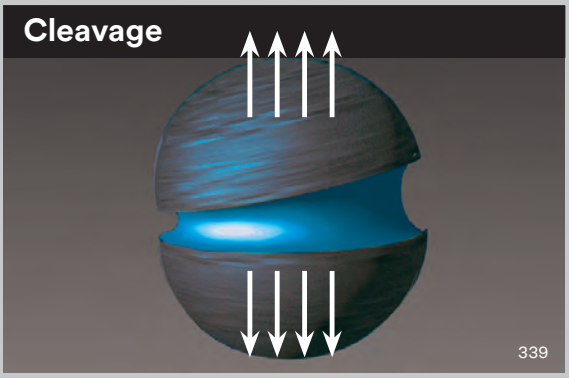
**PUR adhesives** (Polyurethane-reactive adhesives) are one-part adhesives that apply like a hot melt, but cure with ambient moisture for near structural strength bonds. Fast set times and build strength over the next 24–48 hours can reach as much as 1,000 psi in overlap shear strength. They are flexible and resistant to temperature extremes and most solvents. Most commonly used in bonds where at least one substrate contains or transmits moisture (such as wood or plastic).



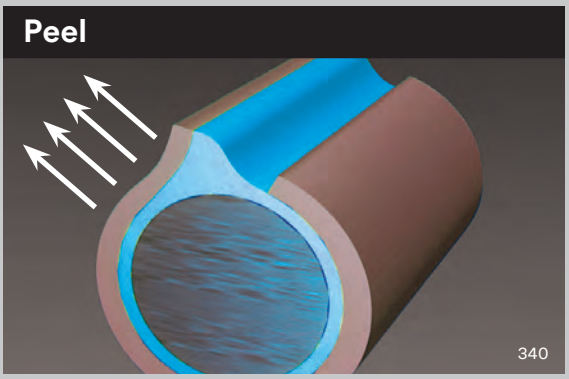

**Tensile is pull exerted equally over the entire joint. Pull direction is straight and away from the adhesive bond.**




**Shear is pull directed across the adhesive, forcing the substrates to slide over each other.**




**Cleavage is pull concentrated at one edge of the joint, exerting a prying force on the bond. The other edge of the joint is theoretically under zero stress.**




**Peel is concentrated along a thin line at the edge of the bond where one substrate is flexible.**

# Key markets and applications for 3M™ Scotch-Weld™ Structural Adhesives




## Sporting Goods

**Key Features and Benefits**

- Excellent impact resistance of high stressed bonds
- High strength for small joints
- High strength bonding of rubber, composites and metals to each other







**Key Products**

**DP420NS Black, DP8810NS, PR100, TS230**




## Specialty Vehicle

**Key Features and Benefits**

- Weight reduction
- High strength
- Vibration and fatigue resistance







**Key Products**

**DP6330NS, DP8410NS, LSB60NS, TL42**




## Signage

**Key Features and Benefits**

- One adhesive to bond all of your substrates
- Strong formulations and thin bond lines
- Weather resistance
- UL recognition







**Key Products**

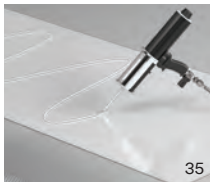
**DP8805NS, DP8405NS, DP100 Plus**




## Metalworking

**Key Features and Benefits**

- High strength and durability
- Reduced surface preparation before bonding, and no grinding after bonding
- Save weight and improve appearance with adhesives instead of welds or rivets







**Key Products**

**DP420NS Black, DP8407NS, DP8410NS**




## Electronics

**Key Features and Benefits**

- Excellent impact resistance of high stressed bonds
- High strength for small joints
- High strength bonding of rubber, composites and metals to each other







**Key Products**

**DP420LH Black, DP8805NS, PR100, TS230**




## Appliance

**Key Features and Benefits**

- Simplify operations by bonding after powdercoating
- Eliminate the challenge of bonding rigid to flexible substrates
- Noise damping
- Reduce complexity-bond and seal glass to metal in one step







**Key Products**

**DP125 Gray, DP6310NS, DP8810NS, TS230, TL42**




## Aerospace

**Key Features and Benefits**

- Available in UL94 or FST compliant options
- Strong, yet flex

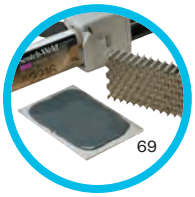






**Key Products**

**2216 Gray, DP100FR, DP640, TL71**




## Plastic, Composite & Rubber

**Key Features and Benefits**

- Bonding of low surface energy plastics without priming
- Impact resistant composite bonding





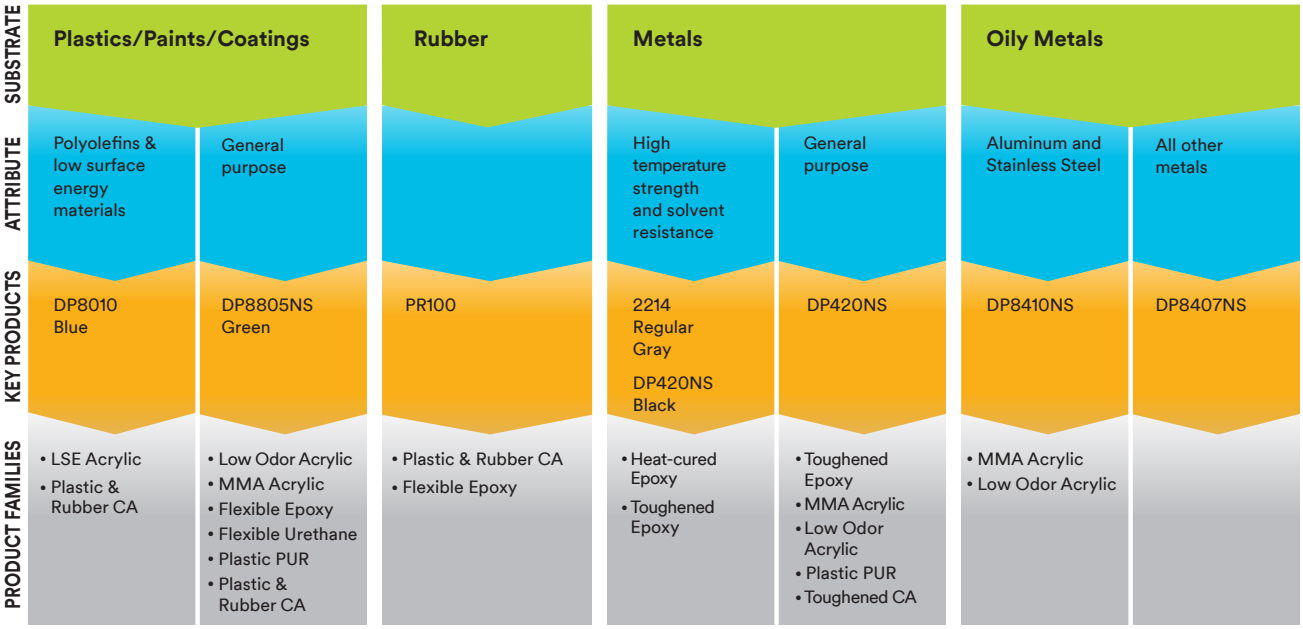


**Key Products**

**DP8010 Blue, DP420NS, DP6310NS, TS230, PR100**

# 3M™ Scotch-Weld™ Adhesives Selector Guide

**Step 1:** Select Most Difficult Substrate **Step 2:** Determine Key Attribute **Step 3:** Select Product Family




*See chart in back of guide for more details.

## Structural Adhesive Families

**Rigid Epoxy Adhesives** — Higher tensile strength at lower elongations for greater long-term holding power. Mostly used for rigid substrates (metals) with high static loads.

**Flexible Epoxy Adhesives** — Lower tensile strength at higher elongations for greater capability to withstand differential movement of bonded parts; higher peel strength and higher adhesion to most plastics.

**Toughened Epoxy Adhesives** — Higher tensile strength at lower elongations for fatigue resistance; best suited for dynamic stresses. They have long-term holding power, higher peel strength, and exceptional higher resistance against shock, vibration and impact loads. Lower adhesion to most thermoplastics.

**Heat-cured Epoxy Adhesives** — One-component, rigid adhesives with outstanding strength at elevated temperatures. These adhesives require a thermal cure, typically around 250–350°F (120–180°C) for 40–60 minutes.

**MMA Acrylic Adhesives** — Provides greater adhesion to a wide variety of materials including most plastics and paint systems, are tolerant of many surface contaminations. High impact resistance for metal bonds.

**Low Odor Acrylic Adhesives** — Less odor than typical acrylic adhesives and faster rate of strength build than most two-part structural adhesives. Excellent adhesion to a variety of materials, including plastics and paint systems. They provide high impact resistance for plastic bonds; and are tolerant of many surface contaminations.

**LSE Acrylic Adhesives** — Outstanding adhesion to polyolefin materials such as polypropylene, polyethylene and TPO without surface treatment.

**Semi-rigid Urethane Adhesives** — Higher tensile modulus and lower elongation capability, with greater long-term holding power.

**Flexible Urethane Adhesives** — Lower tensile modulus and higher elongation capability. Excellent adhesion to most plastics.

## Instant Adhesive Families

**Plastic & Rubber (PR) Instant Adhesives** bond to the widest variety of materials, have an extremely fast cure speed, and come in a wide range of viscosity.

**Surface Insensitive (SI) Instant Adhesives** cure even on acidic surfaces (such as wood, paper, leather, and ceramic); these adhesives have a slower cure speed than traditional instant adhesives

**Step 1:** Select Most Difficult Substrate **Step 2:** Determine Key Attribute **Step 3:** Select Product Family




*See chart in back of guide for more details.

SUBSTRATE ATTRIBUTE KEY PRODUCT PRODUCT FAMILIES

**Low Odor (LO) Instant Adhesives** provide a reduced blooming effect for applications that require an improved appearance.

**General Purpose (EC) Instant Adhesives** are slightly less expensive products that have lower strength and impact resistance compared to traditional instant adhesives.

**Super Fast (SF) Instant Adhesives** provide the fastest rate of cure speed for most applications.

**Rubber Toughened (RT) Instant Adhesives** can be used for applications that require improved impact strength or vibration resistance; preferred for applications bonding two rigid materials together.

**Metal (MC) Instant Adhesives** provide improved performance on metal substrates.

**Engineered Grade (EG) Instant Adhesives** provide excellent overall performance for most applications.

## Anaerobic Adhesive Families

**Threadlockers (TL)** hold screws and other threaded fasteners in place to prevent loosening from shock, vibration, and thermal expansion and contraction; these adhesives replace lock washers and nylon-insert nuts.

**Retaining Compounds (RT)** bond and seal non-threaded cylindrical metal assemblies, such as press-fit or slip-fit parts; these adhesives replace keys, splines, and set screws.

**Pipe Sealants (PS)** provide a pressure seal on threaded tubes and pipes; these adhesives replace various tapes and pastes.

**Gasket Makers (GM)** fill voids between metal parts to create a form-in-place gasket; these adhesives replace o-rings and pre-formed gaskets.

## PUR Adhesive Families

**Wood PUR** — Higher shear strength at lower elongations for long term holding power. Mostly used for rigid wood substrates and some plastics.

**Plastic PUR** — Higher impact strength, elongation and flexibility for greater capacity to withstand movement of bonded parts. Higher adhesion to most plastics, glass and aluminum.

# Substrate Selector

**Step 1:** Select Substrate **Step 2:** Determine Key Attribute **Step 3:** Select Product (see definitions below)

| | | Plastic/Paints/Coatings | | Rubber | Metals | | | Oily Metals | | Composites | | Concrete/Stone/Ceramics/Glass | | Wood |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Low Surface Energy | General Purpose | | Temperature and Solvent Resistant | Stainless Steel & Aluminum | Other Metals | Stainless Steel & Aluminum | Other Metals | Fiberglass/ SMC | Epoxy | Indoor | Outdoor | |
| Plastic/Paints/Coatings | Low Surface Energy | **LSE Acrylic*** Plastic & Rubber CA | **LSE Acrylic*** Plastic & Rubber CA | **Plastic & Rubber CA*** | N/A | **LSE Acrylic** | **LSE Acrylic** | **LSE Acrylic** | **LSE Acrylic** | **LSE Acrylic** Toughened CA* | **LSE Acrylic** Toughened CA* | **LSE Acrylic** | **LSE Acrylic** | **LSE Acrylic** Surface Insensitive CA* |
| | General Purpose | **LSE Acrylic*** Plastic & Rubber CA | **LO Acrylic** MMA Acrylic Plastic PUR Flexible Epoxy Plastic & Rubber CA | **Plastic & Rubber CA*** Plastic PUR | **Toughened Epoxy** Flexible Epoxy | **LO Acrylic** MMA Acrylic Flexible Epoxy Plastic PUR Plastic & Rubber CA | **DP8407NS** Toughened Epoxy Flexible Epoxy Plastic PUR Plastic & Rubber CA | **LO Acrylic** MMA Acrylic | **DP8407NS** | **Semi-rigid Urethane MMA Acrylic** LO Acrylic Flexible Urethane Plastic PUR Toughened CA | **Semi-rigid Urethane MMA Acrylic** Flexible Epoxy Toughened Epoxy Plastic PUR Toughened CA | **Flexible Epoxy** Rigid Urethane Flexible Urethane Plastic PUR | **Flexible Epoxy** Flexible Urethane Plastic PUR | **Wood PUR** Flexible Epoxy Rigid Urethane Surface Insensitive CA |
| Rubber | | **Plastic & Rubber CA*** | **Plastic & Rubber CA*** Plastic PUR | **Plastic & Rubber CA*** | N/A | **Flexible Epoxy** Plastic PUR | **Flexible Epoxy** Plastic PUR | N/A | N/A | **Plastic & Rubber CA*** Plastic PUR | **Plastic & Rubber CA*** Plastic PUR | **Flexible Epoxy** Plastic PUR | **Flexible Epoxy** Plastic PUR | **Surface Insensitive CA*** Plastic PUR Flexible Epoxy |
| Metals | Temperature and Solvent Resistant | N/A | **Toughened Epoxy** Flexible Epoxy | N/A | **Toughened Epoxy** Flexible Epoxy | **Toughened Epoxy** Flexible Epoxy | **One-part Heat-cured Epoxy** Toughened Epoxy | **Heat-cured Epoxy** | **Heat-cured Epoxy** | **Toughened Epoxy** Flexible Epoxy Plastic PUR | **Toughened Epoxy** Flexible Epoxy Plastic PUR | **Toughened Epoxy** Flexible Epoxy | **Flexible Epoxy** | **Toughened Epoxy** Plastic PUR Flexible Epoxy |
| | Stainless Steel & Aluminum | **LSE Acrylic** | **LO Acrylic** MMA Acrylic Flexible Epoxy Plastic PUR Plastic & Rubber CA | **Plastic & Rubber CA*** Plastic PUR | **Toughened Epoxy** Flexible Epoxy | **LO Acrylic** MMA Acrylic Toughened Epoxy Flexible Epoxy Rigid Epoxy Toughened CA | **Heat-cured Epoxy** Toughened Epoxy | **LO Acrylic** MMA Acrylic | **DP8407NS** Heat-cured Epoxy | **Semi-rigid Urethane MMA Acrylic** LO Acrylic Toughened Epoxy Plastic PUR Toughened CA | **Semi-rigid Urethane Toughened Epoxy** MMA Acrylic LO Acrylic Plastic PUR Toughened CA | **Toughened Epoxy** Flexible Epoxy | **Flexible Epoxy** | **Plastic PUR** Toughened Epoxy Rigid Epoxy Flexible Epoxy Surface Insensitive CA |
| | Other Metals | **LSE Acrylic** | **DP8407NS** Toughened Epoxy Flexible Epoxy Plastic PUR Plastic & Rubber CA | **Plastic & Rubber CA*** Plastic PUR | **Heat-cured Epoxy** Toughened Epoxy | **Heat-cured Epoxy** Toughened Epoxy | **Toughened Epoxy** Flexible Epoxy Heat-cured Epoxy DP810 | **DP8407NS** Heat-cured Epoxy | **DP8407NS** Heat-cured Epoxy | **Semi-rigid Urethane Toughened Epoxy** Flexible Epoxy Plastic PUR | **Toughened Epoxy** Flexible Epoxy Heat-cured Epoxy Plastic PUR | **Toughened Epoxy** Heat-cured Epoxy | **Flexible Epoxy** | **Plastic PUR** Toughened Epoxy |
| Oily Metals | Stainless Steel & Aluminum | **LSE Acrylic** | **LO Acrylic** MMA Acrylic | N/A | **Heat-cured Epoxy** | **LO Acrylic** MMA Acrylic | **DP8407NS** Heat-cured Epoxy | **LO Acrylic** MMA Acrylic | **DP8407NS** | **MMA Acrylic** LO Acrylic | **MMA Acrylic** LO Acrylic Heat-cured Epoxy | N/A | N/A | N/A |
| | Other Metals | LSE Acrylic | DP8407NS | N/A | **Heat-cured Epoxy** | **DP8407NS** Heat-cured Epoxy | **DP8407NS** Heat-cured Epoxy | **DP8407NS** | **DP8407NS** Heat-cured Epoxy | **DP8407NS** | **Heat-cured Epoxy** | N/A | N/A | N/A |
| Composites | Fiberglass/ SMC | **LSE Acrylic** Toughened CA* | **Semi-rigid Urethane MMA Acrylic** LO Acrylic Flexible Urethane Plastic PUR Toughened CA | **Plastic & Rubber CA*** Plastic PUR | **Toughened Epoxy** Flexible Epoxy Plastic PUR | **Semi-rigid Urethane MMA Acrylic** LO Acrylic Toughened Epoxy Plastic PUR Toughened CA | **Semi-rigid Urethane Toughened Epoxy** Flexible Epoxy Plastic PUR | **MMA Acrylic** LO Acrylic | **DP8407NS** | **Semi-rigid Urethane MMA Acrylic** LO Acrylic Toughened Epoxy Flexible Epoxy Plastic PUR Toughened CA | **Semi-rigid Urethane Toughed Epoxy** Flexible Epoxy Plastic PUR Toughened CA | **Semi-rigid Urethane Toughened Epoxy** Flexible Epoxy Plastic PUR | **Semi-rigid Urethane Flexible Epoxy** Flexible Urethane Plastic PUR | **Semi-rigid Urethane Toughened Epoxy** Rigid Urethane Flexible Epoxy Plastic PUR |
| | Epoxy | **LSE Acrylic** Toughened CA* | **Semi-rigid Urethane MMA Acrylic** Flexible Epoxy Toughened Epoxy Plastic PUR Toughened CA | **Plastic & Rubber CA*** Plastic PUR | **Toughened Epoxy** Flexible Epoxy Plastic PUR | **Semi-rigid Urethane Toughened Epoxy** MMA Acrylic LO Acrylic Plastic PUR Toughened CA | **Toughened Epoxy** Flexible Epoxy Heat Cured Epoxy Plastic PUR | **MMA Acrylic** LO Acrylic Heat Cured Epoxy | **Heat Cured Epoxy** | **Semi-rigid Urethane Toughened Epoxy** Flexible Epoxy Plastic PUR Toughened CA | **Toughened Epoxy** Flexible Epoxy Plastic PUR Toughened CA | **Semi-rigid Urethane Toughened Epoxy** Flexible Epoxy Plastic PUR | **Semi-rigid Urethane Flexible Epoxy** Plastic PUR | **Semi-rigid Urethane Toughened Epoxy** Flexible Epoxy Plastic PUR |
| Concrete/Stone/Ceramics/Glass | Indoor | **LSE Acrylic** | **Flexible Epoxy** Rigid Urethane Flexible Urethane Plastic PUR | Flexible Epoxy Plastic PUR | **Toughened Epoxy** Flexible Epoxy | **Toughened Epoxy** Flexible Epoxy | **Toughened Epoxy** Heat Cured Epoxy | N/A | N/A | **Semi-rigid Urethane Toughened Epoxy** Flexible Epoxy Plastic PUR | **Semi-rigid Urethane Toughened Epoxy** Flexible Epoxy Plastic PUR | **Toughened Epoxy** Flexible Epoxy Rigid Urethane Flexible Urethane | **Flexible Epoxy** Flexible Urethane | **Flexible Epoxy** Plastic PUR Flexible Urethane |
| | Outdoor | LSE Acrylic | **Flexible Epoxy** Flexible Urethane Plastic PUR | Flexible Epoxy Plastic PUR | **Flexible Epoxy** | **Flexible Epoxy** | **Flexible Epoxy** | N/A | N/A | **Semi-rigid Urethane Flexible Epoxy** Flexible Urethane Plastic PUR | **Semi-rigid Urethane Flexible Epoxy** Plastic PUR | **Flexible Epoxy** Flexible Urethane | **Flexible Epoxy** Flexible Urethane | **Flexible Epoxy** Plastic PUR Flexible Urethane |
| Wood | | **LSE Acrylic** Surface Insensitive CA* | **Wood PUR** Flexible Epoxy Rigid Urethane Surface Insensitive CA | **Wood PUR** Surface Insensitive CA* | **Toughened Epoxy** Plastic PUR Flexible Epoxy | **Wood PUR** Toughened Epoxy Rigid Epoxy Flexible Epoxy Surface Insensitive CA | **Wood PUR** Toughened Epoxy | N/A | N/A | **Semi-rigid Urethane Toughened Epoxy** Rigid Urethane Flexible Epoxy Plastic PUR | **Semi-rigid Urethane Toughened Epoxy** Flexible Epoxy Plastic PUR | **Flexible Epoxy** Plastic PUR Flexible Urethane | **Flexible Epoxy** Plastic PUR Flexible Urethane | **Wood PUR** Rigid Epoxy Toughened Epoxy Rigid Urethane Surface Insensitive CA |

**Bold = Best In Class Product** Light = Suggested Alternate Product * = With Primer

# 3M™ Scotch-Weld™ Structural Adhesives Coverage Guide

## Approximate Coverages for 3M™ Scotch-Weld™ Adhesives in Duo-Pak Cartridges

| Bead Size Dimension* inches (mm) | Linear ft/m per 37mL (2:1 Cart.) | Linear ft/m per 43mL (2:3 Cart.) | Linear ft/m per 45 mL (10:1 Cart.) | Linear ft/m per 50mL (1:1 & Cart.) | Linear ft/m per 200mL (1:1 & 2:1 Cart.) | Linear ft/m per 400mL (1:1 & 2:1 Cart.) | Linear ft/m per 490mL (10:1 Cart.) | Linear ft/m per 295mL (1/10 gal Cart.) |
|---|---|---|---|---|---|---|---|---|
| 1/2" (12.7mm) | 2 ft (0.6m) | 2 ft (0.7m) | 2 ft (0.7m) | 2.5 ft (0.8m) | 10 ft (3m) | 21 ft (6m) | 26 ft (8m) | 20 ft (6m) |
| 3/8" (9.5mm) | 3.5 ft (1m) | 4 ft (1m) | 4 ft (1m) | 4.5 ft (1m) | 18 ft (6m) | 37 ft (11m) | 45 ft (14m) | 35 ft (11m) |
| 1/4" (6.4mm) | 8 ft (2m) | 9 ft (3m) | 9 ft (3m) | 11 ft (3m) | 41 ft (13m) | 83 ft (25m) | 102 ft (31m) | 79 ft (24m) |
| 1/8" (3.2mm) | 31 ft (9m) | 36 ft (11m) | 37 ft (11m) | 42 ft (13m) | 165 ft (50m) | 331 ft (101m) | 405 ft (123m) | 312 ft (95m) |
| 1/16" (1.6mm) | 122 ft (37m) | 142 ft (43m) | 147 ft (45m) | 165 ft (50m) | 656 ft (200m) | 1,313 ft (400m) | 1,600 ft (488m) | 1,234 ft (376m) |

## Coverages per Gallon for Various Thicknesses of 100% Solids 3M Adhesives

| Wet Thickness inches (mm) | $Ft^2$/gal ($m^2$/L) | gal/1,000 $ft^2$ (L/1,000$m^2$) |
|---|---|---|
| 1/2" (12.7mm) | 3 $ft^2$ (0.1$m^2$) | 312 gal (12,700L) |
| 1/8" (3.2mm) | 13 $ft^2$ (0.3$m^2$) | 78 gal (3,175L) |
| 1/16" (1.6mm) | 26 $ft^2$ (0.6$m^2$) | 39 gal (1,587L) |
| 1/32" (0.8mm) | 51 $ft^2$ (1$m^2$) | 20 gal (794L) |
| 25 mils (0.64mm) | 64 $ft^2$ (1.5$m^2$) | 16 gal (635L) |
| 5 mils (0.13mm) | 320 $ft^2$ (8$m^2$) | 3 gal (127L) |

## Coverages per Gallon for Various Bead Sizes of 100% Solids 3M Adhesives

| Bead Size Dimension* inches (mm) | Approx. lineal ft/gal (m/L) | Approx. gal/1,000 lineal ft (liter/1,000m) |
|---|---|---|
| 1/2" (12.7mm) | 196 ft (16m) | 5 gal (63L) |
| 3/8" (9.5mm) | 350 ft (28m) | 3 gal (36L) |
| 1/4" (6.4mm) | 785 ft (63m) | 1.3 gal (16L) |
| 1/8" (3.2mm) | 3,130 ft (252m) | 0.3 gal (4L) |
| 1/16" (1.6mm) | 12,420 ft (1,000m) | 0.1 gal (1L) |

*Bead size is semi-circular bead with width equal to size noted and height at center of bead equal to 1/2 the width.

# 3M™ Scotch-Weld™ PUR Adhesives Coverage Guide

## Approximate Coverage per Container (linear foot per container based on 1/8" dia. bead size)

| 1/10 Gallon Cartridge | 2k Bag | 5 Gallon Pail | 55 Gallon Drum |
|---|---|---|---|
| 250' (76.2m) | 1,650' (502.9m) | 13,500' (41448m) | 170,200' (51576.9m) |

NOTE: The technical information and data provided here should be considered representative or typical only and should not be used for specification purposes.

## 3M™ Scotch-Weld™ Structural Adhesives



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| | Product (Color) | Key Features | Mix Ratio (Vol.) B:A | Approx. Viscosity at 75°F (24°C) (cP) | Approx. Mixed Work Life at 75°F (24°C) | Approx. Time to Handling Strength at 75°F (24°C) | Floating Roller Peel PLI (N/cm) at 75°F (24°C) | Overlap Shear: psi (MPa) | | | Size | UPC | Stock # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | -67°F (-55°C) | 75°F (24°C) | 180°F (82°C) | | | |
| | **3M™ Scotch-Weld™ Rigid Epoxies** | | | | | | | | | | | | |
| * | **DP100<br>100**<br>(Clear) | General purpose, Rigid bonds | 1:1 | 13,000 | 5 min | 20 min | 2<br>(4) | 900<br>(6) | 1,500<br>(10) | 300<br>(2) | 48.5mL<br>200mL<br>400mL<br>5 gal pail A<br>5 gal pail B | 00-638060-08994-1<br>00-021200-87260-0<br>00-021200-87261-7<br>00-021200-82345-9<br>00-021200-82344-2 | 7100148763<br>7100075490<br>7000121318<br>7100086557<br>7100086558 |
| | **DP100FR<br>100FR**<br>(White) | Flame retardant, UL94 V-0 rating | 1:1 | 80,000 | 6 min | 20 min | 2<br>(4) | 1,250<br>(9) | 2,200<br>(15) | 800<br>(6) | 48.5mL<br>200mL<br>400mL<br>5 gal pail A<br>5 gal pail B | 00-638060-08989-7<br>00-048011-56744-0<br>00-048011-56743-3<br>00-048011-57230-7<br>00-048011-57229-1 | 7100148760<br>7000148268<br>7000028577<br>7010366158<br>7010366123 |
| | **DP100NS<br>100NS**<br>(Translucent) | General purpose, Non-sag | 1:1 | 95,000 | 5 min | 20 min | 2<br>(4) | 900<br>(6) | 1,500<br>(10) | 300<br>(2) | 48.5mL<br>200mL<br>400mL<br>5 gal pail A<br>5 gal pail B | 00-638060-08974-3<br>00-021200-87264-8<br>00-021200-87265-5<br>00-021200-82257-5<br>00-021200-82256-8 | 7100148744<br>7100014024<br>7100082554<br>7010367412<br>7010295308 |
| | **DP270<br>270**<br>(Black) | Rigid potting compound, Non-corrosive | 1:1 | 12,000 | 60 min | 3 hr | 2<br>(4) | 1,200<br>(8) | 2,500<br>(17) | 300<br>(2) | 48.5mL<br>200mL<br>400mL<br>Gal Kit<br>5 gal pail A<br>5 gal pail B | 00-638060-08975-0<br>00-021200-87836-7<br>00-021200-87837-4<br>00-021200-82263-6<br>00-021200-82265-0<br>00-021200-82264-3 | 7100148745<br>7000121252<br>7100082565<br>7000121253<br>7000046463<br>7000046439 |
| | **DP270<br>270**<br>(Clear) | Rigid potting compound, Non-corrosive | 1:1 | 12,000 | 60 min | 3 hr | 2<br>(4) | 1,200<br>(8) | 2,500<br>(17) | 300<br>(2) | 48.5mL<br>200mL<br>400mL<br>5 gal pail A<br>5 gal pail B | 00-638060-08973-6<br>00-021200-87834-3<br>00-021200-87835-0<br>00-021200-82251-3<br>00-021200-82250-6 | 7100148730<br>4000009361<br>7100077143<br>7000028575<br>7000028567 |
| | **1751 B/A**<br>(Gray) | Excellent void filler, Rigid bonds | 3:2 | 700,000 | 45 min | 10 hr | 4<br>(7) | 1,400<br>(10) | 2,000<br>(14) | 500<br>(3) | 2 oz tube kit<br>Pint kit<br>Qt Kit<br>Gal Kit<br>5 gal pail A<br>5 gal pail B | 00-021200-20100-4<br>00-021200-20101-1<br>00-021200-20103-5<br>00-021200-20105-9<br>00-021200-20108-0<br>00-021200-20120-2 | 7000121211<br>7000046336<br>7000046337<br>7000046339<br>7010309727<br>7010367210 |
| | **1838 B/A**<br>(Green) | Multi-purpose, Rigid bonds | 4:5 | 400,000 | 60 min | 8 hr | 4<br>(7) | 1,500<br>(10) | 3,000<br>(21) | 500<br>(3) | 2 oz tube kit<br>Pint kit<br>Qt Kit<br>Gal Kit<br>5 gal pail A<br>5 gal pail B | 00-021200-20148-6<br>00-021200-20150-9<br>00-021200-20152-3<br>00-021200-20154-7<br>00-021200-20160-8<br>00-021200-20155-4 | 7000000810<br>7010295295<br>7000046340<br>7000121212<br>7010309728<br>7010367213 |
| | **1838L B/A**<br>(Translucent) | Multi-purpose, Rigid bonds | 1:1 | 10,000 | 60 min | 8 hr | 4<br>(7) | 2,000<br>(14) | 2,500<br>(17) | 300<br>(2) | 2 oz tube kit<br>Qt Kit<br>5 gal pail A<br>5 gal pail B | 00-021200-22645-8<br>00-021200-22646-5<br>00-021200-82635-1<br>00-021200-82634-4 | 7010367467<br>7000036224<br>7010366157<br>7010330215 |
| | **2158 B/A**<br>(Gray) | Multi-purpose, Rigid bonds | 1:1 | 375,000 | 2 hr | 10 hr | 3<br>(5) | 1,500<br>(10) | 2,000<br>(14) | 400<br>(3) | Pint kit<br>Qt Kit<br>Gal Kit<br>5 gal pail A<br>5 gal pail B | 00-021200-20258-2<br>00-021200-20260-5<br>00-021200-20262-9<br>00-021200-20269-8<br>00-021200-20264-3 | 7010309731<br>7000046348<br>7010330060<br>7000046350<br>7000046349 |
| | **3501 B/A**<br>(Gray) | Multi-purpose, Rigid bonds | 1:1 | 500,000 | 7 min | 25 min | 4<br>(7) | 1,500<br>(10) | 2,400<br>(16) | 300<br>(2) | 2 oz tube kit<br>400mL<br>Pint kit<br>Gal Kit<br>55 gal drum A<br>55 gal drum B | 00-021200-20842-3<br>00-021200-45184-3<br>00-021200-20843-0<br>00-021200-20846-1<br>00-051111-91640-7<br>00-051111-91639-1 | 7000046476<br>7010367460<br>7100010271<br>7010367461<br>7010292710<br>7010367462 |

For lead times on bulk adhesives, please contact your 3M representative.

**Key Product** **Denotes product to consider first in this category.** * **After Key Products, consider these.**

**Note:** The technical information and data on these pages should be considered representative or typical only and should not be used for specification purposes.

## 3M™ Scotch-Weld™ Structural Adhesives (cont.)



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| | Product (Color) | Key Features | Mix Ratio (Vol.) B:A | Approx. Viscosity at 75°F (24°C) (cP) | Approx. Mixed Work Life at 75°F (24°C) | Approx. Time to Handling Strength at 75°F (24°C) | Floating Roller Peel PLI (N/cm) at 75°F (24°C) | Overlap Shear: psi (MPa) -67°F (-55°C) | Overlap Shear: psi (MPa) 75°F (24°C) | Overlap Shear: psi (MPa) 180°F (82°C) | Size | UPC | Stock # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **3M™ Scotch-Weld™ Flexible Epoxies** | | | | | | | | | | | | |
| Key Product | **DP100 Plus**<br>**100 Plus**<br>(Clear) | Very flexible, Colorless | 1:1 | 8,500 | 4 min | 20 min | 55 (98) | 3,000 (21) | 3,500 (24) | 200 (1) | 48.5mL<br>200mL<br>400mL<br>5 gal pail A<br>5 gal pail B | 00-638060-08976-7<br>00-021200-87266-2<br>00-021200-87267-9<br>00-021200-87198-6<br>00-021200-87197-9 | 7100148750<br>7100069498<br>7000121255<br>7100046020<br>7100084539 |
| | **DP105**<br>**105**<br>(Clear) | Very flexible, Colorless | 1:1 | 6,500 | 5 min | 20 min | 50 (89) | 3,500 (24) | 2,000 (14) | 150 (1) | 48.5mL<br>200mL<br>400mL<br>5 gal pail A<br>5 gal pail B | 00-638060-08981-1<br>00-021200-87270-9<br>00-021200-87271-6<br>00-021200-87206-8<br>00-021200-87205-1 | 7100148733<br>7010309884<br>7100076786<br>7000000856<br>7000000850 |
| | **DP110**<br>**110**<br>(Gray) | General purpose, Flexible bonds | 1:1 | 55,000 | 8 min | 20 min | 40 (71) | 2,700 (19) | 3,500 (24) | 250 (2) | 48.5mL<br>200mL<br>400mL<br>5 gal pail A<br>5 gal pail B | 00-638060-08990-3<br>00-021200-87274-7<br>00-021200-87275-4<br>00-021200-82472-2<br>00-021200-82471-5 | 7100148777<br>7000121312<br>7100009581<br>7010299362<br>7010299357 |
| | **DP110**<br>**110**<br>(Translucent) | General purpose, Flexible bonds | 1:1 | 50,000 | 8 min | 20 min | 40 (71) | 2,500 (17) | 2,500 (17) | 200 (1) | 48.5mL<br>200mL<br>400mL<br>5 gal pail A<br>5 gal pail B | 00-638060-08993-4<br>00-021200-87846-6<br>00-021200-87847-3<br>00-021200-82467-8<br>00-021200-82466-1 | 7100148762<br>7000148270<br>7000148269<br>7010366163<br>7010366143 |
| Key Product | **DP125**<br>**125**<br>(Gray) | High performance, Very flexible bonds | 1:1 | 52,500 | 25 min | 2.5 hr | 90 (160) | 3,400 (23) | 4,300 (30) | 400 (3) | 48.5mL<br>200mL<br>400mL<br>5 gal pail A<br>5 gal pail B | 00-638060-08985-9<br>00-021200-87844-2<br>00-021200-87845-9<br>00-021200-87218-1<br>00-021200-87217-4 | 7100148735<br>7000121264<br>7100076727<br>7100084588<br>7100084538 |
| | **DP125**<br>**125**<br>(Translucent) | High performance, Very flexible bonds | 1:1 | 15,000 | 25 min | 2.5 hr | 85 (151) | 4,000 (28) | 2,500 (17) | 150 (1) | 48.5mL<br>200mL<br>400mL | 00-638060-08983-5<br>00-021200-87842-8<br>00-021200-87843-5 | 7100148734<br>7100025419<br>7000121262 |
| | **DP190**<br>(Translucent) | High performance, Flexible bonds | 1:1 | 10,000 | 80 min | 6 hr | 60 (107) | 3,500 (24) | 1,200 (8) | 150 (1) | 48.5mL<br>200mL<br>400mL | 00-638060-08980-4<br>00-021200-87838-1<br>00-021200-87839-8 | 7100148752<br>7000121260<br>7010329707 |
| * | **DP190**<br>(Gray) | High performance, Slightly flexible bonds | 1:1 | 80,000 | 90 min | 10 hr | 50 (89) | 1,500 (10) | 2,500 (17) | 400 (3) | 48.5mL<br>200mL<br>400mL | 00-638060-08992-7<br>00-021200-87840-4<br>00-021200-87841-1 | 7010410438<br>7000121314<br>7100076722 |
| * | **2216 B/A**<br>(Gray) | High performance, Very flexible bonds | 2:3 | 80,000 | 90 min | 10 hr | 50 (89) | 3,000 (21) | 3,200 (22) | 400 (3) | 43mL Duo-Pak<br>2 oz tube kit<br>Pint kit<br>Qt Kit<br>Gal Kit<br>5 gal pail A<br>5 gal pail B<br>55 gal drum A<br>55 gal drum B | 00-021200-56659-2<br>00-021200-20351-0<br>00-021200-20354-1<br>00-021200-20356-5<br>00-021200-20358-9<br>00-021200-20365-7<br>00-021200-20360-2<br>00-021200-20366-4<br>00-021200-20361-9 | 7000046357<br>7000000812<br>7000046358<br>7000000815<br>7000000816<br>7000046361<br>7000046360<br>7100166318<br>7100166319 |
| | **2216 B/A**<br>(Translucent) | General purpose, Very flexible bonds | 1:1 | 10,000 | 2 hr | 14 hr | 70 (125) | 3,000 (21) | 1,700 (12) | 140 (1) | 2 oz tube kit<br>Pint kit<br>Qt Kit<br>Gal Kit<br>5 gal pail A<br>5 gal pail B<br>55 gal drum A<br>55 gal drum B | 00-021200-20851-5<br>00-021200-20852-2<br>00-021200-20854-6<br>00-021200-20856-0<br>00-021200-64981-3<br>00-021200-64980-6<br>00-021200-20927-7<br>00-021200-20859-1 | 7000046479<br>7010310194<br>7000000861<br>7000046480<br>7000046494<br>7000121307<br>7010330240<br>7010367466 |
| | **2216NS B/A**<br>(Tan) | High performance, Non-sag | 2:3 | 350,000 | 2 hr | 10 hr | 50 (89) | 2,000 (14) | 2,500 (17) | 400 (3) | 5 gal pail A<br>5 gal pail B | 00-021200-87180-1<br>00-021200-87179-5 | 7010367414<br>7010309882 |

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**Note:** The technical information and data on these pages should be considered representative or typical only and should not be used for specification purposes.

## 3M™ Scotch-Weld™ Structural Adhesives (cont.)



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| Product (Color) | Key Features | Mix Ratio (Vol.) B:A | Approx. Viscosity at 75°F (24°C) (cP) | Approx. Mixed Work Life at 75°F (24°C) | Approx. Time to Handling Strength at 75°F (24°C) | Floating Roller Peel PLI (N/cm) at 75°F (24°C) | Overlap Shear: psi (MPa) | | | Size | UPC | Stock # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | -67°F (-55°C) | 75°F (24°C) | 180°F (82°C) | | | |
| **3M™ Scotch-Weld™ Toughened Epoxies** | | | | | | | | | | | | |
| **DP405**<br>**405**<br>(Black) | Tough durable bonds, High impact resistance | 2:1 | 40,000 | 4 min | 15 min | 40 (71) | 4,500 (31) | 4,500 (31) | 600 (4) | 50mL<br>400mL<br>5 gal pail A<br>5 gal pail B | 00-638060-08971-2<br>00-051111-07699-6<br>00-051111-07708-5<br>00-051111-07707-8 | 7100148728<br>7010365943<br>7010301041<br>7010329549 |
| **DP420**<br>**420**<br>(Black) | Tough durable bonds, High impact resistance | 2:1 | 30,000 | 20 min | 2 hr | 75 (133) | 4,500 (31) | 4,500 (31) | 1,250 (9) | 50mL<br>200mL<br>400mL<br>Gal Kit<br>5 gal pail A<br>5 gal pail B<br>55 gal drum A<br>55 gal drum B | 00-638060-08966-8<br>00-021200-41530-2<br>00-021200-41529-6<br>00-051115-25796-4<br>00-021200-41532-6<br>00-021200-41531-9<br>00-021200-41534-0<br>00-021200-41533-3 | 7100148731<br>7100007956<br>7100077148<br>7000046381<br>7000000834<br>7000000827<br>7010365967<br>7010309750 |
| **DP420**<br>**420**<br>(Off-White) | Tough durable bonds, High impact resistance | 2:1 | 30,000 | 20 min | 2 hr | 70 (125) | 4,500 (31) | 4,500 (31) | 450 (3) | 50mL<br>200mL<br>400mL<br>5 gal pail A<br>5 gal pail B | 00-638060-08978-1<br>00-021200-87832-9<br>00-021200-87833-6<br>00-021200-82239-1<br>00-021200-82238-4 | 7100148736<br>7100077136<br>7100002516<br>7100001144<br>7100001145 |
| **DP420LH**<br>**420LH**<br>(Off-White) | Tough durable bonds, Low halogen | 2:1 | 30,000 | 20 min | 2 hr | 70 (125) | 4,500 (31) | 4,500 (31) | 1,250 (9) | 200mL<br>400mL | 00-051111-07697-2<br>00-051111-07696-5 | 7010329550<br>7100075336 |
| Key Product **DP420NS**<br>**420NS**<br>(Black) | Tough durable bonds, Non-sag | 2:1 | 180,000 | 20 min | 2 hr | 60 (107) | 4,500 (31) | 4,500 (31) | 1,250 (9) | 50mL<br>200mL<br>400mL<br>5 gal pail A<br>5 gal pail B<br>55 gal drum A<br>55 gal drum B | 00-638060-08987-3<br>00-021200-39286-3<br>00-021200-39287-0<br>00-021200-31309-7<br>00-021200-56587-8<br>00-048011-58133-0<br>00-048011-58132-3 | 7100148758<br>7100036943<br>7100010680<br>7000000857<br>7000000853<br>7100160352<br>7100160334 |
| **DP460**<br>**460**<br>(Black) | Tough durable bonds | 2:1 | 30,000 | 60 min | 4 hr | 80 (142) | 4,500 (31) | 4,500 (31) | 700 (5) | 5 gal pail A<br>5 gal pail B | 00-021200-25319-5<br>00-021200-25318-8 | 7000121271<br>7000121265 |
| **DP460**<br>**460**<br>(Off-White) | Tough durable bonds | 2:1 | 30,000 | 60 min | 4 hr | 80 (142) | 4,500 (31) | 4,500 (31) | 700 (5) | 50mL<br>200mL<br>400mL<br>Qt Kit<br>5 gal pail A<br>5 gal pail B<br>55 gal drum A<br>55 gal drum B | 00-638060-08998-9<br>00-021200-87830-5<br>00-021200-87831-2<br>00-021200-82226-1<br>00-021200-82228-5<br>00-021200-82227-8<br>00-021200-83757-9<br>00-76308-14623-8 | 7100148768<br>7000121321<br>7100082563<br>7000000874<br>7000000876<br>7000000875<br>7010366165<br>7100153215 |
| **DP460NS**<br>**460NS**<br>(Off-White) | Tough durable bonds, Non-sag | 2:1 | 125,000 | 60 min | 4 hr | 70 (125) | 4,900 (34) | 4,650 (32) | 1,350 (9) | 50mL<br>200mL<br>400mL<br>5 gal pail A<br>5 gal pail B | 00-638060-08968-2<br>00-021200-43671-0<br>00-021200-43672-7<br>00-021200-43674-1<br>00-021200-43673-4 | 7100148751<br>7100069441<br>7100076677<br>7010329565<br>7010301036 |
| **LSB60**<br>(Gray) | Tough durable bonds, High impact resistance | 1:1 | 30,000 | 90 min | 10 hr | 15 (27) | 3,400 (23) | 4,500 (31) | 900 (6) | 400mL<br>5 gal pail A<br>5 gal pail B<br>55 gal drum A<br>55 gal drum B | 00-051115-63411-6<br>00-051115-63416-1<br>00-051115-63414-7<br>00-051115-63418-5<br>00-051115-63417-8 | 7000046487<br>7010310209<br>7010366138<br>7010366162<br>7010310202 |
| **LSB60NS**<br>(Gray) | Tough durable bonds, Non-sag, High impact resistance | 1:1 | 180,000 | 90 min | 10 hr | 30 (53) | 3,800 (26) | 4,500 (31) | 800 (6) | 400mL<br>5 gal pail A<br>5 gal pail B<br>50 gal drum A<br>50 gal drum B | 00-051115-63426-0<br>00-051115-63428-4<br>00-051115-63427-7<br>06-38060-40269-6<br>06-38060-40270-2 | 7000046491<br>7100079533<br>7100079534<br>7100198360<br>7100198390 |
| **LSB360NS**<br>(Green) | Tough durable bonds, Non-sag Extra long work life, Bonds oily metals | 1:1 | Paste | 10 hr | 16 hr | 30 (53) | 4,000 (28) | 3,900 (27) | 800 (6) | 400mL<br>55 gal drum A<br>55 gal drum B | 00-051111-64291-3<br>00-051115-64360-6<br>00-051115-64391-0 | 7010366139<br>7010330243<br>7010299359 |

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## 3M™ Scotch-Weld™ Structural Adhesives (cont.)

| Product (Color) | Key Features | Approx. Viscosity at 75°F/ 24°C (cP) | Cure Conditions | | Floating Roller Peel PLI (N/ cm) at 75°F (24°C) | Overlap Shear: psi (MPa) | | | | Size | UPC | Stock # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Time (min) | Temp. F (C) | | -67°F (-55°C) | 75°F (24°C) | 180°F (82°C) | 250°F (121°C) | | | |
| **3M™ Scotch-Weld™ Heat-Cured Epoxies** | | | | | | | | | | | | |
| **1386** (Cream) | High temperature strength, Impact resistance | 150,000 | 60 | 350 (177) | 10 (18) | 3,000 (21) | 5,500 (38) | 4,500 (31) | 2,500 (17) | 1 qt | 00-021200-19917-2 | 7000046326 |
| **1469** (Cream) | High temperature strength, Low viscosity | 60,000 | 120 | 350 (177) | 2 (4) | 3,150 (22) | 3,700 (26) | 3,700 (26) | 3,600 (25) | 1 qt<br>5 gal pail | 00-021200-19949-3<br>00-021200-19950-9 | 7000046328<br>7100056050 |
| **2214 Hi-Density** (Gray) | High temperature strength, Low temp curing | Paste | 40 | 250 (121) | 5 (9) | 3,000 (21) | 4,500 (31) | 4,500 (31) | 1,700 (12) | 6 oz cart.<br>5 gal pail | 00-021200-20813-3<br>00-021200-20814-0 | 7000021289<br>7010367423 |
| **2214 Hi-Temp New Formula** (Gray) | High temperature strength, Environmental resistance | Paste | 60 | 250 (121) | 2 (4) | 2,800 (19) | 2,800 (19) | 2,800 (19) | 2,500 (17) | 6 oz cart.<br>5 gal pail | 00-021200-20833-1<br>00-021200-20835-5 | 7000046474<br>7010330200 |
| **2214 Hi-Temp Original** (Gray) | High temperature strength, Environmental resistance | Paste | 40 | 250 (121) | 2 (4) | 2,000 (14) | 2,000 (14) | 3,000 (21) | 2,500 (17) | 6 oz cart. | 00-021200-20806-5 | 7000121274 |
| **221 Non-Metallic Filled** (Cream) | High temperature strength, Higher insulation value | Paste | 40 | 250 (121) | 7 (12) | 3,000 (21) | 4,000 (28) | 4,500 (31) | 1,500 (10) | 2 oz tube<br>6 oz cart. | 00-021200-20802-7<br>00-021200-25496-3 | 7100034990<br>7000121273 |
| * **2214 Regular** (Gray) | High temperature strength, Low temp curing | Paste | 40 | 250 (121) | 5 (9) | 3,000 (21) | 4,500 (31) | 4,500 (31) | 1,500 (10) | 6 oz cart.<br>1 qt<br>5 gal pail | 00-021200-20344-2<br>00-021200-20345-9<br>00-021200-23047-3 | 7000000811<br>7000046356<br>7100111206 |
| **2290** (Amber) | Low solids liquid coating for metal laminations | 60 | 30 | 350 (177) | 5 (9) | 5,000 (34) | 5,000 (34) | 3,500 (24) | 1,200 (8) | Gal cont.<br>5 gal pail<br>55 gal drum | 00-021200-76225-3<br>00-021200-76227-7<br>00-021200-76228-4 | 7000000897<br>7100144895<br>7100144896 |

| Product | Key Festures | Viscosity | Color | Dry time (24°C–33°C) | Dry time (88°C) | Size | UPC | Stock # |
|---|---|---|---|---|---|---|---|---|
| **3M™ Scotch-Weld™ Primer** | | | | | | | | |
| **Metal Primer 3901** | Improves metal and glass adhesion and increases environmental resistance | 5 | Red | 1 hour | 30 min | 0.5 pint | 00-021200-21087-7 | 7000000907 |

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## 3M™ Scotch-Weld™ Threadlockers

3M's Threadlocker Adhesives offer a range of products including temporary, permanent and high temperature resistance. These adhesives conform to most industry recognized standards for torque and strength.

**Key Products**
**TL42, TL62, TL71, TL90**




## 3M™ Scotch-Weld™ Epoxy Adhesive DP100 Plus

3M™ Scotch-Weld™ Epoxy Adhesive DP100 Plus is a very flexible, fast-setting, two-part epoxy adhesive that cures clear and colorless. It provides a strong, permanent bond, even under vibration and impact and is flexible when cured, making it a good choice for bonding dissimilar surfaces.



## 3M™ Scotch-Weld™ Structural Adhesives (cont.)



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| Product (Color) | Key Features | Mix Ratio (Vol.) B:A | Approx. Viscosity at 75°F (24°C) (cP) | Approx. Mixed Work Life at 75°F (24°C) | Approx. Time to Handling Strength at 75°F (24°C) | Floating Roller Peel PLI (N/cm) at 75°F (24°C) | Overlap Shear: psi (MPa) | | | Size | UPC | Stock # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | -20°F (-29°C) | 75°F (24°C) | 180°F (82°C) | | | |
| **3M™ Scotch-Weld™ Standard MMA Acrylics** | | | | | | | | | | | | |
| **DP805** (Off-White) | Fast strength build, Minimal surface prep | 1:1 | 110,000 | 3 min | 10 min | 35 (62) | 2,500 (17) | 3,500 (24) | 2,200 (15) | 48.5mL<br>200mL | 00-638060-08982-8<br>00-021200-87828-2 | 7010410436<br>7010367390 |
| **DP820** (Light Yellow) | Tough durable bond, Minimal surface prep | 1:1 | 55,000 | 15 min | 40 min | 20 (36) | 3,100 (21) | 3,150 (22) | 1,900 (13) | 48.5mL<br>200mL<br>400mL | 00-638060-08977-4<br>00-021200-89348-3<br>00-021200-89349-0 | 7010412194<br>7010329704<br>7000121258 |
| **DP8405NS**<br>**8405NS** (Green) | High impact, Adhesion to most plastics | 10:1 | 70,000 | 5 min | 15 min | 50 (89) | 2,600 (18) | 4,100 (28) | 900 (6) | 45mL<br>490mL<br>1 gal pail A<br>5 gal pail B 5 gal pail A<br>55 gal drum B | 00-051115-68963-5<br>00-051115-68964-2<br>00-051115-68981-9<br>00-051115-68986-4<br>00-051115-68980-2<br>00-051115-68987-1 | 7100009688<br>7100011056<br>7100102180<br>7100027430<br>7100101506<br>7100084534 |
| Key Product **DP8407NS**<br>**8407NS** (Gray) | High impact, Adhesion to most plastics | 10:1 | 20,000 | 7 min | 24 min | 50 (89) | 3,400 (23) | 4,500 (31) | 1,400 (10) | 45mL<br>490mL<br>1 gal pail A<br>5 gal pail B 5 gal pail A<br>55 gal drum B | 00-638060-14631-6<br>00-638060-14643-9<br>00-638060-14658-3<br>00-076308-86306-7<br>00-638061-14659-0<br>00-076308-98878-4 | 7100179482<br>7100179480<br>7100179264<br>7100105384<br>7100179442<br>7100104987 |
| Key Product **DP8410NS**<br>**8410NS** (Green) | High impact, Adhesion to most plastics | 10:1 | 70,000 | 10 min | 25 min | 50 (89) | 3,600 (25) | 4,100 (28) | 800 (6) | 45mL<br>490mL<br>1 gal pail A<br>5 gal pail B 5 gal pail A<br>55 gal drum B | 00-051115-70994-4<br>00-051115-70995-1<br>00-051115-68981-9<br>00-051115-70997-5<br>00-051115-68980-2<br>00-051115-71101-5 | 7100024055<br>7100024045<br>7100102180<br>7100084532<br>7100101506<br>7100084535 |
| **DP8425NS**<br>**8425NS** (Green) | High impact, Adhesion to most plastics | 10:1 | 70,000 | 25 min | 50 min | 50 (89) | 3,800 (26) | 3,700 (26) | 800 (6) | 45mL<br>490mL<br>1 gal pail A<br>5 gal pail B 5 gal pail A<br>55 gal drum B | 00-051115-81303-0<br>00-051115-81302-3<br>00-051115-68981-9<br>00-051115-81298-9<br>00-0511115-81414-3<br>00-051115-81031-6 | 7100078165<br>7100078166<br>7100102180<br>7010415048<br>7100101506<br>7100084535 |
| **3M™ Scotch-Weld™ Low Odor Acrylics** | | | | | | | | | | | | |
| **DP810**<br>**810** (Black) | Tough durable bond, High impact resistance | 1:1 | 20,000 | 10 min | 20 min | 30 (53) | 1,200 (8) | 3,600 (25) | 500 (3) | 48.5mL<br>200mL<br>1 gal pail A<br>1 gal pail B<br>4.4 gal pail A<br>4.4 gal pail B | 00-638060-08967-5<br>00-021200-49079-8<br>00-048011-56712-9<br>00-048011-56711-2<br>00-021200-49081-1<br>00-021200-49080-4 | 7100148732<br>7100142848<br>7000046401<br>7000046385<br>7010365969<br>7010329544 |
| **DP810**<br>**810** (Tan) | Tough durable bond, High impact resistance | 1:1 | 20,000 | 10 min | 20 min | 30 (53) | 1,200 (8) | 3,600 (25) | 500 (3) | 48.5mL<br>200mL<br>400mL<br>4.4 gal pail A<br>4.4 gal pail B | 00-638060-08986-6<br>00-021200-31311-0<br>00-021200-31312-7<br>00-021200-45233-8<br>00-021200-45230-7 | 7100148757<br>7000121267<br>7000121266<br>7100077450<br>7100077451 |
| **DP810NS**<br>**810NS** (Tan) | Tough durable bond, Non-sag | 1:1 | 95,000 | 10 min | 20 min | 20 (36) | 1,200 (8) | 4,000 (28) | 500 (3) | 48.5mL<br>200mL<br>400mL | 00-638060-08969-9<br>00-021200-49084-2<br>00-021200-49083-5 | 7100148748<br>7100069365<br>7100069366 |
| Key Product **DP8805NS**<br>**8805NS** (Green) | Low odor, Fast rate of strength build | 10:1 | 80,000 | 5min | 10 min | 30 (53) | 800 (5) | 3,600 (25) | 900 (6) | 45mL<br>490mL<br>1 gal pail A<br>5 gal pail B 5 gal pail A<br>55 gal drum B | 00-076308-98433-5<br>00-076308-98439-7<br>00-051115-81415-0<br>00-076308-98440-3<br>00-051115-81414-3<br>00-076308-98441-0 | 7100098631<br>7100097636<br>7100102180<br>7100097693<br>7100101506<br>7100097673 |
| **DP8810NS**<br>**8810NS** (Green) | Low odor, Fast rate of strength build | 10:1 | 80,000 | 10 min | 20 min | 30 (53) | 900 (6) | 3,600 (25) | 800 (6) | 45mL<br>490mL<br>1 gal pail A<br>5 gal pail B 5 gal pail A<br>55 gal drum B | 00-051128-99432-0<br>00-051128-99431-3<br>00-051115-81415-0<br>00-076308-98442-7<br>00-051115-81414-3<br>00-076308-98443-4 | 7100097574<br>7100075409<br>7100102180<br>7100097704<br>7100101506<br>7100097626 |
| **DP8810NS** (Gray) | Low odor, Fast rate of strength build | 10:1 | 80,000 | 10 min | 20 min | 30 (53) | 900 (6) | 3,600 (25) | 800 (6) | 45mL<br>490mL | 00-076308-86152-0<br>00-076308-98485-4 | 7100097474<br>7010329557 |
| **DP8825NS**<br>**8825NS** (Green) | Low odor, Fast rate of strength build | 10:1 | 80,000 | 25 min | 50 min | 20 (36) | 1,000 (7) | 3,000 (21) | 800 (6) | 45mL<br>490mL<br>1 gal pail A<br>5 gal pail B 5 gal pail A<br>55 gal drum B | 00-051115-81288-0<br>00-051115-81289-7<br>00-051115-81415-0<br>00-051115-81290-3<br>00-051115-81414-3<br>00-051115-81291-0 | 7100067297<br>7100068120<br>7100102180<br>7100067291<br>7100101506<br>7100084533 |

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## 3M™ Scotch-Weld™ Structural Adhesives (cont.)



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| Product (Color) | Key Features | Mix Ratio (Vol.) B:A | Approx. Viscosity at 75°F (24°C) (cP) | Approx. Mixed Work Life at 75°F (24°C) | Approx. Time to Handling Strength at 75°F (24°C) | Floating Roller Peel PLI (N/cm) at 75°F (24°C) | Overlap Shear: psi (MPa) -20°F (-29°C) | Overlap Shear: psi (MPa) 75°F (24°C) | Overlap Shear: psi (MPa) 150°F (66°C) | Size | UPC | Stock # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **3M™ Scotch-Weld™ Low Surface Energy (LSE) Acrylics** | | | | | | | | | | | | |
| **DP8005** (Black) | Bonds polyolefins and low surface energy materials | 10:1 | 25,000 | 3 min | 3 hr | N/A | 875 (6) | 2,000 (14) | 475 (3) | 45mL<br>490mL | 00-051128-99352-1<br>00-051128-99298-2 | 7100089475<br>7100089476 |
| **DP8005** (Off-White) | Bonds polyolefins and low surface energy materials | 10:1 | 25,000 | 3 min | 3 hr | N/A | 750 (5) | 2,200 (15) | 500 (3) | 45mL<br>490mL | 00-051128-99349-1<br>00-051128-99297-5 | 7100088846<br>7100090196 |
| Key Product **DP8010 8010** (Blue) | Bonds polyolefins and low surface energy materials | 10:1 | 20,000 | 10 min | 1 hr | N/A | 2,700 (19) | 2,700 (19) | 500 (3) | 45mL<br>490mL<br>1 gal pail A<br>5 gal pail B<br>5 gal pail A<br>55 gal drum B | 00-051115-71600-3<br>00-051115-71601-0<br>00-021200-49113-9<br>00-051115-71669-0<br>00-021200-49115-3<br>00-076308-14203-2 | 7100036717<br>7100036719<br>7100050479<br>7100036720<br>7000046400<br>7100153259 |
| **DP8010NS 8010NS** (Blue) | Bonds polyolefins and low surface energy materials, Non-sag | 10:1 | 65,000 | 10 min | 1 hr | N/A | 2,700 (19) | 2,700 (19) | 500 (3) | 45mL<br>490mL<br>1 gal pail A<br>5 gal pail B<br>5 gal pail A<br>55 gal drum B | 00-051115-81451-8<br>00-051115-81453-2<br>00-021200-49113-9<br>00-051115-81454-9<br>00-021200-49115-3<br>00-051115-81461-7 | 7100036721<br>7100036723<br>7100050479<br>7010329562<br>7000046400<br>7100113670 |

| Product (Color) | Key Features | Mix Ratio (Vol.) B:A | Approx. Viscosity at 75°F (24°C) (cP) | Approx. Mixed Work Life at 75°F (24°C) | Approx. Time to Handling Strength at 75°F (24°C) | Floating Roller Peel PLI (N/cm) at 75°F (24°C) | Overlap Shear: psi (MPa) -40°F (-40°C) | Overlap Shear: psi (MPa) 75°F (24°C) | Overlap Shear: psi (MPa) 180°F (82 °C) | Size | UPC | Stock # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **3M™ Scotch-Weld™ Semi-Rigid Urethanes** | | | | | | | | | | | | |
| * **DP600 600** (Gray) | Concrete repair, Self-leveling | 1:1 | 6,000 | 1 min | 4 min | 20 (36) | 3,200 (22) | 2,300 (16) | 700 (5) | 48.5mL<br>400mL<br>8.4 fl oz<br>5 gal pail A<br>5 gal pail B | 00-638060-08962-0<br>00-051111-98303-4<br>00-021200-96596-8<br>00-021200-96575-3<br>00-021200-96574-6 | 7100148740<br>7000021287<br>7000046375<br>7010130543<br>7010170293 |
| **DP600NS 600NS** (Gray) | Concrete repair, Non-sag | 1:1 | Paste | 1 min | 4 min | 8 (14) | 2,700 (19) | 2,300 (16) | 700 (5) | 48.5mL<br>400mL | 00-638060-08964-4<br>00-051111-98312-6 | 7100148747<br>7000046376 |
| **DP605NS 605NS** (Off-White) | Semi-rigid, Non-sag | 1:1 | 150,000 | 5 min | 20 min | 40 (71) | 4,000 (28) | 2,000 (14) | 600 (4) | 48.5mL | 00-638060-08997-2 | 7100148767 |
| **DP6310NS** (Green) | Multi-purpose, Energy absorbing | 1:1 | Non-sag paste | 9 min | 45 min | 20 (36) | 3,500 (24) | 3,600 (25) | 900 (6) | 48.5mL<br>400mL<br>5 gal pail A<br>5 gal pail B<br>50 gal drum A<br>50 gal drum B | 00-076308-86407-1<br>00-076308-86398-2<br>00-076308-86782-9<br>00-076308-86748-5<br>00-076308-86783-6<br>00-076308-86749-2 | 7100109829<br>7100109830<br>7100143960<br>7100143915<br>7010415316<br>7010412199 |
| **DP6330NS** (Green) | Multi-purpose, Energy absorbing | 1:1 | Non-sag paste | 30 min | 2 hr | 20 (36) | 3,600 (25) | 3,600 (25) | 1,000 (7) | 48.5mL<br>400mL<br>5 gal pail A<br>5 gal pail B<br>50 gal drum A<br>50 gal drum B | 00-076308-86431-6<br>00-076308-86433-0<br>00-076308-86780-5<br>00-076308-86701-0<br>00-076308-86781-2<br>00-076308-86727-0 | 7100109828<br>7100109827<br>7100143961<br>7100143701<br>7010409611<br>7010366145 |
| **3532 B/A** (Brown) | Multi-purpose, Semi-rigid bonds | 1:1 | 30,000 | 10 min | 90 min | 25 (44) | 2,500 (17) | 2,000 (14) | 300 (2) | 2 oz kit<br>Qt kit<br>5 gal pail A<br>5 gal pail B | 00-021200-20878-2<br>00-021200-20879-9<br>00-021200-20935-2<br>00-021200-20881-2 | 7000000863<br>7000046481<br>7010130544<br>7010170296 |
| **3535 B/A** (Off-White) | Multi-purpose, Semi-rigid bonds | 1:1 | 30,000 | 3 min | 30 min | 25 (44) | 2,500 (17) | 2,000 (14) | 300 (2) | 2 oz kit<br>Qt kit<br>5 gal pail A<br>5 gal pail B | 00-021200-20887-4<br>00-021200-20888-1<br>00-051111-07486-2<br>00-051111-07485-5 | 7000046483<br>7010310199<br>7010366160<br>7010330223 |

For lead times on bulk adhesives, please contact your 3M representative.

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## 3M™ Scotch-Weld™ Structural Adhesives (cont.)

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| | Product (Color) | Key Features | Mix Ratio (Vol.) B:A | Approx. Viscosity at 75°F (24°C) (cP) | Approx. Mixed Work Life at 75°F (24°C) | Approx. Time to Handling Strength at 75°F (24°C) | Floating Roller Peel PLI (N/cm) at 75°F (24°C) | Overlap Shear: psi (MPa) | | | Size | UPC | Stock # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | -40°F (-40°C) | 75°F (24°C) | 180°F (82 °C) | | | |
| | **3M™ Scotch-Weld™ Flexible Urethanes** | | | | | | | | | | | | |
| * | **DP604NS 604NS** (Black) | Flexible, Non-sag | 1:1 | Paste | 4 min | 20 min | 30 (53) | 1,400 (10) | 600 (4) | 300 (2) | 48.5mL<br>400mL<br>5 gal pail A<br>5 gal pail B 55 gal drum A<br>55 gal drum B | 00-638060-08961-3<br>00-051111-98301-0<br>00-021200-96462-6<br>00-021200-96461-9<br>00-076308-14205-6<br>00-076308-87087-4 | 7100148738<br>7100069452<br>7010365926<br>7010367265<br>7010329538<br>7010412243 |
| * | **DP620NS 620NS** (Black) | Semi-flexible Non-sag | 1:1 | Paste | 20 min | 4 hr | 40 (71) | 3,000 (21) | 2,500 (17) | 500 (3) | 48.5mL<br>400mL<br>5 gal pail A<br>5 gal pail B<br>55 gal drum A<br>55 gal drum B | 00-638060-08960-6<br>00-048011-57287-1<br>00-076308-14144-8<br>00-076308-14135-6<br>00-076308-14135-5<br>00-076308-14146-3 | 7100148737<br>7000046372<br>7010329537<br>7010367262<br>7010301034<br>7010309744 |
| | **DP640** (Brown) | Tough flexible bonds | 1:1 | 25,000 | 60 min | 8 hr | 60 (107) | 3,000 (21) | 2,000 (14) | 400 (3) | 48.5mL<br>400mL | 00-638060-08991-0<br>00-021200-89544-9 | 7100148761<br>7010330225 |
| | **3549** (Brown) | Tough flexible bonds | 1:1 | 25,000 | 60 min | 8 hr | 60 (107) | 3,000 (21) | 2,000 (14) | 400 (3) | 2 oz kit<br>Qt kit<br>5 gal pail A<br>5 gal pail B | 00-021200-20901-7<br>00-021200-20902-4<br>00-021200-20942-0<br>00-021200-20904-8 | 7000046484<br>7000046485<br>7100041738<br>7100041737 |
| | **DP5001 5001** (Black) | Flexible, Conveyor belt repair | 1:1 | 100,000 | 1 min | 15 min | N/A | N/A | 600 (4) | N/A | 400mL | 00-051111-98296-9 | 7100028818 |

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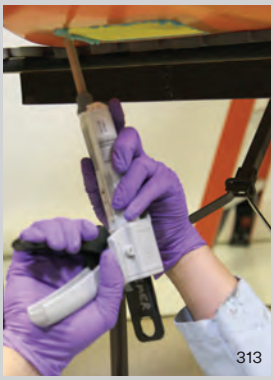
**Key Product** **Denotes product to consider first in this category.** * **After Key Products, consider these.**

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## 3M™ Scotch-Weld™ Low Surface Energy (LSE) Plastic Bonding Adhesives

3M's Low Surface Energy Structural Acrylic Adhesives bond to low surface energy plastics such as Polypropylene (PP), Polyethylene (HDPE) and most Thermoplastic Polyolefins (TPOs), providing structural adhesive bond s trength that causes the plastic material to fail before the adhesive bond.

**Key Products**
**DP8010 Blue**



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## 3M™ Scotch-Weld™ Concrete Repair Adhesives

3M's Concrete Repair Urethane Adhesives repair cracks and patch holes in minutes, providing minimal disruption to your operations. Products are available for both horizontal and vertical surfaces.

**Key Product**
**DP600**



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## 3M™ Scotch-Weld™ PUR Adhesives

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| Product (Color) | Key Features | Viscosity @250°F (121°C) (cP) | Approx. Open Time at 75°F (24°C) | Approx. Time to Handling Strength at 75°F (24°C) | Shore D | Elongation % | Size | UPC | Stock # |
|---|---|---|---|---|---|---|---|---|---|
| **3M™ Scotch-Weld™ PUR Adhesives — Wood Bonders** | | | | | | | | | |
| **EZ250015** (Off-White) | Fast set time | 7,000 | 1.5 min | 15 seconds | 65 | 750 | 1/10 gal<br>5 gal | 00-051115-23545-0<br>00-051115-23546-7 | 7000046529<br>7010310232 |
| **EZ250060** (Off-White) | Medium set time | 7,000 | 2 min | 60 seconds | 60 | 675 | 1/10 gal<br>5 gal | 00-051115-23550-4<br>00-051115-23551-1 | 7000046531<br>7010329734 |
| **EZ250120** (Off-White) | Medium set time, Low viscosity, Thin bond lines | 3,000 | 4 min | 120 seconds | 60 | 625 | 1/10 gal | 00-051115-23554-2 | 7000046532 |
| **TE015** (Off-White) | Fast set time | 7,000 | 1.5 min | 15 seconds | 65 | 750 | 1/10 gal<br>5 gal | 00-051115-25156-6<br>00-021200-39211-5 | 7000046472<br>7010367438 |
| **TE030** (Off-White) | Fast set time, High viscosity | 16,000 | 1 min | 30 seconds | 60 | 725 | 1/10 gal<br>5 gal<br>55 gal drum | 00-051115-25157-3<br>00-021200-82484-5<br>00-021200-82483-8 | 7000046536<br>7010310236<br>7010367598 |
| * **TE100** (Off-White) | Medium set time, Thin bond lines | 7,000 | 2 min | 60 seconds | 61 | 675 | 1/10 gal<br>5 gal | 00-051115-25161-0<br>00-021200-87244-0 | 7000028590<br>7010295326 |
| **TE200** (Off-White) | Medium set time, Low viscosity, Thin bond lines | 3,000 | 4 min | 120 seconds | 60 | 625 | | 00-051115-25164-1<br>00-048011-53272-1 | 7000000905<br>7000046540 |

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**3M™ Scotch-Weld™ PUR Easy 250 Applicator**



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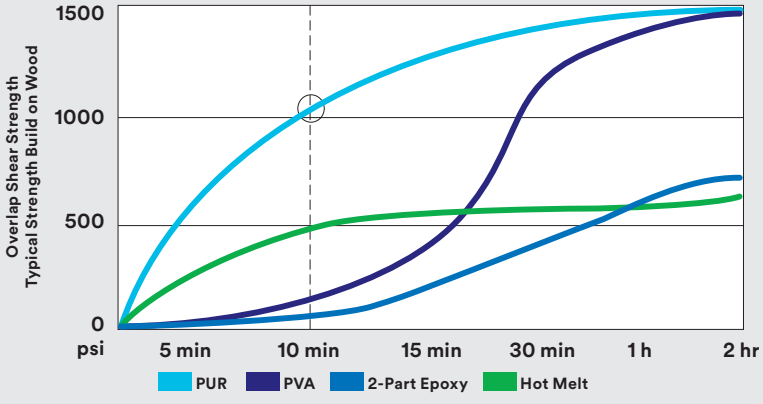
**3M™ Scotch-Weld™ PUR Easy 250 Preheater**




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## 3M™ Scotch-Weld™ PUR Adhesives

PUR Adhesives enhance productivity with fast green strength. Shorter clamp times and reduced need for third-hand mechanical fasteners help speed up your production process without sacrificing ultimate strength.




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## 3M™ Scotch-Weld™ PUR Adhesives (cont.)




| Product (Color) | Key Features | Viscosity @250°F (121°C) (cP) | Approx. Open Time at 75°F (24°C) | Approx. Time to Handling Strength at 75°F (24°C) | Shore D | Elongation % | Size | UPC | Stock # |
|---|---|---|---|---|---|---|---|---|---|
| **3M™ Scotch-Weld™ PUR Adhesives — Plastic Bonders** | | | | | | | | | |
| **EZ250030** (Off-White) | Fast set time, bonds a wide variety of plastics | 13,000 | 2 min | 30 sec | 50 | 725 | 1/10 gal<br>5 gal | 00-051115-23541-2<br>00-051115-23542-9 | 7000046530<br>7000121357 |
| **EZ250150** (Off-White) | Long open time, bonds plastics to metal, glass, wood | 9,000 | 4 min | 150 sec | 45 | 700 | 1/10 gal<br>2k<br>5 gal | 00-051115-23559-7<br>00-051115-23562-7<br>00-051115-23560-3 | 7000046533<br>7010295325<br>7010367590 |
| **EZ250200** (Off-White) | Long open time, low viscosity, bonds plastics, wood, and many other material combinations | 2,750 | 3 min | 120 sec | 30 | 400 | 1/10 gal<br>2k | 00-048011-57402-8<br>00-048011-57401-1 | 7000046538<br>7010367604 |
| **TE031** (Black) | Fast set time, bonds a wide variety of plastics | 13,000 | 2 min | 30 sec | 50 | 725 | 1/10 gal<br>5 gal | 00-051115-25159-7<br>00-021200-89573-9 | 7000000903<br>7100031123 |
| **TE031** (Off-White) | Fast set time, bonds a wide variety of plastics | 13,000 | 2 min | 30 sec | 50 | 725 | 1/10 gal<br>2k<br>5 gal | 00-051115-25158-0<br>00-048011-53355-1<br>00-021200-83695-4 | 7000000902<br>7000028589<br>7100096731 |
| * **TE040** (Black) | Fast set time, strong flexible bonds to plastic, wood, aluminum, glass | 7,000 | 2 min | 40 sec | 35 | 860 | 1/10 gal<br>2k<br>5 gal<br>55 gal drum | 00-051115-64536-5<br>00-051115-64430-6<br>00-638060-14494-7<br>00-638060-14321-6 | 7100003450<br>7000136669<br>7100172685<br>7100160468 |
| **TE040** (Off-White) | Fast set time, strong flexible bonds to plastic, wood, aluminum, glass | 7,000 | 2 min | 41 sec | 35 | 860 | 1/10 gal<br>5 gal<br>55 gal drum | 00-051115-25160-3<br>00-021200-25343-0<br>00-638060-14498-5 | 7000021292<br>7000136628<br>7100170133 |
| **TS115 HGS** (Off-White) | UV indicator, Extrudable/ sprayable/roll coatable with fast set time, bonds plastics to metal, glass, wood | 16,000 | 10 min | 60 sec | 47 | 600 | 5 gal | 00-051115-64535-8 | 7010310234 |
| **TS115 HGS** (Off-White) | Extrudable/sprayable/roll coatable with fast set time, bonds plastics to metal, glass, wood | 16,000 | 10 min | 60 sec | 47 | 600 | 1/10 gal<br>5 gal<br>55 gal drum | 00-051115-25163-4<br>00-021200-89451-0<br>00-021200-89452-7 | 7000000904<br>7010299377<br>7010367606 |
| **TS230** (Black) | Extrudable/sprayable, long open time, bonds plastics to metal, glass, and wood | 9,000 | 4 min | 150 sec | 45 | 700 | 1/10 gal<br>2k<br>5 gal<br>55 gal drum | 00-051115-25166-5<br>00-048011-53273-8<br>00-021200-89583-8<br>00-638060-14675-0 | 7000000906<br>7000046541<br>7000121361<br>7100179521 |
| Key Number **TS230** (Off-White) | Extrudable/sprayable long open time, bonds plastics to metal, glass, and wood | 9,000 | 4 min | 150 sec | 45 | 700 | 1/10 gal<br>2k<br>5 gal<br>55 gal drum | 00-051115-25165-8<br>00-048011-53271-4<br>00-021200-83640-4<br>00-021200-83639-8 | 7000000898<br>7000046534<br>7100024959<br>7100104259 |
| **TS230** (Gray) | Extrudable/sprayable long open time, bonds plastics to metal, glass, and wood | 9,000 | 4 min | 150 sec | 45 | 700 | 55 gal drum | 00-638060-40191-0 | 7100191940 |
| **Purge Material 3756** | Purge PUR adhesives from bulk dispensing equipment | 8250 | N/A | N/A | N/A | N/A | 5 gal | 00-021200-56522-9 | 7000121333 |

| Product | Description | UPC | Stock # |
|---|---|---|---|
| **3M™ Scotch-Weld™ PUR Applicator/Preheater/Hardware** | | | |
| **Applicator** | PUR Easy 250 Applicator, pneumatically dispenses 1/10 gal cartridges, US 120V | 00-051115-23563-4 | 7000000958 |
| **Preheater** | PUR Easy 250 Preheater, preheats up to four 1/10 gal cartridges, 120V, Dual Temp | 00-051115-23564-1 | 7000121608 |
| **System Accessories** (for hands-free dispensing) | Applicator Bench Mount Bracket Assembly (bracket only)<br>Hot Melt Applicator Foot Pedal Assembly 9277 | 00-021200-30086-8<br>00-021200-82278-0 | 7000121614<br>7000121596 |
| **Cartridge Nozzle** | High Temperature Nozzles for PUR 1/10 gal cartridges (Sample, 5/bag) | | 7000031234 |
| **Repair Kits and Replacement Parts** | Adhesive Applicator Housing/Shroud Assembly Kit<br>Applicator Nozzle Shroud<br>Benchmount Quick Exhaust Assembly Replacement Kit<br>Applicator Air Coupler Filter Kit<br>Applicator Air Supply Line Kit<br>Applicator Air Valve Kit<br>Applicator Swivel Connector<br>Applicator End Cap<br>Applicator Heat Tube Assembly (120V) Kit<br>Applicator Heat Tube (240V)<br>Applicator On/Off Switch Kit<br>Applicator Power Cord Kit (120V)<br>Applicator Wire Stand<br>High Temperature (250°F) PUR Preheater Thermostat/TCO Kit<br>Low Temperature (170°F) PUR Preheater Thermostat/TCO Kit | 00-051115-25783-4<br>00-048011-58320-4<br>00-021200-31357-8<br>00-021200-89475-6<br>00-021200-89479-4<br>00-048011-57410-3<br>00-048011-58298-6<br>00-021200-89476-3<br>00-021200-89486-2<br>00-021200-25303-4<br>00-021200-89482-4<br>00-021200-89481-7<br>00-021200-89483-1<br>00-051115-23619-8<br>00-051115-23618-1 | 7000028623<br>7000148288<br>7010366711<br>7000046665<br>7000046668<br>7000046652<br>7000046653<br>7000046666<br>7010329969<br>7000046673<br>7100079509<br>7010366708<br>7010329970<br>7010329954<br>7010366686 |

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## 3M™ Scotch-Weld™ PUR and Instant Adhesives

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| Product (Color) | Description | UPC | Stock # |
|---|---|---|---|
| **3M™ Scotch-Weld™ PUR Applicator/Preheater/Hardware (cont.)** | | | |
| **Alternate Nozzle System not for use with disposable nozzles** | Applicator Main Nozzle Assembly (includes nozzle, tip, tip cap and valve)<br>Applicator Main Nozzle<br>Applicator Extension Tip, .072 in orifice<br>Applicator Tip, .125 in orifice<br>Applicator Tip, .063 in orifice<br>Applicator Tip Cap<br>Applicator Valve Assembly | 00-021200-89514-2<br>00-021200-89515-9<br>00-021200-89471-8<br>00-021200-89473-2<br>00-021200-89472-5<br>00-021200-87194-8<br>00-021200-83730-2 | 7000027561<br>7000046672<br>7000046669<br>7000046671<br>7000046670<br>7100005819<br>7000046650 |

| Product (Color) | Key Features | Typical Viscosity (cP) | Temperature Range | Time to Handling | Full Cure (Hr) | Size | UPC | Stock # |
|---|---|---|---|---|---|---|---|---|
| **3M™ Scotch-Weld™ Instant Adhesives — Plastic and Rubber** | | | | | | | | |
| **PR Gel** (Clear) | Fast cure, gel viscosity for maximum gap filling | Gel | -65° to 180°F (-54° to 82°C) | 20–60 sec | 24 | 20g tube<br>300g cart | 00-051115-25265-5<br>00-051115-25282-2 | 7100039255<br>7100039257 |
| **PR40** (Clear) | Low viscosity for close fitting plastic/rubber parts | 40 | -65° to 180°F (-54° to 82°C) | 3–20 sec | 24 | 20g bottle | 00-051115-25204-4 | 7010330469 |
| Key Product **PR100** (Clear) | General purpose, low viscosity plastic bonder | 100 | -65° to 180°F (-54° to 82°C) | 10–20 sec | 24 | 20g bottle<br>500g bottle<br>500g bottle, 25/CV<br>2k bottle | 00-051115-25214-3<br>00-051115-25213-6<br>00-051115-25939-5<br>00-051111-07176-2 | 7100039259<br>7100039200<br>7010330473<br>7100135507 |
| **PR600** (Clear) | Medium viscosity with some gap filling for plastic/rubbers | 600 | -65° to 180°F (-54° to 82°C) | 4–40 sec | 24 | 50g bottle<br>500g bottle | 00-051115-25241-9<br>00-051115-25240-2 | 7100039244<br>7100039246 |
| **PR1500** (Clear) | General purpose, high viscosity for gap filling | 1,500 | -65° to 180°F (-54° to 82°C) | 20–60 sec | 24 | 2g tube<br>20g bottle<br>500g bottle<br>500g bottle, 25/CV | 00-051115-25222-8<br>00-051115-25221-1<br>00-076308-14147-9 | 7100039201<br>7100039203<br>7010366528 |
| **3M™ Scotch-Weld™ Instant Adhesives — Surface Insensitive** | | | | | | | | |
| **SI Gel** (Clear) | Fast cure, gel viscosity for maximum gap filling | Gel | -65° to 180°F (-54° to 82°C) | 20–60 sec | 24 | 20g tube<br>300g cart. | 00-051115-25266-2<br>00-051115-25284-6 | 7100039258<br>7010330472 |
| **SI100** (Clear) | Low viscosity for medium gaps | 100 | -65° to 180°F (-54° to 82°C) | 3–20 sec | 24 | 3g tube<br>20g bottle | 00-051115-25290-7<br>00-051115-25268-6 | 7100039241<br>7100039240 |
| **SI1500** (Clear) | High viscosity for gap filling | 1,500 | -65° to 180°F (-54° to 82°C) | 5–60 sec | 24 | 50g bottle<br>500g bottle | 00-048011-61662-9<br>00-051115-25245-7 | 7010330477<br>7100039243 |
| **3M™ Scotch-Weld™ Instant Adhesives — Low Odor** | | | | | | | | |
| **LO1000** (Clear) | General purpose, high viscosity with reduced odor and blooming, suitable for minor gap filling | 1,000 | -65° to 180°F (-54° to 82°C) | 20–25 sec | 24 | 20g bottle<br>500g bottle | 00-051111-91664-3<br>00-048011-62738-0 | 7100039269<br>7100039250 |

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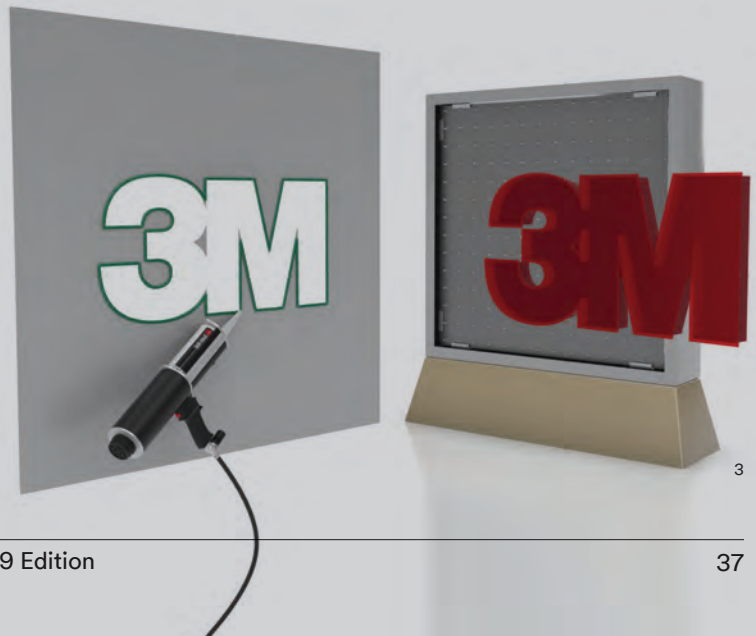
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## 3M™ Scotch-Weld™ Low Odor and MMA Acrylic Adhesives

3M's Low Odor and MMA Acrylic Adhesives are designed for all of your sign application needs. They provide excellent impact strength, high peel strength and greatly extended shelf life compared to ordinary structural adhesives. With high structural strength, fast cure and environmental resistance, they are the first choice for the sign industry.

**Key Produts**
**DP8805NS, DP8810NS, DP8825NS, DP8405NS, DP8407NS, DP8410NS and DP8425NS**




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## 3M™ Scotch-Weld™ Instant Adhesives (cont.)



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| Product (Color) | Key Features | Typical Viscosity (cP) | Temperature Range | Time to Handling | Full Cure (Hr) | Size | UPC | Stock # |
|---|---|---|---|---|---|---|---|---|
| **3M™ Scotch-Weld™ Instant Adhesives — Super Fast** | | | | | | | | |
| **SF20** (Clear) | Fast cure, Optimum performance on wide range of rubbers and plastics | 20 | -65° to 180°F (-54° to 82°C) | 4–30 sec | 24 | 20g bottle<br>500g bottle | 00-051111-91667-4<br>00-051115-25790-2 | 7100049744<br>7100039254 |
| **SF100** (Clear) | Fast cure, high strength with EPDM and other elastomers | 100 | -65° to 180°F (-54° to 82°C) | 4–30 sec | 24 | 3g tube<br>20g bottle<br>500g bottle | 00-048011-62630-7<br>00-048011-62631-4<br>00-048011-62629-1 | 7100039207<br>7100039206<br>7100039208 |
| **3M™ Scotch-Weld™ Instant Adhesives — Rubber Toughened** | | | | | | | | |
| **RT5000B** (Black) | Rubber toughened for impact resistance, High viscosity for minor gap filling | 5,000 | -65° to 180°F (-54° to 82°C) | 30 sec | 24 | 20g bottle<br>500g bottle | 00-051111-91665-0<br>00-051115-25200-6 | 7100039251<br>7100039252 |
| **3M™ Scotch-Weld™ Instant Adhesives — Engineered Grade** | | | | | | | | |
| **CA4** | Fast setting for a variety of plastics and rubbers | 150 | -65° to 180°F (-54° to 82°C) | 5–40 sec | 24 | 2g tube<br>1 oz bottle<br>1 lb. bottle | 00-021200-96601-9<br>00-021200-96600-2<br>00-021200-96597-5 | 7010366320<br>7000028586<br>7000028587 |
| **CA5** | Higher viscosity, slower setting version of CA4 for filling gaps, Meets CID A-A-3097, Type II,Class 3 | 2,000 | -65° to 180°F (-54° to 82°C) | 12–60 sec | 24 | 1 oz bottle<br>1 lb. bottle | 00-021200-74289-7<br>00-021200-74288-0 | 7000046524<br>7010367474 |
| **CA7** | Very fast setting, Excellent metal bonder, Better shock and impact resistance | 15-40 | -65° to 212°F (-54° to 100°C) | 1–30 sec | 24 | 1 oz bottle<br>1 lb. bottle | 00-021200-21061-7<br>00-021200-21062-4 | 7000121352<br>7000121353 |
| **CA8** | Rapid setting, Excellent adhesion to metals, plastics and rubbers, Meets CID A-A-3097, Type II, Class 2 | 70-130 | -65° to 180°F (-54° to 82°C) | 5–40 sec | 24 | 2g tube<br>1 oz bottle<br>1 lb. bottle | 00-021200-21065-5<br>00-021200-21066-2<br>00-021200-21067-9 | 7000121354<br>7000046526<br>7000046527 |
| **CA9** | Slower setting for parts alignment, Useful for wire tracking and coil terminating, Meets CID A-A3097, Type II, Class 3 | 1,000–1,700 | -65° to 180°F (-54° to 82°C) | 20–70 sec | 24 | 1 oz bottle<br>1 lb. bottle | 00-021200-21068-6<br>00-021200-21069-3 | 7000046528<br>7010299373 |
| **CA40** | Very fast setting, Excellent adhesion to many substrates including flexible vinyl and EPDM rubber | 20 | -65° to 180°F (-54° to 82°C) | 3–20 sec | 24 | 1 oz bottle<br>1 lb. bottle | 00-021200-74290-3<br>00-021200-74291-0 | 7000000893<br>7000000894 |
| **CA40H** | Higher viscosity version of CA40, Better void filling capabilities | 400–600 | -65° to 212°F (-54° to 100°C) | 5–40 sec | 24 | 1 oz bottle<br>1 lb. bottle | 00-021200-21073-0<br>00-021200-21074-7 | 7000000895<br>7000000896 |
| **CA50 Gel** | High-viscosity, non-sag gel, Less sensitive to acidic surfaces | 45,000–85,000 | -65° to 212°F (-54° to 100°C) | 60–120 sec | 24 | 20g tube<br>200g cart. | 00-021200-82332-9<br>00-021200-83737-1 | 7100002517<br>7000000899 |
| **CA100** | High peel and impact strength, shock and heat resistance | 2,500–4,500 | -65° to 212°F (-54° to 100°C) | 20–70 sec | 24 | 1 oz bottle<br>1 lb. bottle | 00-021200-82334-3<br>00-021200-82335-0 | 7000000900<br>7000000901 |

For lead times on bulk adhesives, please contact your 3M representative.

**Key Product** **Denotes product to consider first in this category.** * **After Key Products, consider these.**

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## 3M™ Scotch-Weld™ Instant Adhesives (cont.)

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| Product (Color) | Key Features | Typical Viscosity (cP) | Time to Handling | Full Cure (Hr) | Size | UPC | Stock # |
|---|---|---|---|---|---|---|---|
| **3M™ Scotch-Weld™ Instant Adhesive Primers & Activators** | | | | | | | |
| **AC09** | Instant adhesive activator, Non-flammable, solvent-based, California compliant | 1 | 1–5 sec | 24 | 2 fl oz bottle | 00-051111-07795-5 | 7010366543 |
| **AC77** | Instant adhesive primer for bonding of difficult-to-bond plastics such as polyethylene, polypropylene and polyacetal | <3 | 1–5 sec | 24 | 2 fl oz bottle<br>1 gal can | 00-048011-62728-1<br>00-638060-40067-8 | 7100039260<br>7100190206 |
| **AC79** | Instant adhesive primer for bonding of difficult-to-bond elastomers such as silicone, fluoroelastomer and EPDM, VOC compliant | 2 | 1–5 sec | 24 | 2 fl oz bottle<br>8 fl oz bottle<br>4L can | 00-051115-31388-2<br>00-051115-31389-9<br>00-051115-31390-5 | 7100039262<br>7100039264<br>7100039265 |
| **AC113** | Instant adhesive general purpose accelerator, Will not attack plastics | <3 | 1–5 sec | 24 | 8 fl oz bottle | 00-048011-62682-6 | 7100079891 |
| **AC452** | Instant adhesive acetone-based accelerator flashes off rapidly, Excellent adhesion, Overspray may attack some plastics | <2 | 1–5 sec | 24 | 8 fl oz bottle<br>4L can | 00-048011-62686-4<br>00-048011-62689-5 | 7010295349<br>7010366542 |
| **Surface Activator** | Clear, colorless organic-based liquid helps speed curing and prime surfaces, Comes with brush and spray pump | <10 | 1–5 sec | 24 | 2 fl oz bottle | 00-021200-87937-1 | 7000046525 |

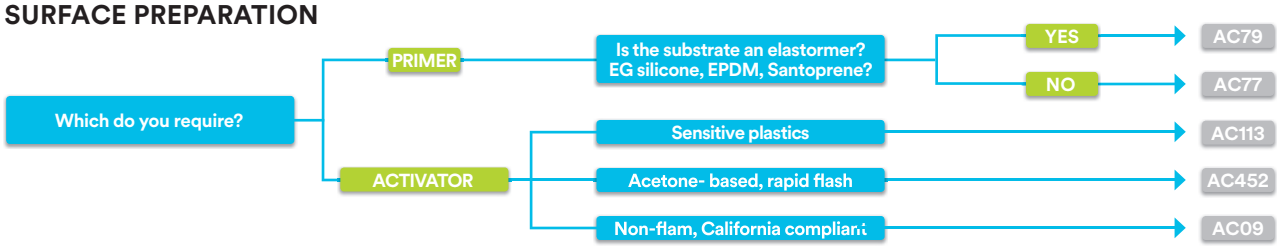
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## SURFACE PREPARATION




### 3M™ Scotch-Weld™ Plastic and Rubber Instant Adhesives

3M's Engineered Grade Instant Adhesives combine high performance, excellent adhesion and temperature resistance with the speed of instant adhesives — providing you with differentiated capabilities for your most difficult thin bond line applications.

**Key Products**
**CA5, CA40, CA40H, CA50 Gel**



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### 3M™ Scotch-Weld™ Engineered Grade Instant Adhesives

The PR (Plastic & Rubber) series of products bonds to most plastics and rubbers with a range of viscosities that will fit all your application needs. Just a single drop per square inch bonds several thousand pounds of holding power. They provide proven, world record strength with a hold of 8 metric tons.

**Key Products**
**PR40, PR100, PR600, PR1500, PRGel**



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## 3M™ Scotch-Weld™ Anaerobic Adhesives

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| Product (Color) | Key Features | Typical Viscosity (cP) | Temperature Range | Time to Handling | Full Cure (Hr) | Size | UPC | Stock # |
|---|---|---|---|---|---|---|---|---|
| **3M™ Scotch-Weld™ Anaerobic Adhesives — Threadlockers** | | | | | | | | |
| **TL22** (Purple) | Screwlock — low removal torque fasteners less than a 1/4" (6mm) | 1,200 | -65° to 300°F (-54° to 149°C) | < 30 min | 24 | 10mL bottle<br>50mL bottle<br>250mL bottle | 00-048011-62601-7<br>00-048011-62602-4<br>00-048011-62603-1 | 7100039217<br>7100039159<br>7010367446 |
| **TL42** (Blue) | Nutlock — medium strength, general purpose | 1,200 | -65° to 300°F (-54° to 149°C) | < 30 min | 24 | 1mL pipette<br>10mL bottle<br>50mL bottle<br>250mL bottle<br>1L bottle | 00-048011-62604-8<br>00-048011-62605-5<br>00-048011-62606-2<br>00-048011-62607-9<br>00-051115-25124-5 | 7100064043<br>7100039190<br>7100039193<br>7100039192<br>7010310189 |
| **TL43** (Blue) | Oil tolerant, medium strength, general purpose | 3,300 | -65° to 300°F (-54° to 149°C) | < 30 min | 24 | 10mL bottle<br>50mL bottle<br>250mL bottle | 00-051115-25138-2<br>00-051115-25139-9<br>00-051115-25140-5 | 7100039219<br>7100039222<br>7100039221 |
| **TL62** (Red) | Studlock — high strength with controlled torque tension | 1,600 | -65° to 300°F (-54° to 149°C) | < 30 min | 24 | 10mL bottle<br>50mL bottle<br>250mL bottle | 00-048011-62609-3<br>00-048011-62610-9<br>00-048011-62611-6 | 7100039194<br>7100039196<br>7100039195 |
| **TL71** (Red) | Permanent studlock for bolts and studs up to 1" (25mm) | 500 | -65° to 300°F (-54° to 149°C) | < 30 min | 24 | 1mL pipette<br>10mL bottle<br>50mL bottle<br>250mL bottle | 00-051115-25125-2<br>00-048011-62612-3<br>00-048011-62613-0<br>00-048011-62614-7 | 7010330204<br>7100039197<br>7100039231<br>7100039230 |
| **TL72** (Red) | High temperature studlock with gap filling for larger diameter coarse threaded parts | 7,000 | -65° to 450°F (-54° to 232°C) | < 30 min | 24 | 50mL bottle | 00-051115-25137-5 | 7100101211 |
| **TL77** (Red) | Heavy duty permanent for fasteners up to 1.5" (38mm) with coarse threads | 7,000 | -65° to 300°F (-54° to 149°C) | < 30 min | 24 | 50mL bottle<br>250mL bottle | 00-051115-25143-6<br>00-051115-25144-3 | 7100039225<br>7100039224 |
| **TL90** (Green) | Penetrating adhesive for pre-assembled fasteners and porosity sealing of welds | 20 | -65° to 300°F (-54° to 149°C) | < 30 min | 24 | 10mL bottle<br>50mL bottle<br>250mL bottle | 00-048011-62615-4<br>00-048011-62616-1<br>00-048011-62617-8 | 7100039234<br>7100039236<br>7100039235 |
| **3M™ Scotch-Weld™ Anaerobic Adhesives — Pipe Sealants** | | | | | | | | |
| **HP45** (Purple) | High pressure sealant for all hydraulic and pneumatic fittings | 14,000 | -65° to 300°F (-54° to 149°C) | < 30 min | 24 | 50mL bottle<br>250mL bottle | 00-048011-62721-2<br>00-048011-62722-9 | 7100039213<br>7100039212 |
| **PS65** (White) | General purpose for applications requiring easy disassembly | Paste | -65° to 300°F (-54° to 149°C) | 2-5 hr | 24 | 50mL tube<br>250mL tube | 00-048011-62711-3<br>00-048011-62712-0 | 7100039238<br>7100039237 |
| **PS67** (White) | Fast curing pipe sealant for inactive surfaces such as stainless steel | Paste | -65° to 400°F (-54° to 204°C) | 15-30 min | 24 | 50mL tube<br>250mL tube | 00-048011-62714-4<br>00-048011-62715-1 | 7100039216<br>7100039215 |
| **PS77** (Yellow) | Fast curing pipe sealant with medium-high viscosity | 18,000 | -65° to 400°F (-54° to 204°C) | 15-30 min | 24 | 50mL tube | 00-054007-99635-4 | 7010366168 |

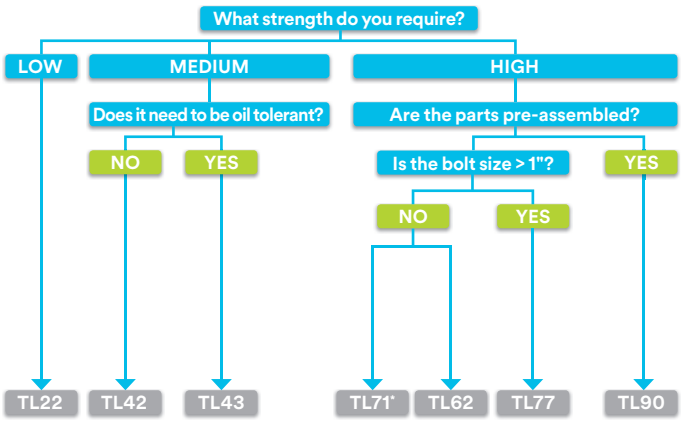
For lead times on bulk adhesives, please contact your 3M representative.

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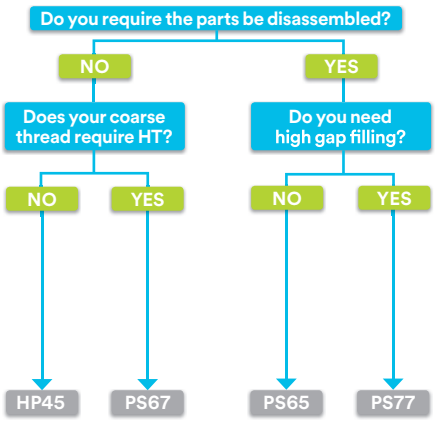
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### THREADLOCKERS




### PIPE SEALANTS




*For permanent attachment.

## 3M™ Scotch-Weld™ Anaerobic Adhesives (cont.)

| Product (Color) | Key Features | Typical Viscosity (cP) | Temperature Range | Time to Handling | Full Cure (Hr) | Size | UPC | Stock # |
|---|---|---|---|---|---|---|---|---|
| **3M™ Scotch-Weld™ Anaerobic Adhesives — Retaining Compounds** | | | | | | | | |
| **RT09** (Green) | For tight tolerances and press fit augmentation | 125 | -65° to 300°F (-54° to 149°C) | 10–30 min | 24 | 10mL bottle<br>50mL bottle<br>250mL bottle<br>1L bottle | 00-048011-62661-1<br>00-048011-62662-8<br>00-048011-62663-5<br>00-051115-31977-8 | 62-3435-1060-8<br>62-3435-5060-4<br>62-3435-3960-7<br>62-3435-8360-5 |
| **RT38** (Green) | Fast setting, high strength for bearings, bushings or sleeves on shafts or in housings | 2,500 | -65° to 300°F (-54° to 149°C) | 10–15 min | 24 | 10mL bottle<br>50mL bottle<br>250mL bottle | 00-051115-81282-8<br>00-051115-81283-5<br>00-051115-81284-2 | 62-3460-1060-6<br>62-3460-5060-2<br>62-3460-3960-5 |
| **RT41** (Tan) | Medium strength for cylindrical parts, Easier disassembly for service and bearing re-use | 600 | -65° to 300°F (-54° to 149°C) | 15–20 min | 24 | 250mL bottle | 00-048011-62724-3 | 62-3484-3960-5 |
| **RT48** | Medium viscosity, high strength, fast curing formulation | 600 | -65° to 300°F (-54° to 149°C) | 15–20 min | 24 | 50mL bottle<br>250mL bottle | 00-054007-99632-3<br>00-054007-99633-0 | 62-3480-5060-0<br>62-3480-3950-4 |
| **3M™ Scotch-Weld™ Anaerobic Adhesives — Gasket Makers** | | | | | | | | |
| **GM10** (Red) | Masking or dressing gaskets in rigid assemblies, can be screen printed, High temperature resistance | Paste | -65° to 400°F (-54° to 204°C) | < 30 min | 24 | 50mL tube | 00-048011-62652-9 | 62-3453-5067-2 |
| **GM18** (Red) | Instant flexible seal without a primer on mating aluminum flanges | Paste | -65° to 300°F (-54° to 149°C) | < 30 min | 24 | 300g cart.<br>50mL tube | 00-048011-62660-4<br>00-048011-62658-1 | 62-3454-3362-7<br>62-3454-5067-0 |
| **GM74** (Orange) | Form-in-place gasketing product designed for multipurpose applications on rigid metal flanges and surfaces | Paste | -65° to 300°F (-54° to 149°C) | < 30 min | 24 | 50mL bottle, 10/CV | 00-054007-99634-7 | 62-3459-5067-9 |
| **3M™ Scotch-Weld™ Anaerobic Adhesives — Activators** | | | | | | | | |
| **AC649** (Green) | Acetone-based green primer for inactive or very cold surfaces,30-day part life for pre-application, California compliant | <3 | N/A | <5 min | 24 | 2 fl oz bottle<br>8 fl oz bottle<br>4L can | 00-048011-62708-3<br>00-048011-62709-0<br>00-048011-62707-6 | 62-3918-0860-7<br>62-3918-3760-6<br>62-3918-7560-6 |

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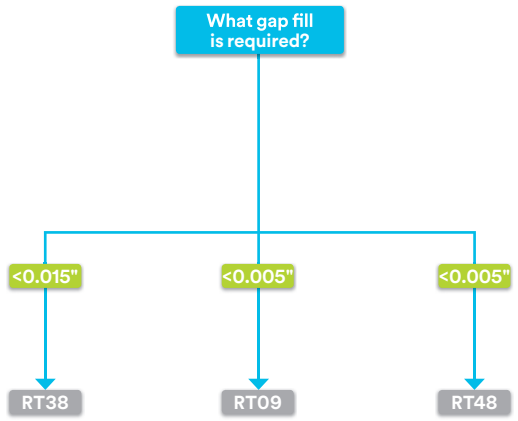
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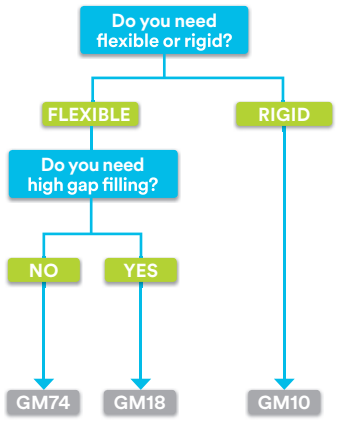




### RETAINING COMPOUNDS




### GASKET MAKERS



## 3M™ Scotch-Weld™ EPX Applicators and Nozzles

| Product | Replacement Plunger Orders | 43mL (2:3) | 45mL (10:1) | 48.5mL (1:1) | 50mL (1:1) | 200mL (2:1 & 1:1) | 400mL (2:1 & 1:1) | Nozzle Length (Inches) | Static Mixing Nozzle Options | |
|---|---|---|---|---|---|---|---|---|---|---|
| **3M™ Scotch-Weld™ EPX Plus II Applicator** | | | | | | | | | | |
| Stock #: 7100148764<br>UPC: 00-063806-01001-7<br>Includes 1:1, 2:1 and 10:1 plunger<br><br>318 | **1:1/2:1 Shared Plunger**<br>Stock #: 7010415317<br>UPC: 00-063806-01000-0 | | | ■ | ■ | | | 3.6 | **3M™ Scotch-Weld™ EPX Mixing Nozzle**<br>Square Green, 48.5mL and 50mL<br>Stock #: 7100104991<br>UPC: 0-00-76308-86434-7 | <br>343<br>Bulk: 7100148765<br>Bulk: 0-00-63806-01003-1 |
| | | | | | | | | 6.2 | **3M™ Scotch-Weld™ EPX Mixing Nozzle**<br>Helical White, 48.5mL and 50mL<br>Stock #: 7100148766<br>UPC: 00-063806-01004-8 | <br>351<br>Bulk: 7100148756<br>Bulk: 00-063806-01005-5 |
| | **2:1 Plunger — Used only for 2216 epoxy**<br>Stock #: 7010309947<br>UPC: 0-00-76308-86390-6 | ■ | | | | | | 3.3 | **3M™ Scotch-Weld™ EPX Mixing Nozzle**<br>Square Gold, 43mL<br>Stock #: 7000000952<br>UPC: 0-00-21200-50008-4 | <br>341<br>Bulk: 7000121587<br>Bulk: 0-00-21200-50009-1 |
| | | | | | | | | 5.8 | **3M™ Scotch-Weld™ EPX Mixing Nozzle**<br>Helical White, 43mL<br>Stock #: 7100034271<br>UPC: 0-00-51115-81449-0 | <br>342<br>Bulk: 7100034272<br>Bulk: 0-00-51115-81467-9 |
| | **10:1 Plunger**<br>Stock #: 7010329933<br>UPC: 0-00-76308-86391-3 | | ■ | | | | | 3.6 | **3M™ Scotch-Weld™ EPX Mixing Nozzle**<br>Square Orange, 45mL<br>Stock #: 7100007806<br>UPC: 0-00-51115-69043-3 | <br>344 |
| **3M™ EPX Metal Applicator** | | | | | | | | | | |
| Stock #: 7000000954<br>UPC: 0-00-21200-21789-0<br><br>319 | **2:1 Plunger**<br>Stock #: 7000000956<br>UPC: 0-00-21200-82314-5 | ■ | | | | | | 3.3 | **3M™ Scotch-Weld™ EPX Mixing Nozzle**<br>Square Gold, 43mL<br>Stock #: 7000000952<br>UPC: 0-00-21200-50008-4 | <br>341<br>Bulk: 7000121587<br>Bulk: 0-00-21200-50009-1 |
| | | | | | | | | 5.8 | **3M™ Scotch-Weld™ EPX Mixing Nozzle**<br>Helical White, 43mL<br>Stock #: 7100034271<br>UPC: 0-00-51115-81449-5 | <br>342<br>Bulk: 7100034272<br>Bulk: 0-00-51115-81467-9 |
| | | | | ■ | | | | 3.6 | **3M™ Scotch-Weld™ EPX Mixing Nozzle**<br>Square Green, 43mL and 48.5mL<br>Stock #: 7100104991<br>UPC: 0-00-76308-86434-7 | <br>343<br>Bulk: 7100148765<br>Bulk: 0-00-63806-01003-1 |
| | | | | | | | | 6.2 | **3M™ Scotch-Weld™ EPX Mixing Nozzle**<br>Helical White, 48.5mL and 50mL<br>Stock #: 7100148766<br>UPC: 00-063806-01004-8 | <br>351<br>Bulk: 7100148756<br>Bulk: 00-063806-01005-5 |
| **3M™ EPX Pneumatic Applicator 48.5/50mL** | | | | | | | | | | |
| Stock #: 7100148769<br>UPC: 00-063806-01006-2<br><br>350 | N/A | | | ■ | ■ | | | 3.6 | **3M™ Scotch-Weld™ EPX Mixing Nozzle**<br>Square Green, 43mL and 48.5mL<br>Stock #: 7100104991<br>UPC: 0-00-76308-86434-7 | <br>343<br>Bulk: 7100148765<br>Bulk: 0-00-63806-01003-1 |
| | | | | | | | | 6.2 | **3M™ Scotch-Weld™ EPX Mixing Nozzle**<br>Helical White, 48.5mL and 50mL<br>Stock #: 7100148766<br>UPC: 00-063806-01004-8 | <br>351<br>Bulk: 7100148756<br>Bulk: 00-063806-01005-5 |
| **3M™ Scotch-Weld™ EPX Manual Applicator 200mL** | | | | | | | | | | |
| Stock #: 7000046632<br>UPC: 0-00-21200-87977-7<br><br>321 | **1:1/2:1 Shared Plunger**<br>Stock #: 7000121583<br>UPC: 0-00-21200-87981-4 | | | | | ■ | ■ | 5.0 | **3M™ Scotch-Weld™ EPX Mixing Nozzle**<br>Square Gold, 200mL and 400mL<br>Stock #: 7000028616<br>UPC: 0-00-21200-97331-4 | <br>345 |
| | | | | | | | | 7.5 | **3M™ Scotch-Weld™ EPX Mixing Nozzle**<br>Helical White, 200mL and 400mL<br>Stock #: 7000046633<br>UPC: 0-00-21200-87982-1 | <br>346 |

## 3M™ Scotch-Weld™ EPX Applicators and Nozzles (cont.)

| Product | Replacement Plunger Orders | 37mL (2:1) & 43mL (2:3) | 45mL (10:1) | 50mL (1:1) | 200mL (2:1 & 1:1) | 400mL (2:1 & 1:1) | Nozzle Length (Inches) | Static Mixing Nozzle Options | |
|---|---|---|---|---|---|---|---|---|---|
| **3M™ EPX 200, 400mL Manual Applicator** | | | | | | | | | |
| **Stock #:** 7000046634<br>**UPC:** 0-00-51111-98073-6<br><br>322 | N/A | | | | ■ | ■ | 5.0 | **3M™ Scotch-Weld™ EPX Mixing Nozzle**<br>Square Gold, 200mL and 400mL<br>**Stock #:** 7000028616<br>**UPC:** 0-00-21200-97331-4 | <br>345 |
| | | | | | | | 7.5 | **3M™ Scotch-Weld™ EPX Mixing Nozzle**<br>Helical White, 200mL and 400mL<br>**Stock #:** 7000046633<br>**UPC:** 0-00-21200-87982-1 | <br>346 |
| **3M™ EPX 490mL Manual Applicator** | | | | | | | | | |
| **Stock #:** 7100015958<br>**UPC:** 0-00-51115-71115-2<br><br>323 | N/A | | | | | | 9.5 | **3M™ Scotch-Weld™ EPX Mixing Nozzle**<br>Helical Orange, 490mL<br>**Stock #:** 7100015959<br>**UPC:** 0-00-51115-69042-6 | <br>347 |
| | | | | | | | 4.4 | **3M™ Scotch-Weld™ EPX Mixing Nozzle**<br>Square Green, 490mL<br>**Stock #:** 7100066351<br>**UPC:** 0-00-51115-81619-2 | <br>348 |
| **3M™ Scotch-Weld™ EPX Pneumatic Applicator 200mL** | | | | | | | | | |
| **Stock #:** 7000121584<br>**UPC:** 0-00-21200-87978-4<br><br>324 | N/A | | | | ■ | | 5.0 | **3M™ Scotch-Weld™ EPX Mixing Nozzle**<br>Square Gold, 200mL and 400mL<br>**Stock #:** 7000028616<br>**UPC:** 0-00-21200-97331-4 | <br>345 |
| | | | | | | | 7.5 | **3M™ Scotch-Weld™ EPX Mixing Nozzle**<br>Helical White, 200mL and 400mL<br>**Stock #:** 7000046633<br>**UPC:** 0-00-21200-87982-1 | <br>346 |
| **3M™ EPX 400mL Pneumatic Applicator** | | | | | | | | | |
| **Stock #:** 7000148285<br>**UPC:**0-00-21200-87979-1<br><br>325 | N/A | | | | | ■ | 5.5 | **3M™ Scotch-Weld™ EPX Mixing Nozzle**<br>Square Gold, 200mL and 400mL<br>**Stock #:** 7000028616<br>**UPC:** 0-00-21200-97331-4 | <br>345 |
| | | | | | | | 7.5 | **3M™ Scotch-Weld™ EPX Mixing Nozzle**<br>Helical White, 200mL and 400mL<br>**Stock #:** 7000046633<br>**UPC:** 0-00-21200-87982-1 | <br>346 |
| **3M™ EPX 490mL Pneumatic Applicator** | | | | | | | | | |
| **Stock #:** 7100011053<br>**UPC:** 0-00-51115-69041-9<br><br>326 | N/A | | | | | | 9.5 | **3M™ Scotch-Weld™ EPX Mixing Nozzle**<br>Helical Orange, 490mL<br>**Stock #:** 7100015959<br>**UPC:** 0-00-51115-69042-6 | <br>347 |
| | | | | | | | 4.4 | **3M™ Scotch-Weld™ EPX Mixing Nozzle**<br>Square Green, 490mL<br>**Stock #:** 7100066351<br>**UPC:** 0-00-51115-81619-2 | <br>348 |
| **Standard Caulk Gun** | | | | | | | | | |
| Image not available | N/A | 3M™ Concrete Repair Urethane 8.4 oz cartridges | | | | | 5.5 | **3M™ Concrete Repair 8.4 oz Cartridge Nozzles**<br>**Stock #:** 7000046642<br>**UPC:** 0-00-48011-53382-7 | <br>349 |

For low volume applications and take-it-to-the-job convenience, the 3M™ EPX Plus II and EPX Metal Manual Applicators comfortably dispense any of the 3M™ Scotch-Weld™ Duo-Pak Structural Adhesives. For higher volume applications, select the 200mL manual dispenser, or the 200mL or 400mL pneumatic dispenser. For concrete repair, there are both manual or pneumatic options.

3M™ Scotch-Weld™ One-Part Heat Cured Epoxies require a unique manual or pneumatic dispenser, such as Semco® 250, 350, 850, 950, or equivalent.

# 3M™ Scotch-Weld™ Structural Adhesives Surface Preparation Tips

*The following surface preparation steps are generally recommended for most substrates and structural adhesives. See Technical Data Sheets for more specific recommendations.*

## METALS

1. Safely wipe surface with acetone or methyl ethyl ketone (MEK) using a clean cloth. A heavier degreaser may be needed if the substrate contains a layer of processing oil.
2. Lightly abrade surface with sandblasting, fine grit sandpaper or 3M™ Scotch-Brite™ 7447 maroon pads.
3. Wipe surface with acetone or MEK to remove debris.
4. Allow surface to dry before applying adhesive.

## PLASTICS & RUBBERS

1. Lightly abrade surface with sandblasting, fine grit sandpaper or 3M™ Scotch-Brite™ 7447 maroon pads.
2. Wipe surface with isopropyl (IPA) alcohol using a clean cloth to remove debris.
3. Allow solvent to evaporate before applying adhesive.

## GLASS

1. Wipe surface using a clean cloth with solvent containing 0.5 wt % silane adhesion promoter or wipe with 3M™ Scotch-Weld™ Metal Primer 3901.
2. Allow solvent to evaporate before applying adhesive.

# 3M™ Hot Melt Adhesive Selector Guide

## Step 1: Select your assembly type.




**Small Joint Assembly**

Small joints are typically irregularly shaped, but only a few inches of overlap area.




**Large Surface Lamination**

Two surfaces of similar size, either rigid or flexible, are bonded or laminated together where majority of the surface is covered by adhesive.




**Mounting and Trim Attachment**

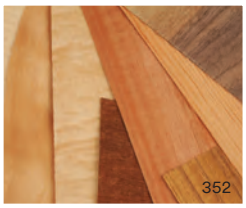
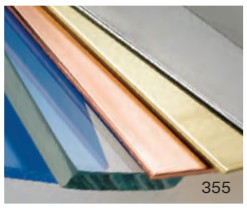
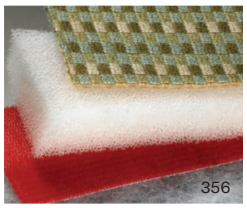
Small objects are mounted or added to a large surface.




**Sealing, Potting and Encapsulating**

Adhesive flows over and around a component or fills a chamber to protect and seal components therein.

## Step 2: After selecting your assembly, choose the substrate and identify the adhesive that performs best for your application.

| Substrate | Wood | Paper | Plastic | Metal / Glass | Fabric / Foam |
|---|---|---|---|---|---|
| |   |   |   |   |   |
| Lead Adhesive | 3M™ Hot Melt Adhesive 3792 | 3M™ Hot Melt Adhesive 3762LM | 3M™ Hot Melt Adhesive 3764 | 3M™ Hot Melt Adhesive 3747 | 3M™ Sprayable Hot Melt Adhesive 6111HT |

*Hot Melt Adhesive is dispensed at 350–385°F. Low Melt Adhesive is dispensed at 250–270°F.*

NOTE: Low Melt (LM) adhesives liquefy at lower operating temperatures for bonding heat sensitive surfaces such as bead board and foams.

NOTE: High Temperature (HT) has high temperature resistance.

# 3M™ Hot Melt Spray Adhesives

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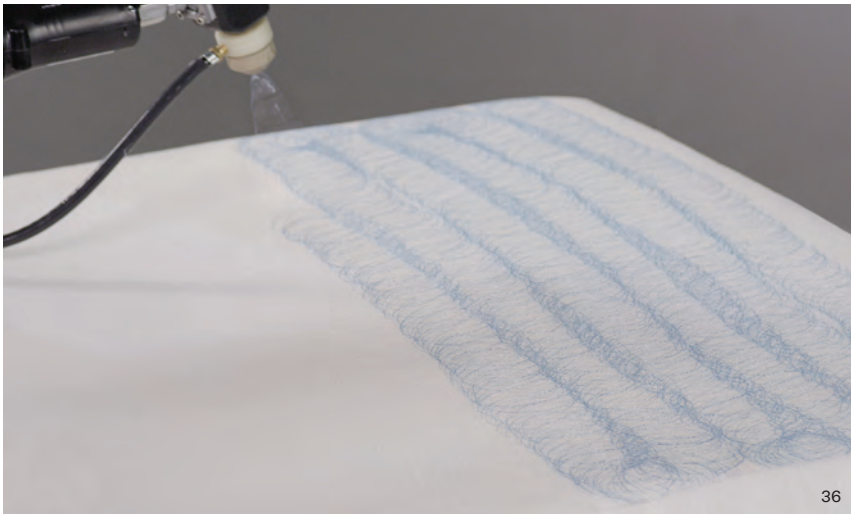
### Immediate Bonding of Foam and Other Lightweight Materials

3M™ Hot Melt Spray Adhesive is a fast, effective alternative to solvent-based adhesives for bonding most foams, fabrics, plastics, wood and light-gauge metals. Applications range from furniture cushions to foam inserts, modular office panels to gym floor pads, and more. You simply spray a controlled pattern of 100% solids adhesive right where you want it. Apply to one or both surfaces and bond substrates immediately.

Other features include:

- Up to 10-minute open time for handling convenience and bonding larger areas
- Available in two colors to easily identify spray pattern*
- Bulk format adhesives for ease of use in most delivery systems

*See chart below.




**Can bond multiple substrates, large surface areas with 1 or 2 surface applications.**




**In display cases for jewelry and other retail items, foam is bonded to foam and fabric. Low temperature spray will not damage heat-sensitive substrates.**




**In carrying case assembly, 3M™ Hot Melt Spray Adhesive bonds foam to foam, plywood, metal or plastic.**

## Adhesives Characteristics and Suggested Coverage

| Product Characteristics | 6111 | 6111 HT/6111 HT Blue | 6116 |
|---|---|---|---|
| **Description** | Standard Product | Higher Heat Resistance | Low Viscosity |
| **Color** | Tan | Tan/Blue | White |
| **Open Time[1] One Surface (Foam/PVC)** | 1 min | 3 min | 2 min |
| **Open Time[1] Two Surface (Foam/Foam)** | 6 min | 8 min | 6 min |
| **Heat Resistance[2]** | 145°F (63°C) | 175°F (79°C) | 160°F (71°C) |
| **Peel Adhesion[3] (PIW)** | | | |
| **Fir** | 34.4 | 25.6 | 21.4 |
| **ABS** | 12.1 | 16.5 | 20.3 |
| **Polypropylene** | 46.3 | 14.4 | 16.4 |
| **PVC** | 9.9 | 16.3 | N/A |
| **Cold Rolled Steel** | 16.5 | 29.9 | 20.4 |
| **High Density Polyethylene** | 8.2 | 2.3 | N/A |

| Typical Coverage | Smooth Surface | Textured Surface |
|---|---|---|
| **Two Surface Applications** | 1–2g/ft² | 2–3g/ft² |
| **One Surface Application** | 3–5g/ft² | 5–7g/ft² |

1 Bonds were made by spraying adhesive onto 3/4" thick, 2 lb. density polyester urethane foam. Open time will vary depending on substrate.
2 Tested per 3M IATD test method C-3093 using 2 lb. dead load.
3 According to 3M IATD test method C-3012. 180° peel strength was determined at a cross head speed of 2"/min at 73°F (23°C).

**Note:** The technical information and data on these pages should be considered representative or typical only and should not be used for specification purposes.

# 3M™ Hot Melt Adhesives and Applicators



**The 3M Systems Approach to Help You Improve Productivity and Lower Costs**

3M™ Hot Melt Adhesives and Applicators are advanced hand-held systems to help you improve productivity, lower cost and minimize waste.

Adhesives are 100% solids thermo-plastic resins that become fluid when heated and quickly wet the bonding surface. They cool, harden and reach bond strength in seconds. You can move assemblies immediately to keep production flowing. This helps eliminate clamps, fixturing and drying, and saves time, energy and space.

Each adhesive is designed and precisely manufactured for efficient use in one of the portable 3M™ Hot Melt Applicators. Bonds wood, plastic, foam, fabric, cardboard and more.




**3M™ Hot Melt Applicator LT with 3M™ Hot Melt Adhesive 3762LM low temperature (265°F/ 129°C) adhesive effectively bonds heat-sensitive substrates such as styrene foam to itself, corrugated or other surfaces without damaging the foam.**




**For bonding the guide to a drawer bottom, 3M™ Hot Melt Adhesive 3792 provides high delivery rate and long bonding range.**




**For sample and display boards, attach wood flooring, laminates, foams, fabrics or other materials and small products with 3M™ Hot Melt Adhesive 3792.**




**For economical package sealing, 3M™ Hot Melt Adhesive 3762 is a versatile formulation with a bonding range for production speed. Variety of tips for package types.**




**To help with sound dampening on drawer bottoms, use 3M™ Hot Melt Adhesive 3792.**




**3M™ Hot Melt Applicator LT and 3M™ Hot Melt Adhesive 3792LM applied at low temperature (265°F/129°C) make quick work of welting, gimping, and bonding fabric to wood.**




**For versatility in P.O.P. assembly, 3M™ Hot Melt Adhesive 3792 bonds a variety of plastics, woods and light gauge metals.**

# Selecting a 3M™ Hot-Melt Applicator to Fit Your Needs



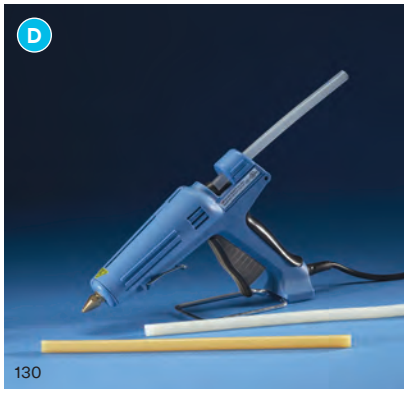

**3M™ Hot Melt Applicator LT. Low-medium volume using low melt adhesive.**
UPC# 021200-82245




**3M™ Hot Melt Applicator LT with Quadrack Converter. Medium volume using low melt adhesive.**
UPC# 021200-89447



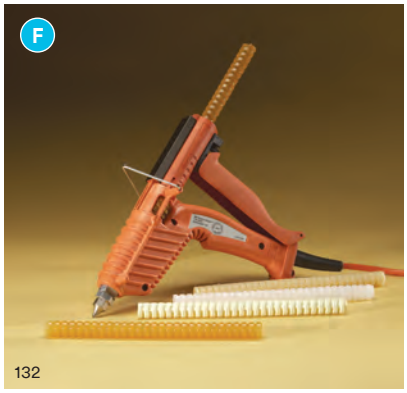

**3M™ Pneumatic Hot Melt Applicator PG II LT with Speedloader. High volume using low melt adhesive.**
UPC# 021200-89395



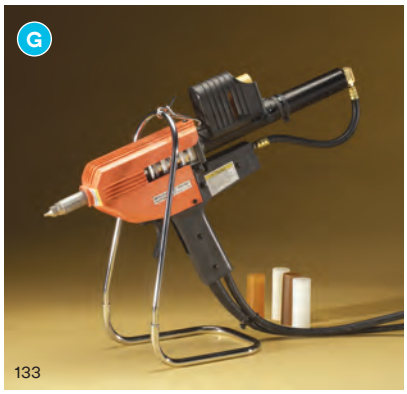

**3M™ Hot Melt Applicator AE II LT. Low volume using low melt adhesive.**
UPC# 051115-25567



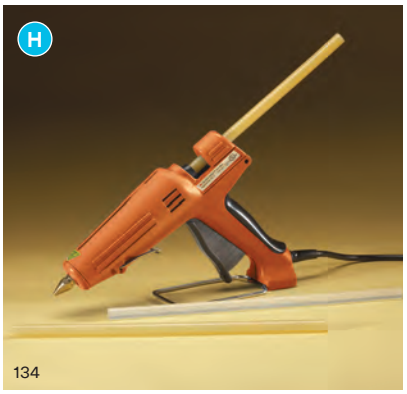

**3M™ Hot Melt Applicator TC. Low-medium volume.**
UPC# 021200-82244



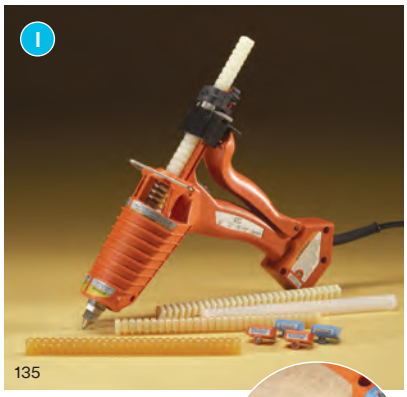

**3M™ Hot Melt Applicator TC with Quadrack Converter. Medium volume.**
UPC# 021200-89445

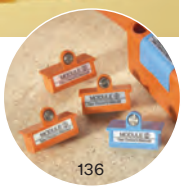



**3M™ Pneumatic Hot Melt Applicator PG II with Speedloader. High volume.**
UPC# 021200-22033




**3M™ Hot Melt Applicator AE II. Low volume.**
UPC# 021200-96594




**3M™ Hot Melt Applicator EC. Medium volume; variable temperature control.**
UPC# 021200-89519

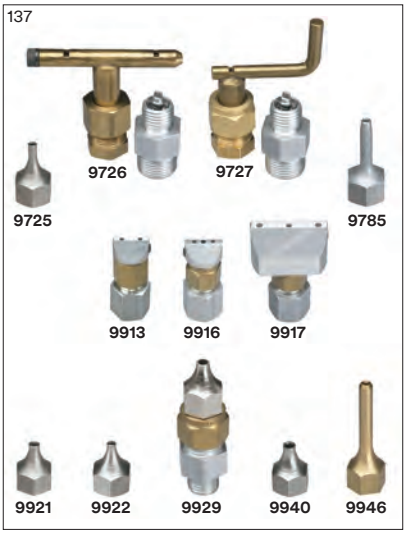
# 3M™ Hot Melt Applicators

| Product | Weight[1] | Output[2] (lb/hr) | Temp.[3] °F (°C) | Power (120V) | Adhesive Dia. x L (in) | Features | Warranty (Months) |
|---|---|---|---|---|---|---|---|
| **Low Melt Applicators** | | | | | | | |
| A **LT** | 10.0 oz | 2.6 | 265 (129) | 150W | 5/8 × 2 TC | For use with low melt adhesives. | 12 |
| B **LT with Quadrack Converter** | 13.8 oz | 2.6 | 265 (129) | 150W | 5/8 × 8 Q | For use with low melt adhesives. | 12 |
| C **Pneumatic PG II LT with Speedloader** | 4.3 lb | 6.0 | 265 (129) | 500W | 1 × 3 PG | Pneumatic high output for low melt adhesives. | 12 |
| D **AE II LT** | 20.0 oz | 4.0 | 265 (129) | 100W | 1/2 × 12 AE | All electric operation for low melt adhesives. | 6 |
| **Hot Melt Applicators** | | | | | | | |
| E **TC** | 10.0 oz | 3.5 | 385 (196) | 150W | 5/8 × 2 TC | Easy to use with standard melt adhesives. | 12 |
| F **TC with Quadrack Converter** | 13.8 oz | 3.5 | 385 (196) | 150W | 5/8 × 8 Q | Easy to use with standard melt adhesives. | 12 |
| G **Pneumatic PG II with Speedloader** | 4.3 lb | 7.5 | 385 (196) | 500W | 1 × 3 PG | Pneumatic high output for standard melt adhesives. | 12 |
| H **AE II** | 20.0 oz | 4.0 | 400 (204) | 100W | 1/2 × 10 AE<br>1/2 × 12 AE | All electric operation for standard melt adhesives. | 6 |
| **Variable Applicators** | | | | | | | |
| I **EC** | 24.0 oz | 5.5 | 260–450 (127–232) | 350W | 5/8 × 8 Q | Temperature modules to operate with standard and low melt adhesives. | 12 |

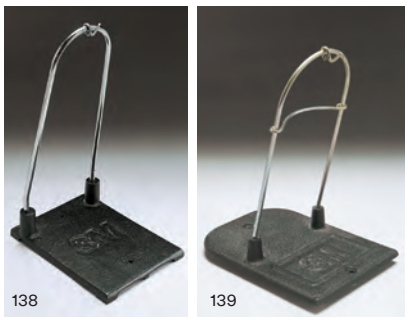
1 – Weight shown is for applicator only; does not include adhesive capacity.
2 – Adhesive output will vary with conditions and the adhesive used. Values are approximate and are based on maximum steady-state flow.
3 – Temperatures shown are nominal control values. Actual temperature will range slightly above and below this value.

## Accessories to Improve Your Productivity

| Product | Description | UPC | SN |
|---|---|---|---|
| **9725** | .072" Mini Extension Tip | 021200-21786 | 62-9725-9930-2 |
| **9726** | "T" Tip Assembly | 021200-64542 | 62-9726-9930-0 |
| **9727** | "L" Tip with Adapter | 021200-64543 | 62-9727-9930-8 |
| **9785** | .07" Tapered Aluminum Extension (all applicators) | 021200-82554 | 62-9785-9930-6 |
| **9913** | 2-hole Spreader | 021200-21830 | 62-9913-9930-4 |
| **9916** | 3-hole Spreader | 021200-21836 | 62-9916-9930-7 |
| **9917** | 3-hole 1" Spreader | 021200-21837 | 62-9917-9930-5 |
| **9921** | .090" Fluted Tip | 021200-21840 | 62-9921-0066-9 |
| **9922** | .063" Fluted Tip | 021200-21841 | 62-9922-0066-7 |
| **9929** | High Viscosity Valve (TC, EC, PG II) | 021200-64840 | 62-9729-9930-4 |
| **9940** | .125" Fluted Tip | 021200-22036 | 62-9940-6920-1 |
| **9946** | .072" Brass Extension (PG II, PG II LT) | 021200-22040 | 62-9946-6980-2 |
| **Heavy-Duty Benchstand** | For use with PG II and PG II LT | 021200-22039 | 62-9945-9930-6 |
| | For use with EC, TC and LT | 021200-82418 | 62-9945-9935-5 |
| **Bench Mount** | Includes bench nozzle assembly (Does not include applicator) | 021200-82277 | 62-9276-9930-6 |
| **Bench Nozzle Assembly** | For use with bench mounted applicator | 021200-21713 | 62-9233-2781-1 |
| **Foot Pedal Assembly** | For use with bench mounted applicator | 021200-82278 | 62-9277-9930-4 |
| **TC and LT Palm Trigger** | For use with Quadrack converter | 021200-82701 | 62-9761-9930-7 |
| **Quadrack Converter** | To add Quadrack capability to TC and LT applicators | 021200-83536 | 62-9275-9935-7 |
| **Valve Assembly Kit** | Nozzle and valve replacement for TC, EC, LT | 021200-21714 | 62-9234-9930-5 |




**A general purpose tip (.090) is supplied with each 3M™ Hot Melt Applicator. To increase productivity, optional tips can provide multiple beads, flat ribbons, guided beads for carton sealing and extended reach.**




**Heavy-Duty Benchstands provide added convenience.**




**Increase loading capacity and ease of operation with Quadrack Converter and Palm Trigger.**




**Foot pedal, magazine feeder and benchmount accessories can provide high capacity, hands-free operation for 3M™ Hot Melt PG II and PG II LT Applicators.**




**Note:** The technical information and data on these pages should be considered representative or typical only and should not be used for specification purposes.

# 3M™ Hot Melt Adhesives



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| Product | Color | UL 94 Listing | Features/Application Ideas |
|---|---|---|---|
| **Low Melt Technology: Applied 250–270°F (121–132°C)** | | | |
| **3762LM*** | Light Amber | N/A | Excellent "hot tack", fast setting for corrugated, beadboard, recouperage, repacking chipboard and wood. Economical, general purpose. Use with low melt applicator only. |
| **3776LM** | Tan | N/A | Bonds variety of plastics, woods and light-gauge metals. Use with low melt applicator only. |
| **3792LM*** | Clear | V2 | Clear, multi-purpose for wood, coated paper, polyolefins and other heat-sensitive materials. P.O.P. displays. Use with low melt applicator only. |
| **3798LM*** | Light Yellow | N/A | Removable "gummy glue" for many substrates. Removes easily without residual tack. Use with low melt applicator only. |
| **Hot Melt Technology: Applied 350–385°F (177–196°C)** | | | |
| **3731*** | Tan | N/A | High heat resistance. Bonds plastics including polyethylene, polypropylene. |
| **3738*** | Tan | V2 | High delivery rate and long bonding range. General purpose for foundry sand cores, wood bonding, corrugated, selected plastics and chipboard. |
| **3747** | Tan | N/A | General purpose for wide variety of plastics, wood and lightweight metals. |
| **3748*** | Off-White | V2 | Good thermal shock resistance. Non-corrosive to copper for many electronic applications. Bonds polyolefins. |
| **3748 VO** | Light Yellow | VO | Self-extinguishing version of 3748. Meets UL 1410 requirements. |
| **3750** | Tan | N/A | Low viscosity for high flow rate, increased production. Good hot tack, quick grab for packaging and woodworking. |
| **3750** | Clear | N/A | Low viscosity for high flow rate, increased production. Good hot tack, quick grab for packaging and woodworking. |
| **3762** | Tan | V2 | Excellent "hot tack", fast setting for corrugated, beadboard, recouperage, repacking chipboard and wood. Economical, general purpose. |
| **3764*** | Clear | V2 | Bonds variety of plastics including polycarbonate, polyethylene, and polypropylene. Flexible at low temperatures. |
| **3779*** | Amber | N/A | High heat resistance. High strength. Good fuel and oil resistance. Electronics. |
| **3789*** | Brown | V2 | High performance for plastics. Impact resistant. Bonds vinyl and wood. Good fuel and oil resistance. |
| **3792*** | Clear | V2 | Clear, multi-purpose for wood, corrugated, fabric, furniture, upholstery, novelties, and other lightweight materials. |
| **3797** | Off-White | V2 | High ball and ring. Low viscosity. Good for electrical potting. |
| **Bulk Only** | | | |
| **3794 Hi Tack PSA** | Light Tan | N/A | Sprayable high tack PSA for bonding plastic, paper, metals, die-cut labels. |
| **6111** | Tan | N/A | Sprayable 100% solventless adhesive for most foams, fabrics, plastics, particle board and thin metal. |
| **6111HT** | Tan, Blue | N/A | Similar to 6111 but has higher heat resistance. Available in tan and blue. |
| **6116** | Off-White | N/A | Similar to 6111 but lower than normal viscosity and mainly used on fabrics. |

*Also available in bulk.
1 – Brookfield Thermosel Viscometer in Centipoise
2 – ASTM E-28-6-7
3 – Highest temperature that the adhesive will support a 2 psi dead load
4 – Canvas to Douglas Fir
5 – Douglas Fir to Douglas Fir
6 – 1/8" semicircular bead, Douglas Fir to Douglas Fir

| | Sizes | EC Temp Control Modules | Viscosity CPS[1] | Delivery Time for 1" x 3" Cartridge (sec) | Ball & Ring Melt Point[2] °F (°C) | Heat Resistance[3] °F (°C) | Peel Strength PIW[4] 72°F (22°C) | Shear Strength PSI[5] 72°F (22°C) | Open Time 1/8" Bead[6] (sec) |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |
| | 5/8" x 8" Q<br>1" x 3" PG<br>5/8" x 2" TC<br>1/2" x 12" | 1 | 4,000 @ 250°F | 45 | 205 (96) | 130 (54) | 6 | 480 | 25 |
| | 5/8" x 8" Q<br>1" x 3" PG<br>1/2" x 12" | 1 | 8,250 @ 250°F | 47 | 184 (84) | 140 (60) | 9 | 600 | 40 |
| | 5/8" x 8" Q<br>1" x 3" PG<br>5/8" x 2" TC<br>1/2" x 12" | 1 | 10,500 @ 250°F | 57 | 178 (81) | 140 (60) | 13 | 350 | 40 |
| | 5/8" x 2" TC | N/A | 9,500 @ 250°F | N/A | 191 (88) | 120 (49) | N/A | N/A | 30 |
| | | | | | | | | | |
| | 5/8" x 8" Q<br>1" x 3" PG | 5 | 12,000 @ 375°F | N/A | 315 (157) | 265 (130) | 22 | 490 | 30 |
| | 5/8" x 8" Q<br>1" x 3" PG<br>5/8" x 2" TC<br>1/2" x 12" AE | 4 | 2,875 @ 375°F | 35 | 186 (86) | 130 (54) | 13 | 375 | 50 |
| | 5/8" x 8" Q<br>1" x 3" PG<br>5/8" x 2" TC<br>1/2" x 12" AE | 4 | 4,100 @ 375°F | 45 | 220 (104) | 145 (63) | 20 | 430 | 45 |
| | 5/8" x 8" Q<br>1" x 3" PG<br>5/8" x 2" TC | 4 | 5,000 @ 375°F | 65 | 292 (144) | 175 (79) | 18 | 250 | 45 |
| | 5/8" x 8" Q<br>1" x 3" PG<br>5/8" x 2" TC | 4 | 5,000 @ 375°F | 65 | 305 (152) | 175 (79) | 15 | 275 | 30 |
| | 1/2" x 12" AE | N/A | 1,900 @ 375°F | 30–40 | 200 (93) | 125 (52) | 6 | 500 | N/A |
| | 1/2" x 10" AE | N/A | 4,800 @ 375°F | 35–45 | 178 (81) | 135 (57) | 12 | 250 | N/A |
| | 5/8" x 8" Q<br>1" x 3" PG<br>5/8" x 2" TC<br>1/2" x 12" AE | 3 | 1,870 @ 375°F | 30 | 201 (94) | 130 (54) | 7 | 545 | 35 |
| | 5/8" x 8" Q<br>1" x 3" PG<br>5/8" x 2" TC<br>1/2" x 12" AE | 4 | 6,000 @ 375°F | 55 | 190 (88) | 140 (60) | 14 | 390 | 40 |
| | 5/8" x 8" Q<br>1" x 3" PG<br>5/8" x 2" TC | 5 | 7,000 @ 375°F | 75 | 325 (163) | 300 (149) | 18 | 700 | 25 |
| | 5/8" x 8" Q<br>1" x 3" PG | 5 | 5,200 @ 375°F | 70 | 270 (132) | 220 (104) | 16 | 570 | 50 |
| | 5/8" x 8" Q<br>1" x 3" PG<br>5/8" x 2" TC<br>1/2" x 12" AE | 4 | 5,000 @ 375°F | 45 | 179 (81) | 140 (60) | 13 | 250 | 50 |
| | 1" x 3" PG<br>5/8" x 2" TC | N/A | 2,650 @ 375°F | 55 | 304 (151) | 170 (77) | 10 | 350 | 30 |
| | | | | | | | | | |
| | Bulk pillows | N/A | 15,000 @ 325°F | N/A | 224 (107) | 120 (49) | 16 | N/A | > 60 |
| | 0.75" x 0.75" chips | N/A | 3,000–5,000 @ 375°F | N/A | 224 (107) | 145 (63) | 34 | N/A | 1 surface: 60<br>2 surface: 360 |
| | 0.75" x 0.75" chips | N/A | 2,500–4,500 @ 375°F | N/A | 284 (140) | 175 (79) | 26 | N/A | 1 surface: 180<br>2 surface: 480 |
| | 0.75" x 0.75" chips | N/A | 1,300 @ 375°F | N/A | 199 (93) | 160 (69) | 20 | N/A | 1 surface: 120<br>2 surface: 300 |

**Note:** The technical information and data on these pages should be considered representative or typical only and should not be used for specification purposes.

# Solvent and Water Based Adhesives

### Unite Performance, Productivity and Sustainability

3M™ Solvent and Water Based Adhesives start with the customer. Their process, their requirements and their wishes. Then the 3M team of industry experts, in conjunction with our comprehensive technology portfolio, offers customers versatility, efficiency and confidence to answer their "what if?"


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## Performance

**Find the RIGHT product for your assembly with the RIGHT questions:**

- What substrates are being bonded?
- What are the issues with your current product?
- Are there any environmental Health and Safety requirements?
- Are there specific product attributes needed?
- Are there specific manufacturing requirements?
- What is the size of the substrate being sprayed?

## Sustainability

**Low Emissions. High Standards.**



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Going "green" does not mean that you have to give up on performance. For 40 years our engineers have been developing water-based, low VOC and GREENGUARD Certified adhesives that have been used in the most demanding applications.

**So, are you ready to go "green?" We're ready to take you there.**


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## Productivity

Our goal is to make your business as efficient and effective as possible. How the adhesive gets to your assembly is equally as important as the adhesive itself. We work with you to integrate the best delivery system for your process.


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**Cylinders**

- Self-contained and pressurized
- Portable
- Minimal equipment investment
- Low maintenance
- Optimized spray pattern cuts waste and maximizes coverage


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**Aerosols**

- Convenient for smaller jobs or multiple stations
- Easy to use and no equipment


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**Bulk**

- Cost effective
- Integrate into existing equipment

# Multipurpose Adhesives — Solvent and Water Based

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## Insulation, Light Fabrics, Cardboard and Other Light Duty Bonding

Those working with HVAC, General Industrial, Signage, Exhibit/P.O.P. and packaging can effectively bond insulation, light fabrics, cardboard and paper with these versatile adhesives.

- Insulation attachment (polystyrene*, fiber glass, foam, etc.)
- General assembly
- Temporary holding (third hand)
- P.O.P. displays
- Carton sealing, palletizing and label attachment

*Not all products are compatible with polystyrene

| MULTI-PURPOSE — Solvent Based Adhesives | | |
|---|---|---|
| Productt | Requirement | Size Availability |
| Key Product 70 | FAST TACKING | |
| 77 | Low soak in, mist spray | |
| 74NF | Non-flammable | |

| MULTI-PURPOSE — Water Based Adhesives | | |
|---|---|---|
| Product | Requirement | Size Availability |
| Key Product 1000NF | ONE-SIDED BONDING | |
| 49 | Long open time, long tack time | |
| 100NF | Immediate bonding | |

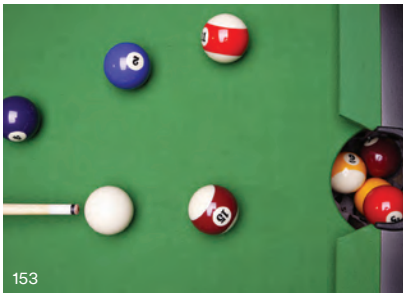
Aerosol Cylinder Bulk




**3M multipurpose adhesives are commonly used for installation of shoddy material, venting insulation and other foams and fabrics. Our product line offers the most versatility for adhesive delivery. 3M™ Super 77™ Multipurpose Spray Adhesive, for example, can be sprayed from bulk containers, cylinders or aerosol cans.**




**When thinking insulation, don't stop at heating and ventilation. In this application, our adhesives can be used for installation of foam for acoustical soundproofing.**










**The variety of applications for these multi-purpose adhesives is nearly endless. From adhering pool table felt, to building architectural models, and even bonding protective materials like dense foams into electronics, musical instrument or sensitive equipment cases. 3M has a spray adhesive solution to fit customers' needs.**



**Note:** The technical information and data on these pages should be considered representative or typical only and should not be used for specification purposes.

# Woodworking and Large Surface Lamination — Solvent and Water Based

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## Wood, Metal and Rubber Flooring

Woodworking, transportation, construction, and general industrial markets can effectively bond metals, wood, rubber, carpet and flooring (vinyl tiles) with this line of adhesives. Some applications include transportation flooring and carpet, store fixtures and furniture.

- High pressure laminate (HPL)
  - Countertops
  - Furniture
  - Display fixtures
- Edge banding
- Specialty vehicle flooring
- Wood furniture
- Trade show displays

**HEAVY DUTY — Solvent Based Adhesives**

| | Product | Requirement | Size Availability |
|---|---|---|---|
| Key Product | **94 CA** | **FAST TACKING, POSTFORMABLE** | |
| | 90 | High strength | |
| | 92 | High temperature resistance | |
| | 94 ET | Longer open time, more aggressive tack | |
| | 98 NF | Non-flammable | |
| | 5 | Very high temperature resistance | |
| | 1099 | Plasticizer resistance, harsh environments | |

**HEAVY-DUTY — Water Based Adhesives**

| | Product | Requirement | Size Availability |
|---|---|---|---|
| Key Product | **30NF** | **HIGH STRENGTH** | |
| | 2000NF | Faster initial strength | |
| | 1000NF | One surface bonding, fast assembly, plasticizer resistance | |

Aerosol Cylinder Bulk



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**Marine and specialty vehicle applications, like installing carpet, rubber or synthetic flooring, are perfect for 3M sprayable adhesives. Our quick tack, low VOC and cylinder delivery are common benefits in this market.**



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**Consider trade show exhibits and store fixtures that are often updated several times a year. 3M's adhesive line offers very low cost per square foot bonded for applications where our customers value total applied cost.**



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**3M™ Hi-Strength 90 Spray Adhesive has a long reputation of holding strong in critical applications like this edge banding strip. Also, 3M has multiple adhesives that are postformable. Postforming is where the laminate is heated and bent as much as 360° around a radius.**

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# Foam and Fabric Adhesives — Solvent and Water Based

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## Upholstery and Furniture

Users in the furniture manufacturing, upholstery, or transportation industry can rely on these adhesives to permanently bond open cell foam, closed cell foam and fabrics in a variety applications.

- Upholstered furniture and seating
- Headliners
- Office partitions
- General foam bonding



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**Foam and fabric applications can be very challenging. From soft bond lines to tight radiuses, our lineup can meet the demand. The 3M portfolio of water and solvent based adhesives truly give the customer "flexibility."**

**FOAM & FABRIC — Solvent Based Adhesives**

| | Product | Requirement | Size Availability |
|---|---|---|---|
| Key Product | **100NF** | **SOFT BOND LINES** | |
| | 74NF | Non-flammable | |
| | 77 | Low soak in, mist spray | |

**FOAM & FABRIC — Water Based Adhesives**

| | Product | Requirement | Size Availability |
|---|---|---|---|
| Key Product | **100NF** | **HIGH COVERAGE** | |
| | 100NF + Activator | Faster initial strength | |
| | 1000NF | One surface bonding, higher heat resistance | |

Aerosol Cylinder Bulk




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**Aerosol adhesives provide either web or mist spray patterns with higher solid content than our competitors. This combination allows 3M adhesives to sit on the surface versus soaking in. More adhesive on the surface results in less adhesive usage and a better bond for the customer.**



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**These solvent and water based adhesives are often used as a "third hand" to hold lightweight materials in place until they can be sewn or held in place by other assembly methods.**

# High Performance Specialty Adhesives — Solvent and Water Based

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## Rubber and Plastic

Industrial, Automotive, and Military professionals can rely on these adhesives to effectively bond rubber, plastics and specialty composites.

- Sealing and gasketing
- Chemical resistance
- Unique environments
  - Harsh environments
  - MIL specs
  - Chemical resistance


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**In washing machine repair, 3M™ Neoprene High Performance Rubber and Gasket Adhesive 1300 bonds with high immediate strength and seals the doughnut ring seal in the outer tub.**

| SPECIALTY — Rubber and Gasket Adhesives | | |
|---|---|---|
| **Product** | **Requirement** | **Size Availability** |
| Key Product **1300** | **NEOPRENE OR SBR BONDING** | |
| 1300L | Sprayable, low viscosity | |
| 847 | Vinyl bonding, plasticizer resistant | |
| 4799 | EPDM bonding | |
| 80 | Aerosol | |

| SPECIALTY — Plastic Adhesives | | |
|---|---|---|
| **Product** | **Requirement** | **Size Availability** |
| Key Product **1099** | **RESISTS WATER, OIL AND PLASTICIZER** | |
| 1099L | Sprayable, low viscosity | |
| 4693 | Polyolefin bonding | |
| 2262 | Clear drying | |
| 90 | Aerosol | |

Aerosol Cylinder Bulk



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**With excellent resistance to fuel and oil, 3M™ Nitrile High Performance Rubber and Gasket Adhesive 847 bonds and seals chemical drum gaskets in place.**



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**Note:** The technical information and data on these pages should be considered representative or typical only and should not be used for specification purposes.

# 3M™ Cleaners and Lubricants

## Convenience and a Fistful of Work Power for Maintenance and Production

In thousands of factories and plants, these aerosol chemicals are proven daily to save time and effort in maintenance and production. Lubricating, cleaning, inhibiting rust, and other tough jobs become finger-touch easy.

Compact container fits in a tool box to go readily to any job site and can help you reduce storage space and cost. With targeted application you get more usable product for your money.

3M aerosol chemicals contain no methylene chloride, chlorofluorocarbons (CFCs) or 1,1,1-trichlorethane (methyl chloroform).




329 330 331 332 333 334





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**3M™ Silicone Spray Low VOC 60% lubricates cutting tools and tables. Fast, easy application helps prevent buildup of adhesive, wax, inks and paints. Won't stain or become gummy.**



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**For fast, easy cleanup of gears, 3M™ Industrial Citrus Base Cleaner helps soften and loosen grease, oil and grime. After using this heavy-duty degreaser/cleaner, just wipe away with a shop towel.**



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**3M™ Adhesive Remover removes adhesive without damaging surface underneath.**

**MAINTENANCE AND CLEANING**

| Product | Key Characteristics | Available Format | Color | Application Method | Spray Pattern | VOC Content |
|---|---|---|---|---|---|---|
| **Adhesive Remover** | Citrus based. Fast acting. No residue left behind. | 1 gal, 5 gal, 52 gal | Pale Yellow | Brush/Roll/Spray | Mist | 840g/L |
| | | 5 oz Aerosol | Pale Yellow | Spray | Mist | 100% |
| | | 18.5 oz Aerosol | Pale Yellow | Spray | Mist | 100% |
| | | Mini Cylinder | Pale Yellow | Spray | Mist | 800g/L |
| **Adhesive Remover – Low VOC <20% Clear** | Extended dwell time. No residual film. Meets CARB/OTC VOC Requirements. Helps contribute to LEED® credits. | Aerosol | Clear | Spray | Mist | 15% |
| **Industrial Citrus Base Cleaner** | Citrus based. Non-corrosive. Cleans oil, grease, tar and grime. | Aerosol | Transparent | Spray | Mist | 91% |
| **Silicone Spray 60% VOC** | Excellent lubricant. Fast drying. Long lasting and non-staining. | Aerosol | Clear | Spray | Mist | 60% |
| **5-Way Penetrant** | Drives out moisture. Frees rusted bolts. Inhibits rust — lubricates, demoisturizes, inhibits corrosion, cleans and penetrates. | Aerosol | Amber | Spray | Mist | 30% |
| **Silicone Lubricant** | Excellent lubricant. Fast Drying. Long-lasting and non-staining. | Aerosol | Clear | Spray | Mist | 95% |

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# 3M™ Cylinder Spray Adhesives

## Efficient, Portable and Easy to Use

3M™ Cylinder Spray Adhesives have benefits over more traditional spray methods. Minimal startup costs, reduced downtime, simple hose and applicator setup make cylinders an obvious choice.

Whether your priorities are improving speed of application, making spraying easier or reducing capital equipment maintenance and other costs, 3M Cylinder Spray Adhesives get you there.



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### Advantages and benefits:

- Very efficient speed of application and reduction of overspray
- Convenient, portable and easy to use delivery system
- Maintenance free and very low equipment costs

### Other benefits include:

- More efficient spraying over large surface areas or multiple parts means virtually all adhesive is used and very little is wasted
- Easy to learn, use and train new employees to spray
- Portable for easy transition and setup for multiple stations or field work

### Key features include:

- High coverage
- Various spray patterns
- Non-flammable adhesives
- Greenguard Certified
- Range of open time (worklife)



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**Spray patterns from 1–18+" are achievable using 3M™ Cylinder Spray Adhesives and various spray tips.**

# Where to Start

## Product Selection

The lead products for 3M™ Cylinder Adhesives are:

- 3M™ Postforming 94 CA Cylinder Spray Adhesive
- 3M™ Hi-Strength 94 ET Cylinder Spray Adhesive
- 3M™ Holdfast 70 Cylinder Spray Adhesive

The majority of applications can be done with these three cylinder products.



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**3M™ Postforming 94 CA Cylinder Spray Adhesive is a low telegraphing that dries quickly to reach postformable strength in 1–5 minutes. A 1–15 minute open time provides flexibility in assembly speed. 3M™ Hi-Strength 94 ET Cylinder Spray Adhesive offers all the benefits of 3M™ Postforming 94 CA Cylinder Spray Adhesive, but delivers a higher tack and increased bonding range.**


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**For fast, easy foam board installation, above and below grade, simply spray and stick with 3M™ HoldFast 70 Cylinder Spray Adhesive. Bonds foam to concrete, waterproofing, OSB and more without damaging the foam.**

# Save Yourself the Hassle of Inefficient Spraying

**Most common applications:**

- High pressure laminate
- Foam/paper core steel door
- Upholstery
- Metal lamination
- Insulation bonding

**Where to find these applications:**

- Cabinet shops
- Elevator interiors
- Countertop shops
- Exhibit manufacturing
- Fixture/display manufacturing
- Office furniture
- Theatre/production sets
- Acoustic panel/partition

**Key Questions**

Asking the right questions related to the application will help you arrive at an adhesive selection quickly and painlessly.

**Use A.S.P.E.C.**

- What is the **APPLICATION** you are currently using the adhesive for?
- What **SUBSTRATES** does the adhesive need to bond too?
- Are there special **PROCESS** details the adhesive needs to accommodate? Such as high temperatures or VOC regulations?
- What kinds of **END USE** stress or environment will the bond be subject to? (e.g., boat carpet and saltwater conditions or exterior applications).
- How do you determine the **VALUE** beyond simply the **COST** of a product? (e.g., Improved coverage, reduced flammability or speed of application).



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**3M™ Cylinder Spray Adhesives do not atomize spray patterns with added airline. This means you get consistent even spray patterns, potentially saving rework and cleanup.**



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**Consistent spray patterns and portable cylinders mean you can realize big improvements in efficiency and save time and labor costs.**

## 3M™ Cylinder Spray Adhesive Quick Reference Guide

| Product | Application | Solids (%) | Solids – Bulk (%) | VOCs (g/L) | Open Time (min) | Spray Pattern | Spray Applicator | Recommended Tips |
|---|---|---|---|---|---|---|---|---|
| **MULTI-PURPOSE** | | | | | | | | |
| **60 CA** | General Purpose | 43 | 42 | >80 | 2–60 | Web | Applicator | 9501, 6501 |
| **70** | Construction, Marine, RV, Polystyrene | 21 | 41 | 544 | 1–60 | Web | Applicator | QSS tip |
| **77** | Multi-Purpose | 27 | 36 | 534 | 1–30 | Mist | Applicator | 250050, 650050 |
| **HEAVY DUTY** | | | | | | | | |
| **90** | Laminating | 13 | 23 | 571 | 1–15 | Web | Applicator | 9501, 6501, 250050 |
| **92** | Laminating | 23 | 34 | 654 | 1–20 | Web | Applicator | 9501, 6501, 250050 |
| **94 CA** | Laminating | 28 | 28 | 79 | 1–15 | Pebble | Applicator H | 4001, 6501 |
| **94 ET** | Laminating | 28 | 34 | <80 | 1–60 | Pebble | Applicator H | 9501, 6501, 4001 |
| **98NF** | Laminating | 20 | 25 | 254 | 1–60 | Web | Applicator | 9501, 6501, 4001 |
| **FOAM & FABRIC** | | | | | | | | |
| **74** | Foam Bonding | 22 | 36 | 563 | 1–15 | Web | Applicator | 9501, 6501 |
| **74NF** | Foam Bonding | 22 | 28 | 248 | 1–60 | Web | Applicator | 9501, 6501 |
| **SPECIALTY** | | | | | | | | |
| **78 ET** | Polystyrene | 17 | 31 | 570 | 1–60 | Web | Applicator | 9501, 6501 |

## 3M™ Cylinder Spray Adhesive Equipment and Accessories





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**9501**



**6501**



**4001**



**QSS**



**T-Fitting**



**Hose Swivel**

| Spray Tip | Angle | Spray Pattern Width |
|---|---|---|
| **9501** | 95° | Wide |
| **6501** | 65° | Medium |
| **4001** | 40° | Narrow |
| **QSS*** | — | Very Wide |
| **250050** | 25° | Very Narrow |
| **650050** | 65° | Medium |

*For 3M™ HoldFast 70 Spray Adhesive

**Note:** The technical information and data on these pages should be considered representative or typical only and should not be used for specification purposes.

# Solvent and Water Based Adhesives




| Product | Available Format | Solids Weight Percent (Approx.) | Key Characteristics |
|---|---|---|---|
| **MULTI-PURPOSE** | | | |
| **Multi-Purpose 27** | Aerosol | 21% | Fast tack. Lightweight applications. Mist spray pattern. |
| **General Purpose 60 CA** | 5 gal, 54 gal | 43% | High solids for increased coverage. High tack general purpose adhesive. |
| | Large, Int and Jumbo Cylinder | 42% | |
| **HoldFast 70** | 5 gal, 52 gal | 26% | Extremely versatile and very fast tacking. Unique wide web spray pattern with heavy body and low soak-in. Bonds polystyrene without degrading surface. |
| | Large, Int and Jumbo Cylinder | 21% | |
| **Super 77™** | Aerosol | 25% | Low soak-in for long lasting bond. High coverage and aggressive tack. Bonds quickly in 15 seconds. |
| | 5 gal, 52 gal | 36% | |
| | Large Cylinder | 27% | |
| **Super 77™ CA Multi-Purpose (Low VOC)** | Aerosol | 19% | Aggressive tack. Quick bonding. Long bonding range. |
| **Fastbond™ Insulation Adhesive 49** | 5 gal box, 5 gal, 52 gal, 100 gal, 255 gal | 55% | Fast tacking, high performance, pressure sensitive adhesive for lightweight materials. Low VOC and GREENGUARD Certified. UL MAGW2 component recognition. |
| **HEAVY DUTY** | | | |
| **Neoprene Contact 5** | 5 gal, 53 gal | 19% | High performance contact adhesive. Sprayable. Fast drying. |
| **Neoprene Contact 10** | 1 qt, 1 gal, 5 gal, 54 gal | 23% | Brushable and rollable with higher coverage. Meets requirements of MMM-A-121, MMM-A-130B and A-A-1936A. |
| **Heavy Duty 20** | Aerosol | 17% | Fast grab. Variable width spray pattern. Forms strong bonds to a variety of substrates. |
| **Hi-Strength 90** | 5 gal, 52 gal | 23% | High strength. High temperature resistance. |
| | Large, Int and Jumbo Cylinder | 13% | |
| | Aerosol | 13% | |
| **Hi-Strength 90 CA (Low VOC)** | Aerosol | 23% | High strength. |
| **Hi-Strength 92** | 5 gal, 54 gal | 34% | High strength. High temperature resistance. Versatile, high-tack adhesive. |
| | Large, Int and Jumbo Cylinder | 23% | |
| **Hi-Strength 94 ET (Low VOC)** | 5 gal, 54 gal | 25% | Bonds many laminates, woods, and particle board. Long open time, low VOC. SCAQMD Rule 1168 compliance; helps contribute to LEED® Credits. |
| | Large, Int and Jumbo Cylinder | 25% | |
| | Aerosol | 21% | Meets CARB / OTC VOC Requirements; helps contribute to LEED® Credits. |
| **Hi-Strength Postforming 94 CA (Low VOC)** | 5 gal, 54 gal | 34% | High solids for increased coverage. Unique non-telegraphing spray pattern with postformable strength. Low VOC, SCAQMD 1168 and LEED® Compliant. |
| | Large, Int and Jumbo Cylinder | 28% | |
| **Hi-Strength 98NF** | 5 gal, 54 gal | 24% | Non-flammable, fast tack adhesive. High temperature resistance. Versatile, high-tack adhesive. |
| | Mini, Large, Int and Jumbo Cylinder | 21% | |
| **Fastbond™ Contact Adhesive 30NF** | 1 qt, 1 gal, 5 gal, 52 gal, 270 gal | 49% | Non-flammable water-based contact adhesive. Extremely high strength, high temperature resistant. Meets MIL-A-24179A, Type I, GREENGUARD Certified, SCAQMD 1168, LEED® Compliant. |
| **Fastbond™ Contact Adhesive 30H** | 52 gal, 270 gal | 48% | Long bonding range with high immediate bond strength. Economical high coverage. Low mist version of 30NF. |
| **Fastbond™ 2000NF** | 5 gal, 50 gal, 270 gal | 49% | Water dispersed, activated adhesive. Immediate bonding and handling strength without forced drying. GREENGUARD Certified. |
| **FOAM & FABRIC** | | | |
| **Foam & Fabric 24** | Aerosol | 17% | Aggressive tack. Foam-tearing strength. Variable width lace spray pattern. |
| **Foam Fast 74** | Aerosol | 22% | Extremely fast tack. Soft non-dimpling glue line. Immediate foam tearing strength. |
| | 52 gal | 36% | |
| | Large, Int and Jumbo Cylinder | 22% | |
| **Foam Fast 74 CA (Low VOC)** | Aerosol | 23% | Extremely fast tack. Soft non-dimpling glue line. Immediate foam tearing strength. |
| **Foam Fast 74NF** | Mini, Large, Int and Jumbo Cylinder | 24% | Non-flammable. Fast tack with foam tearing strength. Soft non-dimpling bond line. |
| **Fastbond™ Foam Adhesive 100NF** | 1 gal, 5 gal, 52 gal, 100 gal, 255 gal | 47% | One-part, fast setting — foam and fabric adhesive. GREENGUARD Certified. Can be activated for immediate bonding. |

**Note:** The technical information and data on these pages should be considered representative or typical only and should not be used for specification purposes.

| | Adhesive Strength | Color | Application Method | Bonding Range (Two Surfaces) | Flammability | Heat Resistance (SAFT) | Spray Pattern | VOC Content |
|---|---|---|---|---|---|---|---|---|
| | Low | Clear | Spray | 15 sec–10 min | Flammable | 140°F | Mist | 59% |
| | Medium | Clear | Brush/Roll/Spray | 1–60 min | Flammable | 170°F | Pebble | 79g/L<br>73g/L |
| | Medium | Clear | Brush/Roll/Spray | 1–60 min | Flammable | 190°F | Web | 562g/L |
| | Low | Clear | Spray<br>Brush/Roll/Spray<br>Spray | 15 sec–15 min | Flammable | 150°F | Mist | 54%<br>504g/L<br>535g/L |
| | Low | Clear | Spray | 15 sec–30 min | Flammable | 205°F | Mist | <25% |
| | Low | Clear | Brush/Roll/Spray | 5 min–8 hr | Non-flammable | – | Mist | 2g/L |
| | High | Light Yellow | Spray | 10–60 min | Flammable | 300°F | Web | 687g/L |
| | High | Light Yellow | Brush/Roll | 10–60 min | Flammable | 300°F | Web | 589g/L |
| | High | Clear | Spray | 1–30 min | Flammable | 210°F | Web | 52% |
| | High | Clear | Brush/Roll/Spray<br>Spray<br>Spray | 1–10 min | Flammable | 250°F | Web | 356g/L<br>586g/L<br>54% |
| | High | Clear | Spray | 1–30 min | Flammable | 200°F | Web | <25% |
| | High | Clear/Red | Spray | 1–20 min | Flammable | 250+°F | Web | 577g/L |
| | High | Clear/Red<br>Clear/Red<br>Clear | Spray<br>Brush/Roll/Spray<br>Spray | 1–60 min | Flammable | 210°F | Pebble | <80g/L<br><80g/L<br><20 |
| | High | Clear/Red | Brush/Roll/Spray<br>Spray | 1–15 min | Flammable | 210°F | Pebble | 79g/L<br>79g/L |
| | High | Red/Clear | Spray | 10–60 min | Non-flammable | 240°F | Web | 935g/L<br>907g/L |
| | High | Neutral/Green | Brush/Roll/Spray | 30 min–4 hr | Non-flammable | 300°F | Mist | 37g/L |
| | High | Green | Brush/Roll/Spray | 30 min–4 hr | Non-flammable | 300°F | Mist | 37g/L |
| | High | Blue/Light Orange/ Neutral | Co-Spray | 2 min–2 hr | Non-flammable | 300°F | Mist | 37g/L |
| | Medium | Orange | Spray | 30 sec–30 min | Flammable | 170°F | Web | 53% |
| | Medium | Clear/Orange | Spray<br>Brush/Roll/Spray | 30 sec–15 min | Flammable | 170°F | Web | <55%<br>352g/L<br>563g/L |
| | Medium | Clear/Orange | Spray | 30 sec–15 min | Flammable | 200°F | Web | <25% |
| | Medium | Red/Clear | Spray | 10–60 min | Non-flammable | 210°F | Web | 48g/L |
| | Medium | Neutral/Lavender | Spray | 1–20 min | Non-flammable | – | Mist | 0g/L |

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# Solvent and Water Based Adhesives

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| Product | Available Format | Solids Weight Percent (Approx.) | Key Characteristics |
|---|---|---|---|
| **SPECIALTY** | | | |
| **Pressure Sensitive 72** | Aerosol | 15% | Permanently tacky and repositionable. Long open time. Variable width lace spray pattern. |
| **Repositionable 75** | Aerosol | 9% | Adheres in seconds. Extra long tack range. Repositionable. |
| **Hi-Tack 76** | Aerosol | 13.5% | Fast tacking. One surface bonds. Variable width lace spray pattern. |
| **Polystyrene 78** | 5 gal<br>Aerosol | 19% | Bonds polystyrene with no surface degradation. Fast grabbing and fast drying. Uniform spray pattern for fast and easy application. |
| **Polystyrene 78ET** | Large, Int and Jumbo Cylinder | 17% | Bonds polystyrene with no surface degradation. Extended tack time for long working time. Uniform spray pattern for fast and easy application. |
| **Hi-Temp Polystyrene 78HT** | 5 gal, 54 gal<br>Large, Int and Jumbo Cylinder | 27%<br>15% | Bonds polystyrene with no surface degradation. High temperature resistance. Can be used for roofing membrane attachment. |
| **Rubber And Vinyl 80** | Aerosol | 13% | High strength. High temperature resistance. Fast setting. |
| **826 Plastic Adhesive** | 1 qt, 5 gal | 23% | Fast drying for many plastic films. Resists fuels, water and oil. Thin liquid. |
| **847 High Performance Rubber & Gasket Adhesive** | 5 oz, 1 qt, 1 gal, 5 gal, 54 gal | 36% | Quick drying and flexible with fuel and oil resistance. Able to reactivate with heat and solvent. Curable with heat. |
| **847H High Performance Rubber & Gasket Adhesive** | 5 gal | 51% | High viscosity. Able to reactivate with heat and solvent. Curable with heat. |
| **1099 High Performance Plastic Adhesive** | 5 oz, 1 qt, 1 gal, 5 gal, 54 gal | 34% | Fast drying and heat curable. Resists weathering, water, oil, plasticizer migration and aliphatic fuels. |
| **1099L High Performance Plastic Adhesive** | 5 gal, 54 gal | 24% | Sprayable version of 1099H. Fast drying and heat curable. Resists weathering, water, oil, plasticizer migration and aliphatic fuels. |
| **1300 High Performance Rubber & Gasket Adhesive** | 5 oz, 1 pt, 1 qt, 1 gal, 5 gal, | 37% | High immediate strength. Fast-drying and heat resistant for rubber and metal. Meets MIL-M-81288 and MMM-A-121. |
| **1300L High Performance Rubber & Gasket Adhesive** | 1 qt, 1 gal, 5 gal, 54 gal | 30% | Lower viscosity for spraying. Fast-drying and heat resistant for rubber and metal. Meets MMM-A-121. |
| **1357 High Performance Contact Adhesive** | 5 oz, 1 pt, 1 qt, 1 gal, 5 gal, 54 gal (Light Yellow only 5 gal and 55 gal) | 25% | Rapid build up to a very high strength bond for metal. Resists heat and continuous load stress. Meets MMM-A-121 requirements. |
| **1357L High Performance Contact Adhesive** | 5 gal, 54 gal | 18% | Low viscosity. Resists heat and continuous load stress. Meets MMM-A-121 requirements. |
| **2262 Plastic Adhesive** | 1 qt, 5 gal | 27% | Clear and non-staining. Resists plasticizer migration for bonding many flexible vinyls. Fast tack. |
| **4475 Industrial Plastic Adhesive** | 5 oz, 1 qt, 5 gal | 43% | Clear plastic adhesive. Fast drying. Strong environmental resistance. |
| **4491 Industrial Adhesive** | 5 gal, 54 gal | 24% | Securely bonds vinyl with resistance to plasticizer migration. Versatile plastic adhesive. Excellent environmental resistance. |
| **4550 Industrial Adhesive** | 5 gal, 54 gal | 33% | Adding tack to large surfaces. Translucent. Long bonding range. |
| **4693 High Performance Industrial Plastic Adhesive** | 5 oz, 1 qt, 1 gal, 5 gal, 54 gal, (High viscosity only 5 oz) | 26% | Excellent plastic adhesive. Long tack range. Water and heat resistant. |
| **4799 Industrial Adhesive** | 5 oz, 1 qt, 1 gal, 5 gal | 32% | Water and heat resistant. Dries rapidly. EPDM bonder. |
| **Fast Tack 1000NF** | 1 gal, 5 gal, 52 gal, 255 tote | 49% | One-part immediate handling strength. Low overspray and high coverage. Bonds a wide variety of substrates with high temperature resistance . |
| **Pressure Sensitive Adhesive 4224NF** | 5 gal , 52 gal | 41% | Water-based, plasticizer resistant adhesive. Permanent pressure sensitive adhesive with an aggressive tack. Low VOC and GREENGUARD Certified. |
| **Fastbond™ Spray Activator 1** | 1 qt, 1L spray bottle, 5 gal, 30 gal | N/A | GREENGUARD Certified. Low VOC and LEED® Compliant. UL MAGW2 component recognition. |

**Note:** The technical information and data on these pages should be considered representative or typical only and should not be used for specification purposes.

| | Adhesive Strength | Color | Application Method | Bonding Range (Two Surfaces) | Flammability | Heat Resistance (SAFT) | Spray Pattern | VOC Content |
|---|---|---|---|---|---|---|---|---|
| | Medium | Blue | Spray | 1 min–8 hr | Flammable | 170°F | Web | 55% |
| | Low | Clear | Spray | 5 sec–60 min | Flammable | 110°F | Mist | 58% |
| | High | Clear | Spray | 1–60 min | Flammable | 230°F | Web | 55% |
| | Medium | Clear | Spray | 1–15 min | Flammable | 190°F | Web | 566g/L<br>62% |
| | Medium | Clear/Green | Spray | 1–60 min | Flammable | 200°F | Web | 622g/L |
| | Medium | Blue | Spray | 1–60 min | Flammable | 230+°F | Web | 611g/L |
| | High | Yellow | Spray | 3–30 min | Flammable | 300+°F | Web | 54% |
| | Medium | Amber | Brush/Spray | Up to 45 min | Flammable | — | Web | 731g/L |
| | Medium | Brown | Brush/Flow | Up to 15 min | Flammable | — | Brush | 0g/L |
| | Medium | Brown | Brush/Flow | Up to 10 min | Flammable | — | Brush | 5g/L |
| | High | Light Tan | Brush/Flow | Up to 40 min | Flammable | — | Brush/Flow | 5g/L |
| | High | Light Tan | Brush/Spray | Up to 20 min | Flammable | — | Brush/Flow | 443g/L |
| | High | Yellow | Brush/Flow | Up to 12 min | Flammable | 300°F | Brush/Flow | 667g/L |
| | High | Yellow | Brush/Spray | Up to 8 min | Flammable | 300°F | Brush/Spray | ≤706g/L |
| | High | Gray-Green/ Light Yellow | Brush/Spray | 10–30 min | Flammable | 300°F | Web | ≤582g/L |
| | High | Gray-Green | Spray | 10–30 min | Flammable | 300°F | Web | 515g/L |
| | High | Clear | Brush/Flow | 2–20 min | Flammable | — | Brush/Flow | 177g/L |
| | Medium | Clear | Brush/Flow | 1–10 min | Flammable | — | Brush/Flow | 600g/L |
| | High | Light Tan | Brush/Roll/Spray | Up to 20 min | Flammable | — | Web | 190g/L |
| | Low | Clear | Brush/Roll/Spray | 10–30 min | Flammable | — | Web | 516g/L |
| | Medium | Clear | Brush/Spray | 10–60 min | Flammable | — | Web | 597g/L |
| | Medium | Black | Brush/Trowel | 1–10 min | Flammable | — | Brush/Trowel | 628g/L |
| | High | Neutral/Purple | Spray | 1–10 min | Non-flammable | 300°F | Mist | 0g/L |
| | Medium | Blue/Clear | Brush/Roll/ Spray/Trowel | 15 min–8 hr | Non-flammable | — | Mist | 14g/L |
| | N/A | Clear | Spray | N/A | Non-flammable | — | Mist | 0g/L |

**Note:** The technical information and data on these pages should be considered representative or typical only and should not be used for specification purposes.

# 3M™ Adhesive Sealants

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## The economical choice for high strength, long lasting elastomeric bonding and sealing.

3M Adhesive Sealants are suitable for bonding and sealing a wide variety of substrates including: glass, wood, composites and plastics.


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**3M™ Polyurethane Sealant 740 moisture cures to a flexible seal/bond between exterior skins and metal framework and between wood flooring and metal framework. Tensile strength up to 580 psi is enough to replace mechanical fasteners in many situations.**

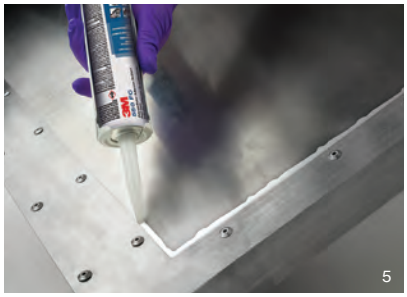

358

**3M™ Polyurethane Window Bonder Adhesive Sealant 595 is a fast curing one-component, high viscosity polyurethane sealant for bonding windshields and other substrates requiring high strength. This adhesive sealant is certified for 1 Hour Drive Away Time.**



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**3M™ Marine Adhesive Sealant 4000 UV Fast Cure cures completely in only 48 hours to a strong flexible bond/seal. Applications include: assembly above or below the waterline such as, hull and stern joints, hull to deck seams, marine hardware and more.**


5

**3M™ Polyurethane Sealant 560 is an all-purpose, single-component, moisture-curing, gap-filling polyurethane that creates permanently elastic seals and bonds in a wide variety of substrates.**


46

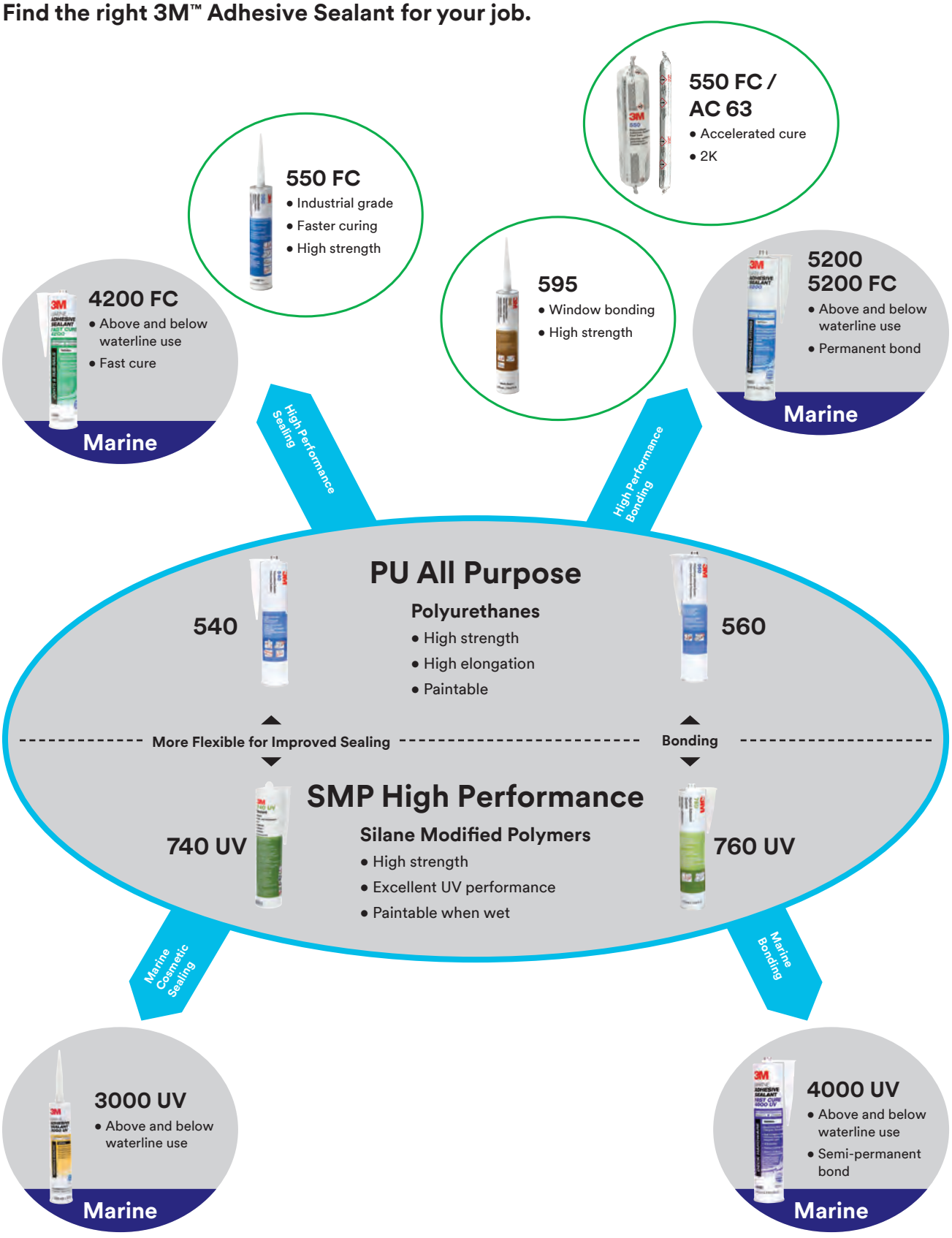
**Seam sealing ductwork with 3M™ Polyurethane Sealant 540 will prevent air and dust intrusion. Its flexibility assists with vibration damping.**


180

**3M™ Adhesive Sealant 740 UV has superior UV resistance that is ideal for sealing seams and filling gaps for exterior applications.**

# Durable, flexible bonding and sealing.

## Find the right 3M™ Adhesive Sealant for your job.




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**Note:** The technical information and data on these pages should be considered representative or typical only and should not be used for specification purposes.

# 3M™ Adhesive Sealants



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## Proven performance in demanding applications

| Product | Description | Tensile Strength psi (MPa) | Stress at 100% Strain psi (MPa) | Elongation (%) | Skin Time (min) | Hardness (Shore A) | Color (Dry) | Application Method | Typical Handling Strength | Cure Rate (mm/ 24 hr) | Service Temp. Range °F (°C) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **3M™ Polyurethane Adhesive Sealants** (UV stable, Paintable once skin forms, Multi-purpose) | | | | | | | | | | | |
| **525** | All-around sealing; very flexible, excellent for concrete. | 300 (2.1) | 75 (0.5) | >800 | 90–150 | 25 | Gray | Bead | N/A | 3 | -22 to 176 (-30 to 80) |
| **540** | Multi-purpose sealing. | 350 (2.4 | 90 (0.6) | >700 | 60–90 | 40 | White, Gray, Black | Bead | 24 hr | 3 | -40 to 194 (-40 to 90) |
| **550FC** | Multi-purpose adhesive sealant. | 375 (2.6 | 150 (1.0) | >500 | 50–90 | 45 | White, Gray, Black | Bead | 24 hr | 4 | -40 to 194 (-40 to 90) |
| **550FC + AC63** | Two component system for accelerated cure of 550. | 275 (1.9) | 125 (0.9) | >500 | 20 | 45 | White, Gray, Black | Bead | 20 min full cure | 20 min | -40 to 194 (-40 to 90) |
| **551** | Properties similar to 550FC with longer open time. | 450 (3.1) | 200 (1.4) | >600 | 120–180 | 45 | White | Bead | 24 hr | 4 | -40 to 194 (-40 to 90) |
| **560** | High strength adhesive sealant. | 380 (2.6) | 200 (1.4) | >300 | 50–60 | 55 | White, Gray, Black | Bead | 24 hr | 4 | -40 to 194 (-40 to 90) |
| **560 + AC63** | Two component system for accelerated cure of 560. | 350 (2.4) | 140 (0.9) | >500 | 40 | 50 | White, Gray, Black | Bead | 3 hr | <24 hr full cure | -40 to 194 (-40 to 90) |
| **595** | Polyurethane windshield and window bonding. | 1250 (8.6) | 470 (3.2) | >400 | 20–30 | 60–65 | Black | Extruded | 1 hr | >3 | -40 to 212 (-40 to 100) |
| **3M™ Silane Modified Polymer (SMP) Adhesive Sealants** (Excellent UV performance, Can be painted immediately, Isocyanate-free) | | | | | | | | | | | |
| **730UV** | Clear, cosmetic sealing with excellent UV resistance. | 300 (2.1) | 120 (0.8) | >200 | 25–30 | 30 | Clear | Bead | 24 hr | 3.5 | -40 to 194 (-40 to 90) |
| **740UV** | Multi-purpose sealing; excellent UV resistance, low VOC. | 180 (1.2) | 168 (1.2) | 130 | 40–60 | 30 | White, Gray, Black | Bead | 24 hr | 3.5 | -40 to 194 (-40 to 90) |
| **760UV** | Multi-purpose bonding; excellent UV resistance, low VOC. | 440 (3.0) | 280 (1.9) | 180 | 10–30 | 55 | White, Gray, Black | Bead | 24 hr | 3.5 | -40 to 212 (-40 to 100) |

| Product | Description | Tensile Strength psi (MPa) | Stress at 100% Strain psi (MPa) | Elongation (%) | Skin Time (min) | Hardness (Shore A) | Color (Dry) | Application Method | Typical Handling Strength | Cure Rate (mm/ 24 hr) | Service Temp. Range °F (°C) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **3M™ Weatherban™ Sealants** | | | | | | | | | | | |
| **5354** | High tack butyl tape for sealing; easy to compress, resists cold flow. | N/A | N/A | N/A | N/A | 60 | Black | Tape | N/A | N/A | N/A |
| **PF5422** | Thread reinforced butyl tape. Repositionable without clean up. Weather resistant. | 125 (0.9) | 25 (0.2) | 400 | 30 | N/A | Black | Tape | N/A | N/A | N/A |
| **PF5423** | Non-reinforced, thinner version of PF5422. | 20 (0.2 | 20 (0.2) | 2700 | 30 | N/A | Black | Tape | N/A | N/A | N/A |
| **3M™ Specialty Sealant and Adhesive Products** | | | | | | | | | | | |
| **800** | Solvent-based rubber dries to flexible seal. Solvent resistant. | 100 (0.7) | 70 (0.5) | 1200 | 10 | N/A | Red-Brown | Bead | 24 hr | 0.8 | -65 to 200 (-54 to 93) |
| **606** | Weatherban™ Acrylic Sealant; Multipurpose indoor and outdoor sealing. | 260 (1.8) | 153 (1.0) | 146 | 30 | 60 | White | Bead | N/A | 1.5 | -28 to 180 (-33 to 82) |
| **2084** | Scotch-Seal™ solvent-based rubber industrial sealant. Metal sealant; aluminum color. Oil and fuel resistant. | 700 (4.8) | 475 (3.3) | 800 | 5 | 30 | Aluminum | Bead | 24 hr | 0.7 | -65 to 200 (-54 to 93) |
| **5010** | Moisture-curing polyurethane. Excellent wood bonder. | 275 (19) | N/A | N/A | 3–5 | N/A | Cream | Bead | 24 hr | N/A | -22 to 212 (-30 to 100) |

# 3M™ Adhesive Sealants



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## Marine sealants

| Product | Description | Tensile Strength psi (MPa) | Stress at 100% Strain psi (MPa) | Elongation (%) | Skin Time (min) | Hardness (Shore A) | Color (Dry) | Application Method | Typical Handling Strength | Cure Rate (mm/ 24 hr) | Service Temp. Range °F (°C) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **3M™ Polyurethane Adhesive Sealants** (UV stable, Paintable once skin forms, Multi-purpose) | | | | | | | | | | | |
| **5200** | Industry standard for over 50 years. Permanent bonding of gelcoat, fiberglass. Long working time. Bonds/seals above and below waterline. | 650 (4.5) | 450 (3.1) | >230 | >48 hr | 70 | White, Black, Tan, Mahogany | Bead | >48 hr | <1 | -40 to 190 (-40 to 88) |
| **5200 FC** | Fast cure version of 5200. Up to 1 hr open time. Permanent bonding. Bonds/seals above and below waterline. | 600 (4.1) | 200 (1.4) | >350 | 60–120 | 60 | White | Bead | 48 hr | 3 | -40 to 190 (-40 to 88) |
| **4200 FC** | Medium strength bonding and water tight sealing; can be removed after prolonged use. Bonds/seals above and below waterline. | 220 (1.5) | 180 (1.2) | >275 | 50–90 | 40 | White, Black | Bead | 24 hr | 3 | -40 to 194 (-40 to 90) |
| **3M™ Silane Modified Polymer (SMP) Adhesive Sealants** (Excellent UV performance, Can be painted immediately, Isocyanate-free) | | | | | | | | | | | |
| **4000 UV** | High performance, medium strength bonding and water tight sealing; excellent UV resistance. Bonds/seals above and below waterline. | 450 (3.1) | 210 (1.4) | >300 | 15–30 | 40 | White, Black | Bead | 24 hr | 3.5 | -40 to 194 (-40 to 90) |
| **3000 UV** | Cosmetic sealing; excellent UV resistance, low VOC. Removable. Bonds/seals above and below waterline. | 180 (1.2) | 168 (1.2) | 170 | 40–60 | 30 | White, Gray, Black | Bead | 24 hr | 3.5 | -40 to 194 (-40 to 90) |
| **3M™ Silicone Adhesive Sealants** (Excellent UV performance, Clear/White Marine Silicone) | | | | | | | | | | | |
| **Marine Silicone** | High quality, marine grade, non-yellowing silicone. Mildew resistant, non-sagging. Removable. Bonds/seals above waterline. | 220 (1.5) | 65 (0.5) | >350 | 5–10 | 20 | White, Clear | Bead | N/A | 3 | -40 to 190 (-40 to 88) |

| Product | Description | Color | Viscosity | VOC g/L | |
|---|---|---|---|---|---|
| **3M™ Primers and Adhesion Promoters** | | | | | |
| **P591** | All purpose primer | Black | Low | 613 | Polyurethane |
| **P592** | Metal primer | Clear | Low | 790 | Silane |
| **AP596** | Adhesion promoter cleaner | Clear | Low | 798 | Silane |

| Description | 310 | 400 A-2K | 400M | 600M | 600A | 34A | 643B |
|---|---|---|---|---|---|---|---|
| **3M™ Applicators** | | | | | | | |
| **Type** | **Manual** | **Pneumatic** | **Manual** | **Manual** | **Pneumatic** | **Pneumatic** | **Battery-operated** |
| **310mL Cartridges** | ■ | | ■ | ■ | | ■ | ■ |
| **350mL Sausage Packs** | | ■ | ■ | ■ | ■ | ■ | ■ |
| **400mL Sausage Packs** | | | ■ | ■ | ■ | ■ | ■ |
| **600mL Sausage Packs** | | | | ■ | ■ | | ■ |

# 3M™ Adhesive Sealants

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## Marine sealants comparison guide




| Features | 3000 UV | 4000 UV | 4200 FC | 5200 | 5200 FC | Marine Grade Silicone | 595 |
|---|---|---|---|---|---|---|---|
| **Sealing** | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| **Bonding** | Good | Excellent | Good | Excellent | Excellent | Poor | Excellent |
| **Removable** | Yes | Yes | Yes | No | No | Yes | No |
| **Above water** | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| **Below water** | Yes | Yes | Yes | Yes | Yes | No | No |
| **Strength** | Medium | Medium | Medium | High | High | Low | High |
| **Chemical base** | SMP | SMP | Polyurethane | Polyurethane | Polyurethane | Silicone | Polyurethane |
| **Curing time** | 24 hrs | 24 hrs | 24 hrs | 5–7 days | 24 hrs | 24 hrs | 24 hrs |
| **Tack free time (70°F/21°C @ 50% RH)** | 1 hr | 30 min | 2 hrs | 24–48 hrs | 1 hr | 10 min | 30 min |
| **Cure rate (mm per 24 hrs)** | >3.5 | >3.5 | >3 | <1 | 3 | 3 | 3 |

⊕ Good ⊕⊕ Better ⊕⊕⊕ Best

| Applications | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Deck to hull bonding** | | ⊕⊕ | ⊕⊕ | ⊕⊕⊕ | ⊕⊕⊕ | | |
| **General purpose sealing and bonding above and below waterline** | ⊕⊕ | ⊕⊕⊕ | ⊕⊕ | ⊕⊕⊕ | ⊕⊕⊕ | Above Waterline Only | |
| **Bedding** | ⊕⊕ | ⊕⊕⊕ | ⊕⊕⊕ | ⊕⊕ | ⊕⊕ | ⊕ | |
| **Keel bonding** | | ⊕ | ⊕ | ⊕⊕⊕ | ⊕⊕⊕ | | |
| **General interior sealing** | ⊕⊕ | ⊕⊕ | ⊕⊕ | | | ⊕⊕⊕ | |
| **Sealing wood to deck or superstructure** | ⊕ | ⊕ | ⊕⊕ | ⊕⊕⊕ | ⊕⊕⊕ | | |
| **Sanitary sealing** | | | | | | ⊕⊕⊕ | |
| **Glass window bonding** | | | | | | | ⊕⊕⊕ |
| **Fritted glass window bonding** | | | | | | | ⊕⊕⊕ |
| **Plastic acrylic window bonding** | | ⊕⊕⊕ | | | | | ⊕⊕⊕ |
| **Wood deck caulking** Not recommended for teak deck caulking. | ⊕ | ⊕⊕ | ⊕⊕ | ⊕⊕⊕ | ⊕⊕⊕ | ⊕ | |
| **Bonding anti-slip plates in engine rooms** | ⊕ | ⊕ | ⊕⊕ | ⊕⊕⊕ | ⊕⊕⊕ | | |
| **Sealing exterior strong UV radiation zones** | ⊕⊕⊕ | ⊕⊕⊕ | ⊕ | ⊕ | ⊕ | Above Waterline Only | |
| **Bonding decorative panels (vertical); work surfaces (horizontal); deck hardware (deck/fittings); wood to wood** | ⊕ | ⊕⊕ | ⊕⊕ | ⊕⊕⊕ | ⊕⊕⊕ | | |
| **Bonding thru hull; hatches and port lights; fiberglass to fiberglass** | ⊕ | ⊕⊕⊕ | ⊕⊕ | ⊕⊕⊕ | ⊕⊕⊕ | | |

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# 3M™ Concrete Repair Products

**Fast, Convenient Crack and Spall Repair, Expansion Joints, Custom Threading and Anchoring, and More**

3M™ Concrete Repair Products offer a complete line of conveniently packaged and dispensed adhesives/sealants for every job from cracks and joints to spalls and more.

Repairs are long lasting with strong, flexible bonds that resist weathering, expansion and contraction.

Fast setting allows you and your customers to drive on repaired surfaces in as few as five minutes. You can choose non-sag or self-leveling formulations for repairs on both vertical and horizontal surfaces. Non-sag formulation facilitates step and ledge repair.



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**3M™ Concrete Repair 600 self-leveling flows smoothly into cleaned cracks and gaps and hardens in as little as 5 minutes.**


102

**50mL and 12 fl oz duo-pak cartridges, 5-gallon pails and 55 gallon drums are available to meet your production volume requirements. Nozzle automatically and precisely meters, mixes, and dispenses two-part urethane formulation. Apply material precisely where needed to conserve material.**


103

**Make fast work of lengthy expansion or control joints and other larger jobs with the heavy-duty manual applicator and 12 fl oz duo-pak cartridges.**


104

**3M concrete repair formulations harden to any depth without cracking for custom threading and anchoring.**

| | Product (Color) | Key Features | Mix Ratio (Vol.) B:A | Approx. Viscosity at 75°F (24°C) (cP) | Approx. Mixed Work Life at 75°F (24°C) | Approx. Time to Handling Strength at 75°F (24°C) | Floating Roller Peel PLI (N/cm) at 75°F (24°C) | Overlap Shear: psi (MPa) | | | Size | UPC | Stock # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | -40°F (-40°C) | 75°F (24°C) | 180°F (82°C) | | | |
| * | **DP600 600** (Gray) | Concrete repair, Self-leveling | 1:1 | 6,000 | 1 min | 4 min | 20 (36) | 3,200 (22) | 2,300 (16) | 700 (5) | 50mL<br>400mL<br>8.4 fl oz<br>5 gal pail A<br>5 gal pail B | 00-021200-56602-8<br>00-051111-98303-4<br>00-021200-96596-8<br>00-021200-96575-3<br>00-021200-96574-6 | 62-2649-5030-4<br>62-2649-3530-5<br>62-2649-1233-8<br>62-2749-8535-7<br>62-2649-8535-9 |
| | **DP600NS 600NS** (Gray) | Concrete repair, Non-sag | 1:1 | Paste | 1 min | 4 min | 8 (14) | 2,700 (19) | 2,300 (16) | 700 (5) | 50mL<br>400mL | 00-021200-56606-6<br>00-051111-98312-6 | 62-2652-5030-8<br>62-2652-3530-9 |
| | **DP5106** (Gray) | Helps relieve stress in large segments of concrete floors | 1:1 | 34,000 | 4 min | 40 min | N/A | N/A | 1,100 (8) | N/A | 400mL<br>5 gal pail A<br>5 gal pail B | 00-051111-98297-6<br>00-021200-96584-5<br>00-021200-96583-8 | 62-3527-3530-2<br>62-3527-9535-4<br>62-3527-8535-6 |

| Product | Size | Description |
|---|---|---|
| **Accessories** | | |
| **Manual Dispenser 98073** | 400mL | Heavy-duty applicator. |
| **Pneumatic Dispenser 87979** | 400mL | Applicator for high volume jobs. |
| **Mix Tip – Higher Throughput 97331** | 400mL | General use tip. |
| **Mix Tip – Longer Reach 87982** | 400mL | Alternative nozzle with longer reach. |
| **Mixing Nozzle (threaded) 53382** | 8.4 fl oz | Mixes Concrete Repair 600. |

* After Key Products, consider these.

**Note:** The technical information and data on these pages should be considered representative or typical only and should not be used for specification purposes.

# Notes:

# Convenience meets extreme bonding power.

## Powerful Bonding Solutions

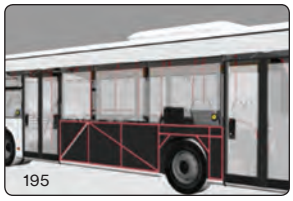
Help your customers successfully bond a variety of materials with strength and speed for permanent, structural and repositionable applications. Our double-sided bonding tapes provide shear strength, conformability, surface adhesion and temperature resistance.

## Dream. Design. Deliver.

Since 1980, 3M™ VHB™ Tape has offered unlimited design and application possibilities. By working with 3M's engineering experts, product designers know they can count on this reliable solution. Lab-tested and proven in the real world, 3M™ VHB™ Tape eliminates rivets, bolts, screws and welds.

- Durability for long-term performance indoors and out
- Productivity through application ease and versatility
- Instant bonding
- Smooth, invisible appearance
- Viscoelastic properties absorb shock and distribute stress evenly over the bond line
- Bond dissimilar materials with confidence



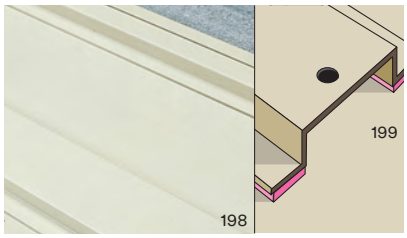

**3M™ VHB™ Tape bonds panels to a bus on contact. The tape seals against water, moisture and more. Bonding power eliminates mechanical fasteners for a smooth, clean surface. Viscoelastic properties help absorb shock and vibration for bond reliability.**



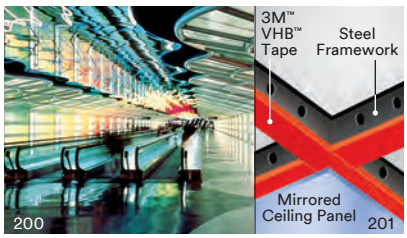

**To join a variety of materials for high impact visual combinations throughout a refrigerator, 3M™ VHB™ Tape bonds painted and unpainted metal, HSE and LSE plastics, ceramics and more.**



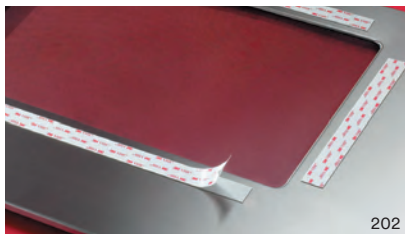

**For assembly efficiency, die-cut pieces of 3M™ VHB™ Tape bond components on a laptop.**



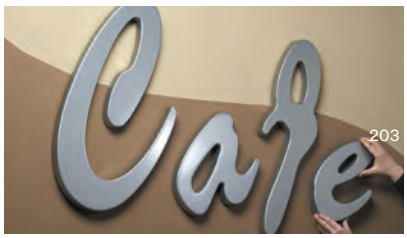

**3M™ VHB™ Tapes bond panel stiffeners on contact to pre-painted metal cabinetry. Unlike welding, applying the tape does not damage the finish.**




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




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

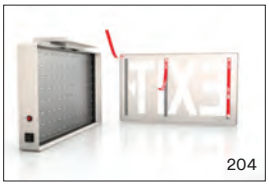



**With high holding power and long-term reliability, 3M™ VHB™ Tape bonds dimensional letters to a painted wall for indoor or outdoor signage.**

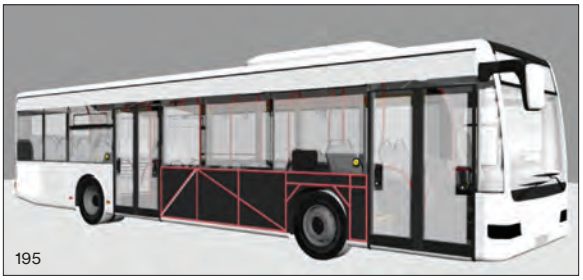
# 3M™ VHB™ Tapes — Typical Applications

3M™ VHB™ Tape is a proven high-strength alternative to screws, rivets, welds and other forms of traditional fastening methods. While a screw or a rivet can join two substrates at a single point, 3M™ VHB™ Tape permanently adheres one substrate to another and spreads the stress load across the entire length of the joint. The most common applications for 3M™ VHB™ Tape are:

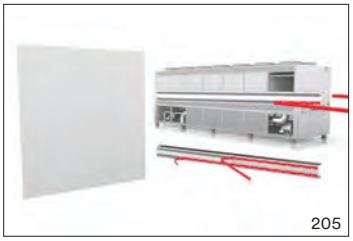
- Reduce weight and solve dynamic force challenges
- Create a clean appearance



204


195

- Exceptional vibration and corrosion resistance
- Deliver unique designs


205


206

- Securely seal dissimilar materials
- Enhance productivity
- Create innovative designs


207


208

- Unlimited opportunities to enhance products
- Flexibility of production and design


209



210

# 3M™ VHB™ Tapes

| Product | Tape Thickness w/o Liner mils (mm) | Liner Type | Description | Adhesive Type | Temp. Resistance Min Hr | Temp. Resistance Days Weeks | Solvent Resistance | Relative Adhesion HSE | Relative Adhesion LSE | Application Ideas |
|---|---|---|---|---|---|---|---|---|---|---|
| **4941 Tape Family** | | | | | | | | | | |
| **4926** | 15 (0.4) | A | Gray, closed-cell acrylic foam carrier. Conformable. Good adhesion to many painted metals. Plasticizer resistant. UL 746C. | Multi-purpose Acrylic | 300°F (149°C) | 200°F (93°C) | High | High | Med | Bond and seal polycarbonate lens over LCD. Bond and seal plastic windows to pre-painted control panels/switch gear. Mount vinyl wiring ducts and conduit channels. Seam vinyl banners. |
| **4936** | 25 (0.64) | A | | | | | | | | |
| **4936F** | 25 (0.64) | F | | | | | | | | |
| **4941** | 45 (1.1) | A | | | | | | | | |
| **4941F** | 45 (1.1) | D | | | | | | | | |
| **4956** | 62 (1.6) | A | | | | | | | | |
| **4956F** | 62 (1.6) | F | | | | | | | | |
| **4991** | 90 (2.3) | F | | | 250°F (121°C) | 200°F (93°C) | | | | |
| **4991B** | 90 (2.3) | F | Black version of 4991. | | | | | | | |
| **4919F** | 25 (0.64) | F | Black version of 4936F. | | 300°F (149°C) | 200°F (93°C) | | | | |
| **4947F** | 45 (1.1) | F | Black version of 4941F. | | | | | | | |
| **4979F** | 62 (1.6) | F | Black version of 4956F. | | | | | | | |
| **5952 Tape Family** | | | | | | | | | | |
| **5906** | 6 (0.15) | G | Black, closed-cell acrylic foam carrier. Good adhesion to many painted surfaces, including powder coated paint. | Modified Acrylic | 300°F (149°C) | 250°F (121°C) | High | High | Med | Bond and seal polycarbonate lens over LCD. Lens and touch panel bonding. Logo attachment. P.O.P. and display construction. |
| **5907** | 8 (0.2) | G | | | | | | | | |
| **5908** | 10 (0.25) | G | | | | | | | | |
| **5909** | 12 (0.3) | G | | | | | | | | |
| **5915** | 16 (0.4) | F | Black or white, closed-cell acrylic foam carrier. Good adhesion to many painted surfaces, including powder coated paint. UL 746C. | | | | | | | Bonds to a variety of plastics and paint systems. Bond architectural signs to frames. Attach trim and extrusions. Hat channels and stiffeners. |
| **5915P** | 16 (0.4) | E | | | | | | | | |
| **5915WF** | 16 (0.4) | F | | | | | | | | |
| **5925** | 25 (0.6) | F | | | | | | | | |
| **5925P** | 25 (0.6) | E | | | | | | | | |
| **5925WF** | 25 (0.6) | F | | | | | | | | |
| **5930** | 32 (0.8) | F | | | | | | | | |
| **5930P** | 32 (0.8) | E | | | | | | | | |
| **5930WF** | 32 (0.8) | F | | | | | | | | |
| **5952** | 45 (1.1) | F | | | | | | | | |
| **5952P** | 45 (1.1) | E | | | | | | | | |
| **5952WF** | 45 (1.1) | F | | | | | | | | |
| **5962** | 62 (1.6) | F | | | | | | | | |
| **5962P** | 62 (1.6) | E | | | | | | | | |
| **5962WF** | 62 (1.6) | F | | | | | | | | |
| **5958FR** | 40 (1) | F | Meets FAR 25.853 (a) 12 sec vertical burn Appendix F, Part 1 (a) (ii) | | 300°F (149°C) | 200°F (93°C) | | | | Overhead stow bins, signage, kick plates, galley modules, plastic and metal decorative trim, ceiling tile stiffeners, mirror mounting, air duct spuds, floor and wall panel attachment and clip attachment. |
| **RP Tape Family** | | | | | | | | | | |
| **RP16** | 16 (0.4) | A | Gray, closed-cell acrylic foam carrier. Conformable. Good adhesion to many painted metals. | Multi-purpose Acrylic | 250°F (121°C) | 200°F (93°C) | High | High | Med | Panel bonding, stiffener attachment and trim attachment. |
| **RP16F** | 16 (0.4) | F | | | | | | | | |
| **RP25** | 25 (0.6) | A | | | | | | | | |
| **RP25F** | 25 (0.6) | F | | | | | | | | |
| **RP32** | 32 (0.8) | A | | | | | | | | |
| **RP32F** | 32 (0.8) | F | | | | | | | | |
| **RP45** | 45 (1.1) | A | | | | | | | | |
| **RP45F** | 45 (1.1) | F | | | | | | | | |
| **RP62** | 62 (1.6) | A | | | | | | | | |
| **RP62F** | 62 (1.6) | F | | | | | | | | |

**Liner Types:**
A – 3 mil 54# Densified Kraft Paper
B – 5 mil Clear Polyethylene Film
C – 2 mil Polyester Film
D – 5 mil Red Polyethylene Film
E – 4 mil 58# Polycoated Kraft Paper
F – 5 mil Red Printed Polyethylene Film
G – 3 mil Clear Polyethylene Film
H – 5 mil Green PE Film

**Relative Adhesion:**
HSE – High Surface Energy
LSE – Low Surface Energy

**Multi-purpose Acrylic:** Bonds to a wide range of materials including metals, glass, and high and medium surface energy plastics and paints. Resists migration of plasticizers in vinyl substrates.
**Modified Acrylic:** Bonds to medium low surface energy paints and plastics, including many powder coated paints in addition to the substrates listed with the multi-purpose acrylic adhesive (except plasticized vinyl).
**General Purpose Acrylic:** Bonds to most higher surface energy substrates including metal, glass and high surface energy plastics.
**Low Temperature Acrylic:** Bonds down to 32°F (0°C) compared to 50°F (10°C) for most acrylic adhesives. Bonds most high surface energy substrates including metal, glass and high surface energy plastics.
**Low Surface Energy:** High performance synthetic adhesive bonds to many lower surface energy substrates, including many plastics and powder coated paints, plus smooth general purpose substrates.

**Note:** The technical information and data on these pages should be considered representative or typical only and should not be used for specification purposes.

# 3M™ VHB™ Tapes

| Product | Tape Thickness w/o Liner mils (mm) | Liner Type | Description | Adhesive Type | Temp. Resistance | | Solvent Resistance | Relative Adhesion | | Application Ideas |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Min Hr | Days Weeks | | HSE | LSE | |
| **4950 Tape Family** | | | | | | | | | | |
| **4914** | 10 (0.25) | A | Closed-cell acrylic foam carrier. UL 746C. | General Purpose Acrylic | 300°F (149°C) | 200°F (93°C) | High | High | Low | Attach stiffeners in air conditioners, office furniture and telecommunications equipment. |
| **4920** | 15 (0.4) | A | | | | | | | | |
| **4929** | 25 (0.6) | C | | | | | | | | |
| **4930** | 45 (1.1) | A | | | | | | | | |
| **4930F** | 45 (1.1) | D | | | | | | | | |
| **4949** | 45 (1.1) | C | | | | | | | | |
| **4950** | 45 (1.1) | A | | | | | | | | |
| **4955** | 80 (2) | C | | | 400°F (204°C) | 300°F (149°C) | | | | |
| **4959** | 120 (3) | C | | | | | | | | |
| **4959F** | 120 (3) | D | | | | | | | | |
| **4945 Tape Family** | | | | | | | | | | |
| **4945** | 45 (1.1) | A | White, closed-cell acrylic foam carrier. Plasticizer resistant. | Multi-purpose Acrylic | 300°F (149°C) | 200°F (93°C) | High | High | Low | Attach vinyl trim. Bond vinyl extrusions. |
| **4946** | 45 (1.1) | F | | | | | | | | |
| **4910 Tape Family** | | | | | | | | | | |
| **4905** | 20 (0.5) | F | Clear, acrylic construction for joining transparent material. | General Purpose Acrylic | 300°F (149°C) | 200°F (93°C) | High | High | Low | Mount backlit translucent signs. Edge-bond resin filled glass. |
| **4910** | 40 (1) | F | | | | | | | | |
| **4951 Tape Family** | | | | | | | | | | |
| **4951** | 45 (1.1) | C | White, closed-cell acrylic foam carrier. Apply as low as 32°F (0°C). | Low Temp Appliable Acrylic | 300°F (149°C) | 200°F (93°C) | High | High | Low | Low temperature installed products. |
| **4943F** | 45 (1.1) | C | | | | | | | | |
| **4957F** | 62 (1.6) | C | | | | | | | | |
| **4952 Tape Family** | | | | | | | | | | |
| **4932** | 25 (0.6) | A | White, closed-cell acrylic foam carrier. Good adhesion to polypropylene and many powder paints. | Low Surface Energy | 200°F (93°C) | 160°F (71°C) | High | High | High | Bond powder painted metal stiffeners to office desks and file cabinets. Bond polypropylene and polystyrene. |
| **4952** | 45 (1.1) | A | | | | | | | | |
| **4611 Tape Family** | | | | | | | | | | |
| **4646** | 25 (0.6) | D | Dark gray, closed-cell acrylic foam carrier. High temperature resistance. UL 746C. | General Purpose Acrylic | 450°F (232°C) | 300°F (149°C) | High | High | Low | Pre-powder coat paint applications. Hat channels and stiffeners. |
| **4611** | 45 (1.1) | D | | | | | | | | |
| **4655** | 62 (1.6) | D | | | | | | | | |
| **4622 Tape Family** | | | | | | | | | | |
| **4618** | 25 (0.6) | H | White, closed-cell acrylic foam carrier. | General Purpose/ Multi-purpose Acrylic | 250°F (121°C) | 200°F (93°C) | High | High | Low | General purpose bonding. |
| **4622** | 45 (1.1) | H | | | | | | | | |
| **4624** | 62 (1.6) | H | | | | | | | | |

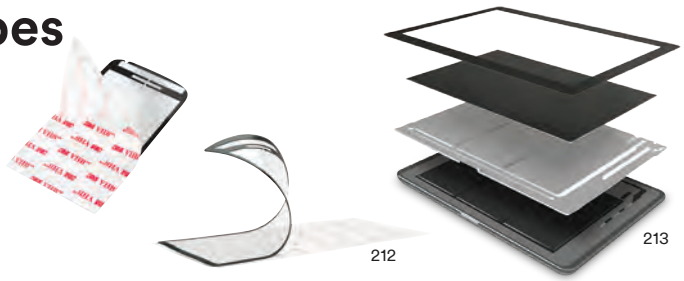
See key on page 74.



**Note:** The technical information and data on these pages should be considered representative or typical only and should not be used for specification purposes.

# 3M™ VHB™ Thin Foam Tapes

With a uniquely thin form, 3M™ VHB™ Thin Foam Tapes go where thicker foam tapes simply can't, while still providing the same great benefits of regular 3M™ VHB™ Tapes. Common applications include LCD, lens and touch panel bonding, logo attachment and point of purchase displays.




| Product | Tape Thickness w/o Liner mils (mm) | Liner Type | Description | Adhesive Type | Temp. Resistance | | Solvent Resistance | Relative Adhesion | | Application Ideas |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Min Hr | Days Weeks | | HSE | LSE | |
| **5900 Tape Family** | | | | | | | | | | |
| **5906** | 6 (0.15) | G | Black, closed-cell acrylic foam carrier. Good adhesion to many painted surfaces, including powder coated paint. | Modified Acrylic | 300°F (149°C) | 250°F (121°C) | High | High | Med | LCD, lens and touch panel bonding, logo attachment, P.O.P. and display construction. |
| **5907** | 8 (0.2) | G | | | | | | | | |
| **5908** | 10 (0.25) | G | | | | | | | | |
| **5909** | 12 (0.3) | G | | | | | | | | |
| **86400 Tape Family** | | | | | | | | | | |
| **86415** | 6 (0.15) | G | Black, closed-cell acrylic foam carrier. Good adhesion to many surfaces. Excellent shock/drop characteristics. | Acrylic | 200°F (93°C) | 158°F (70°C) | Medium | High | High | LCD, lens and touch panel bonding, logo attachment, P.O.P. and display construction. |
| **86420** | 8 (0.2) | G | | | | | | | | |
| **86425** | 10 (0.25) | G | | | | | | | | |
| **86430** | 12 (0.3) | G | | | | | | | | |
| **4914 Tape Family** | | | | | | | | | | |
| **4914-15** | 6 (0.15) | A | White, closed-cell acrylic foam carrier. | General Purpose | 300°F (149°C) | 200°F (93°C) | High | High | Low | LCD, lens and touch panel bonding, logo attachment, P.O.P. and display construction. |
| **4914-20** | 8 (0.2) | A | | | | | | | | |
| **4914** | 10 (0.25) | A | White, closed-cell acrylic foam carrier. All-purpose adhesive. UL 746C. | | | | | | | |
| **5980 Tape Family** | | | | | | | | | | |
| **5980-015** | 6 (.15) | G | Black, closed-cell acrylic foam carrier. Best balance of properties. Excellent push out and anti-lift with drop shock resistance. | Acrylic | 200°F (93°C) | 158°F (70°C) | Medium | High | High | LCD, lens and touch panel bonding, logo attachment, P.O.P. and display construction. |
| **5980-020** | 8 (0.2) | G | | | | | | | | |
| **5980-025** | 10 (0.25) | G | | | | | | | | |
| **5980-030** | 12 (0.3) | G | | | | | | | | |

See key on page 74.

# 3M™ VHB™ Tape for Commercial Vehicles and Trailers

### Built Tough with Smooth Sides to Look Good for the Long Haul

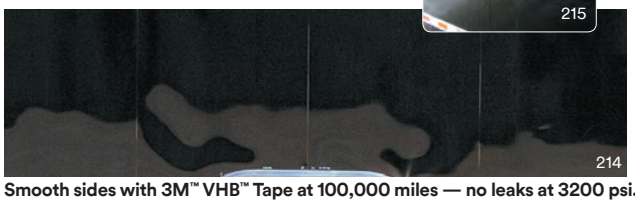
For durability and smooth sides on trailers, trucks, buses, and other commercial vehicles, 3M™ VHB™ Tapes are proven to go the distance.

- 3M™ VHB™ Tape is up to 41% quieter than mechanical fasteners with up to 30% less vibration at highway speeds
- Surfaces of truck panels are aesthetically smooth and graphics apply easily
- Permanently bonds and seals

3M™ VHB™ Tapes for Commercial Vehicles and Trailers are only available through authorized distributors and a warranty may be available on pre-approved applications.




**Mechanically fastened at 36,000 miles — leaks at less than 75 psi.**




**Smooth sides with 3M™ VHB™ Tape at 100,000 miles — no leaks at 3200 psi.**

| Product | Tape Thickness w/o Liner mils (mm) | Liner Type | Description | Adhesive Type | Temp. Resistance | | Solvent Resistance | Application Ideas |
|---|---|---|---|---|---|---|---|---|
| | | | | | Min Hr | Days Weeks | | |
| **CV45F** | 45 (1.1) | D | Gray, closed-cell acrylic foam carrier. Conformable. Good adhesion to many painted metals. | Multi-purpose Acrylic | 300°F (149°C) | 200°F (93°C) | High | Bond overlap seams on vehicle side panels. |
| **CV62F** | 62 (1.6) | F | | | | | | Bond vehicle side panels to posts. |

See key on page 74.

**Note:** The technical information and data on these pages should be considered representative or typical only and should not be used for specification purposes.

# 3M™ VHB™ Structural Glazing Tapes

**Application Ease and Immediate Handling Strength for Increased Productivity**

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.

Immediate handling strength results in faster throughput and delivery. No mixing or curing simplifies manufacturing.

Proven technology with a 30+ year history in construction, an application warranty* is available for qualifying applications in select countries.


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| Product | Tape Thickness w/o Liner mils (mm) | Liner Type | Description | Adhesive Type | Temp. Resistance | | Relative Adhesion | | Solvent Resistance |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | Min Hr+ | Days Weeks | HSE | LSE | |
| **G23F** | 90 (2.3) | F | Gray, closed-cell acrylic foam carrier. Conformable. | Multi-purpose Acrylic | 300°F (149°C) | 200°F (93°C) | High | Med | High |
| **B23F** | | | Black, closed-cell acrylic foam carrier. Conformable. | | | | | | |

*3M™ VHB™ Structural Glazing Tapes are only available for structural glazing applications approved by 3M Technical Service through select distributors.
See key on page 74.

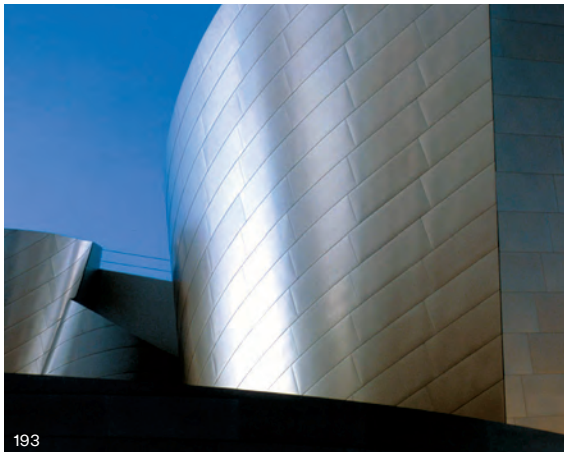
# 3M™ VHB™ Architectural Panel Tapes

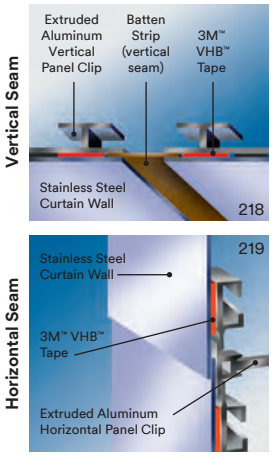
**Proven for More Than 30 Years in Applications from Denver to Singapore**

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

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

Application warranty available for qualifying applications in select countries.


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| Product | Tape Thickness w/o Liner mils (mm) | Liner Type | Description | Adhesive Type | Temp. Resistance | | Solvent Resistance | Relative Adhesion | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | Min Hr | Days Weeks | | HSE | LSE |
| **G11F** | 45 (1.1) | Red, Printed Film | Gray, closed-cell acrylic foam carrier. Conformable. | Multi-purpose Acrylic | 300°F (149°C) | 200°F (93°C) | Med | High | Med |
| **B11F** | 45 (1.1) | | Black, closed-cell acrylic foam carrier. Conformable. | | | | | | |
| **G16F** | 62 (1.6) | | Gray, closed-cell acrylic foam carrier. Conformable. | | | | | | |
| **B16F** | 62 (1.6) | | Black, closed-cell acrylic foam carrier. Conformable. | | | | | | |
| **G90F** | 90 (2.3) | | Gray, closed-cell acrylic foam carrier. Conformable. | | 250°F (121°C) | 200°F (93°C) | Med | High | Med |
| **B90F** | 90 (2.3) | | Black, closed-cell acrylic foam carrier. Conformable. | | | | | | |

See key on page 74.

**Note:** The technical information and data on these pages should be considered representative or typical only and should not be used for specification purposes.

# 3M™ VHB™ Tape for Windows and Doors

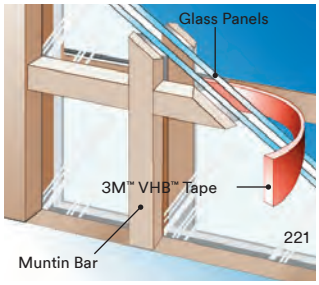
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### Attach Wood, Vinyl, Composite or Painted Metal Muntin Bars to Windows

These high strength tapes conform to glass with good wet-out and resistance to UV light, thermal expansion and contraction, solvents and cleaners. Tapes below are available only for approved window and door customers. Pre-approved applications may be eligible for a 10-year warranty.

See 3M™ Primers on page 79.




| Product | Tape Thickness w/o Liner mils (mm) | Liner Type | Description | Adhesive Type | Temp. Resistance | | Solvent Resistance | Relative Adhesion | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | Min Hr | Days Weeks | | HSE | LSE |
| G45P | 45 (1.1) | A | Gray, closed-cell acrylic foam carrier. Conformable. | Multi-purpose Adhesive | 300°F (149°C) | 200°F (93°C) | High | High | Med |
| G45F | | D | Gray, closed-cell acrylic foam carrier. Conformable. | | | | | | |
| B45F | | F | Black, closed-cell acrylic foam carrier. Conformable. | | | | | | |

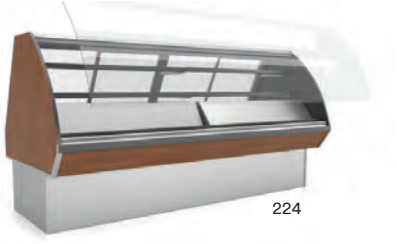
See key on page 74.

# 3M™ VHB™ Tape for Sign and Display

### Reliable and Immediate Bonding

For indoor and outdoor signage, 3M™ VHB™ Tapes hold immediately without the work of screws and the mess and curing time of liquid adhesives.

- Bond metals, plastics, glass, foam board and more
- Invisible fastening for smooth, attractive surfaces



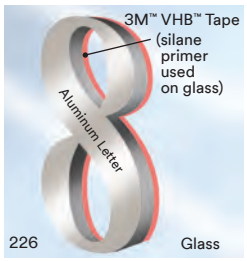







**3M™ VHB™ Tape provides durable bonding in outdoor applications.**




**Clear 3M™ VHB™ Tape permanently bonds aluminum letters to glass and appears almost invisible from behind the pane.**

| Product | Tape Thickness w/o Liner mils (mm) | Liner Type | Description | Adhesive Type | Temp. Resistance | | Solvent Resistance | Relative Adhesion | | Application Ideas |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Min Hr | Days Weeks | | HSE | LSE | |
| 5952 | 45 (1.1) | F | Black or white, closed-cell acrylic foam carrier. Good adhesion to many painted surfaces, including powder coated paint. UL 746C. | Modified Acrylic | 300°F (149°C) | 250°F (121°C) | High | High | Med | Bond and seal metal and plastic through a sign. |
| 5952WF | 45 (1.1) | F | | | | | | | | |
| 5962 | 62 (1.6) | F | | | | | | | | |
| 4910 | 40 (1) | F | Clear, acrylic construction for joining transparent material. | General Purpose | 300°F (149°C) | 200°F (93°C) | High | High | Low | Bond unpainted metal. |
| 4941 | 45 (1.1) | A | Gray, closed-cell acrylic foam carrier. Good adhesion to many painted metals. Plasticizer resistant. UL 746C. | Multi-purpose Acrylic | 300°F (149°C) | 200°F (93°C) | High | High | Med | Bond flexible vinyl banners. |
| 4956 | 62 (1.6) | A | | | | | | | | |

See key on page 74.

**Note:** The technical information and data on these pages should be considered representative or typical only and should not be used for specification purposes.

# 3M™ VHB™ Tape for Appliances

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### 3M™ VHB™ Tape is the Ultimate Solution for Appliance Design Applications

From the kitchen to the laundry room, trust in 3M™ VHB™ Tape to expand design freedom in everything from how the side panels hold together to the way a brand's logo is displayed. Thanks to the viscoelastic properties of 3M™ VHB™ Tape, OEM consumer and commercial design engineers and manufacturers have access to a new realm of opportunities for beautiful, more efficient household appliance designs.



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| Product | Tape Thickness w/o Liner mils (mm) | Liner Type | Description | Adhesive Type | Temp. Resistance | | Solvent Resistance | Relative Adhesion | | Application Ideas |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Min Hr | Days Weeks | | HSE | LSE | |
| **4941** | 45 (1.1) | A | Gray, closed-cell acrylic foam carrier. | Multi-purpose Acrylic | 300°F (149°C) | 200°F (93°C) | High | High | Med | Logo attachment, overlay attachment and control panel assembly. |
| **5952** | 45 (1.1) | F | Black, closed-cell acrylic foam carrier. | Modified Acrylic | 300°F (149°C) | 250°F (121°C) | | | | |
| **RP45** | 45 (1.1) | A | Gray, closed-cell acrylic foam carrier. | Multi-purpose Acrylic | 250°F (121°C) | 200°F (93°C) | | | | |

See key on page 74.

# 3M™ VHB™ Tape for Electronics

Electronic designs are becoming lighter, thinner and smaller every day. Bulky mechanical systems can be replaced with the incredible, strong, long-lasting viscoelastic bond of 3M™ VHB™ Tape. Expand design freedom and simplify manufacturing processes while meeting the challenges of a dynamic market and look no further than 3M™ VHB™ Tape.



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| Product | Tape Thickness w/o Liner mils (mm) | Liner Type | Description | Adhesive Type | Temp. Resistance | | Solvent Resistance | Relative Adhesion | | Application Ideas |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Min Hr | Days Weeks | | HSE | LSE | |
| **5908** | 10 (0.25) | G | Black, closed-cell acrylic foam carrier. | Modified Acrylic | 300°F (149°C) | 250°F (121°C) | High | High | Med | Bond and seal polycarbonate lens over LCD. Bond and seal plastic windows to pre-painted control panels/switch gear. Mount vinyl wiring ducts and conduit channels. Electronic component and assembly attachment. |
| **5915** | 16 (0.4) | F | | | | | | | | |
| **5925** | 25 (0.6) | F | | | | | | | | |
| **5952** | 45 (1.1) | F | | | | | | | | |
| **RP16** | 16 (0.4) | A | Gray, closed-cell acrylic foam carrier. | Multi-purpose Acrylic | 250°F (121°C) | 200°F (93°C) | High | High | Med | |
| **RP45** | 45 (1.1) | A | | | | | | | | |

See key on page 74.

# 3M™ Primers

| Product | Solvent | Active Ingredients | VOCs | Color | Flashpoint | Coverage | Application Ideas |
|---|---|---|---|---|---|---|---|
| **AP111** | Isopropyl Alcohol (IPA) | Less than 5% by weight | 5.91 lb/gal (708g/L) | Clear | 52°F (11°C) | 19m²/L (800 ft²/gal) based on .002" wet coating thickness depending on method of application | Promote better adhesion for bare metals and painted surfaces. |
| **AP115** | Isopropyl Alcohol and Water | Less than 1% by weight | 6.08 lb/gal (728g/L) | Clear | 53°F (12°C) | 20–25 ft² per 4 fl oz bottle (1.8–2.3m² per 118mL bottle) | Promote better adhesion for glass. |
| **Primer 94** | See SDS | See SDS | Approx 6.3 lb/gal (755g/L) less H20 and exempt solvents | Clear Light Yellow/Clear Dark Orange | -4°F (-20°C) | 600 ft²/gal (211m²/L) | Promote better adhesion for a variety of plastic surfaces such as polyethylene, polypropylene, ABS and PET/PBT blends. |

**Note:** The technical information and data on these pages should be considered representative or typical only and should not be used for specification purposes.

# 3M™ Extreme Sealing Tapes

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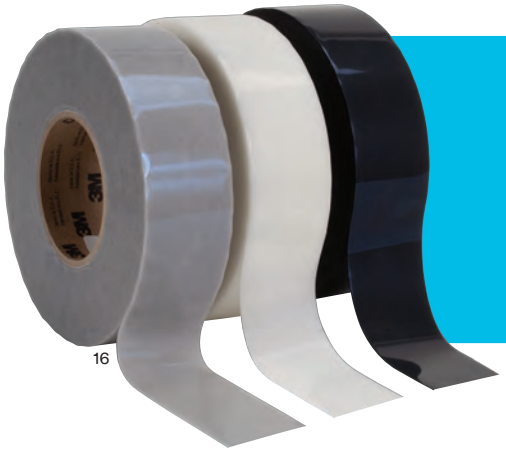
**From Trailer, Bus and Rail Car Roof Seams to Metal Enclosures, a Sure Winner Over Traditional Sealants**

- Sticks on contact to many metals and plastics without dripping, oozing or clean-up
- Increases productivity throughput with no drying time; immediately paintable*
- Conforms over contours, edges, rivets and screw heads for a water tight seal
- Looks neat and precise for improved aesthetics
- Outstanding resistance to many common industrial solvents
- Excellent resistance to abrasion and high pressure washing

*Accepts many paints. Test paint on tape to check for compatibility.



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**Suggested Uses**

- RV trailer and roofs
- Metal enclosures
- Awnings
- Trailer home roofs
- Metal storage buildings
- Vent stacks/windows
- Gutters and downspouts
- Skylights
- Outdoor signs/displays
- Leak patching and repairs

**Scan the code to download the 3M™ Extreme Sealing Tape Exterior Durability Report.**

| Product | Color | Backing/ Adhesive | Tape Thickness mils (mm) | Tensile Strength lb/in (N/cm) | 90° Peel Adhesion Strength† lb/in (N/cm) | | | | | | Widths in (mm) | Length yd (m) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Aluminum | Stainless Steel | Glass | Truck Paint | PVC | ABS | | |
| **4411G** | Grey | Ionomer Film/Pressure Sensitive Acrylic | 40 (1) | 13 (23) | 15 (26) | 16 (28) | 15 (26) | 15 (26) | 15 (26) | 16 (28) | 0.75, 1, 2, 2.5, 3, 4 (19, 25, 50, 65, 75, 100) | 36 (32.9) |
| **4411N** | Neutral/Translucent | | 40 (1) | | 15 (26) | 15 (26) | 15 (26) | 14 (25) | 16 (28) | 16 (28) | | 36 (32.9) |
| **4411B** | Black | | 40 (1) | | 19 (33) | 17 (30) | 19 (33) | 17 (30) | 19 (33) | 18 (32) | | 36 (32.9) |
| **4412N** | Neutral/Translucent | | 80 (2) | | 18 (32) | 18 (32) | 19 (33) | 19 (33) | 19 (33) | 19 (33) | | 18 (16.5) |

†Adhesion promoters were used on peel Adhesion test substrates.

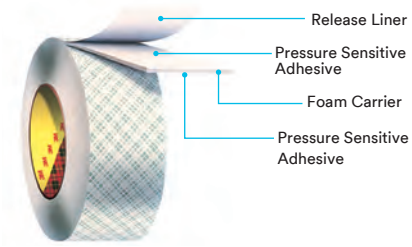
**Note:** The technical information and data on these pages should be considered representative or typical only and should not be used for specification purposes.

# 3M™ Double Coated Foam Tapes

**Flexible Foam Carriers Fill Gaps and Help Bond Irregular Surfaces**

In bonding rough or irregular surfaces, 3M™ Double Coated Foam Tapes fill gaps and distribute stress uniformly over the bonded area.

- Bond line that seals, cushions and damps vibration
- Resists impact
- Withstands a wide temperature range to meet your application requirements
- Provides good insulating qualities
- Select from rubber or acrylic adhesive and a choice of different foam carriers: urethane, polyethylene or acrylic



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**To replace screws and liquid adhesives, 3M™ Multipurpose Mounting Tape 4016 bonds immediately to many indoor surfaces, even permanently mounting a plastic soap dispenser to a mirror.**


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**3M™ Double Coated Foam Tapes can be precisely die-cut and pre-applied to the back of any shape. Ready to mount to a variety of surfaces.**

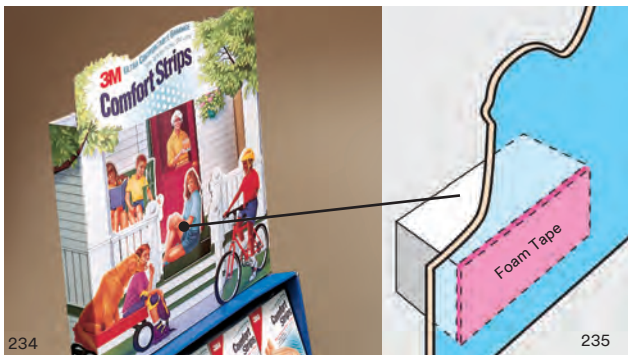

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**To permanently mount to a textured wall, 3M™ Extra Thick Multipurpose Mounting Tape 4008 bonds on contact and fills gaps between the surfaces.**



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



234 235

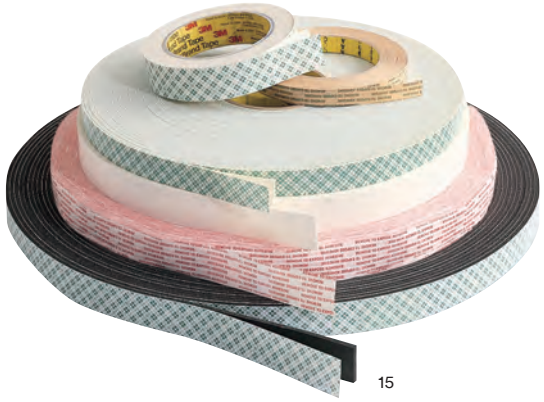
**3M™ Double Coated Polyethylene Foam Tapes with high tack adhesive bond foam spacers between the planes of a 3-dimensional P.O.P. display.**

# 3M™ Double Coated Foam Tapes

| Product | Tape Thickness mils (mm) | Liner Type | Description | Adhesive Type | Temp. Resistance Min Hr | Temp. Resistance Days Weeks | Adhesive Type | Relative Adhesion HSE | Relative Adhesion LSE | Application Ideas |
|---|---|---|---|---|---|---|---|---|---|---|
| **Urethane** | | | | | | | | | | |
| **4004** | 250 (6.4) | A | Off-white, open-cell urethane foam carrier. High shear adhesive with high temperature resistance. | 100 | 380°F (193°C) | 220°F (104°C) | Med | High | Low | Bond acoustic panels to walls. Mount air fresheners. Mount soap dispensers. Mount interior signs and nameplates. Attach wire clips to various surfaces. Mount electrical channel to wall. |
| **4008** | 125 (3.2) | | | | | | | | | |
| **4016** | 62 (1.6) | | | | | | | | | |
| **4026** | 62 (1.6) | | | | | | | | | |
| **4032** | 31 (0.8) | | | | | | | | | |
| **4052** | 31 (0.8) | | Black version of 4032. | 100 | 380°F (193°C) | 220°F (104°C) | | | | |
| **4056** | 62 (1.6) | | Black versions of 4016 and 4026. | | | | | | | |
| **4085** | 45 (1.1) | E | Off-white, open-cell urethane foam carrier. High tack adhesive. | 740 | 200°F (93°C) | 125°F (52°C) | | | | |
| **Polyethylene** | | | | | | | | | | |
| **4451** | 32 (0.8) | C | Black, closed-cell, high density polyethylene foam carrier. High tack synthetic rubber. | A135 | 150°F (66°C) | 120°F (49°C) | Med | High | Low | Removable applications where good static is needed. Exhibits and trade shows. Nameplates. |
| **4462** | 31 (0.8) | B | White or black, closed-cell polyethylene foam carrier. High tack adhesive. | 745 | 158°F (70°C) | 120°F (49°C) | | | | Attach hooks, wire clips and racks. Mount retail shelf price channels. Mount pen holders. |
| **4466** | 62 (1.6) | | | | | | | | | |
| **4492** | 31 (0.8) | C | White or black, closed-cell polyethylene foam carrier. High shear adhesive with high temperature resistance. | 430 | 180°F (82°C) | 158°F (70°C) | | | | Mount nameplates on awards and novelties. P.O.P. displays and signs. |
| **4496** | 62 (1.6) | | | | | | | | | |
| **Acrylic** | | | | | | | | | | |
| **4658F** | 31 (0.8) | D | Clear, closed-cell, acrylic foam tape. Clean removability from many substrates. | 100 | 212°F (100°C) | 175°F (80°C) | High | High | Low | Removable P.O.P. displays. Signs. Exhibits and trade shows. Nameplates. |

**Liner Types:**
A – 3 mil 62# Densified Kraft paper – Green plaid
B – 3 mil Densified Kraft paper – White
C – 4 mil 58# Polycoated Kraft paper – Tan
D – 2 mil Polyester film – Clear
E – 3 mil Densified Kraft paper – Tan

**Relative Adhesion:**
HSE – High Surface Energy
LSE – Low Surface Energy



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**Note:** The technical information and data on these pages should be considered representative or typical only and should not be used for specification purposes.

# 3M™ Double Coated Tapes

### A Variety of Carriers for Easy Handling and Dispensing

3M™ Double Coated Tapes are engineered with adhesive on both sides of paper, film or tissue. This increases the dimensional stability of the adhesive for easy handling and application.

Depending on your production volume, you can apply tape by hand or with automatic high-volume dispensers. Select paper, polyester film or other synthetic carriers to help meet your special needs. Different adhesives (rubber, silicone or acrylic) can be on opposite sides of the carrier to join different materials. Your choice of properties include high temperature resistance, conformability to irregular surfaces, high initial adhesion, high shear strength and more.




**Simply roll on a strip or band of 3M™ Double Coated Tape 9832 for quick edge banding with no special equipment. Pressure sensitive adhesive tape grabs with immediate handling strength for improved productivity.**




**With differential adhesive, the silicone adhesive side of 3M™ Double Coated Tape adheres to a silicone rubber keypad. Acrylic adhesive side adheres to a plastic base.**




**3M™ Double Coated Tape 410M is the quick, convenient way to bond golf club grips to shafts. Adhesive sets up fast and bonds firmly for long-lasting performance.**




**For precise fit, 3M™ Double Coated Tape is pre-applied to foam gasketing materials and then die-cut to size. This helps increase dimensional stability of the part to facilitate assembly.**



| Product | Description/Application Ideas | Tape Cal. (mils) | Carrier Type | Liner | | Master Size | Specs | Adhesion | | | | Chem. Resist. | Temp. Range | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Type | Caliper (mils) | | | Metal | HSE Plastic | LSE Plastic | Foam | | Low (°F) | High (°F) |
| **200MP/300LSE (Differential Adhesive)** | | | | | | | | | | | | | | |
| **9496LE** | Differential double coated tape featuring High Performance Acrylic Adhesive 200MP and Low Surface Energy Acrylic Adhesive 300LSE. | 6.7 | PET | 58# PCK | 4.2 | 24" x 36" sheets | – | 10 | 9 | 1 | 2 | 9 | -40 | 400 |
| | | | | | | | | 9 | 9 | 10 | 1 | 8 | -40 | 300 |
| **300LSE (Low Surface Energy Acrylic)** | | | | | | | | | | | | | | |
| **93005LE** | Very thin double-coated tape polyester tape with good anti-lifting properties. | 2.0 | PET | 58# PCK/ 83# PCK | 4.2/ 6.2 | 48" x 60 yd | – | 9 | 9 | 10 | 1 | 8 | -40 | 300 |
| **93010LE** | High adhesion to polypropylene and LSE plastics for excellent graphic appearances. Good chemical/humidity resistance. | 3.9 | PET | 58# PCK | 4.2 | 54" x 180 yd | – | | | | | | | |
| **93015LE** | | 5.9 | PET | 58# PCK | 4.2 | 54" x 180 yd | – | | | | | | | |
| **93020LE** | | 7.9 | PET | 58# PCK | 4.2 | 54" x 180 yd | – | | | | | | | |

## Values: 1 = Lowest Performance; 10 = Highest Performance

Rankings are a general guide. Adhesives should be tested with actual components to ensure acceptable performance.

**Note:** The technical information and data on these pages should be considered representative or typical only and should not be used for specification purposes.

# 3M™ Double Coated Tapes




| Product | Description/Application Ideas | Tape Cal. (mils) | Carrier Type | Liner | | Master Size | Specs | Adhesion | | | | Chem. Resist. | Temp. Range | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Type | Caliper (mils) | | | Metal | HSE Plastic | LSE Plastic | Foam | | Low (°F) | High (°F) |
| **300 (High Strength Acrylic)** | | | | | | | | | | | | | | |
| **444** | Foam lamination. Gasket attachment. | 3.9 | PET | 55# DK | 3.2 | 48" x 108 yd | – | 7 | 9 | 9 | 9 | 6 | -40 | 250 |
| **444PC** | Foam lamination. Gasket attachment. | 3.9 | PET | 58# PCK | 4.2 | 48" x 108 yd | – | | | | | | | |
| **300MP (High Tack Acrylic)** | | | | | | | | | | | | | | |
| **99786** | Thin nonwoven carrier for dimensional stability and improved handling. Temperature resistance up to 300°F. | 5.5 | Non-woven | 58# PCK Printed | 4.2 | 48" x 180 yd | – | 7 | 7 | 8 | 9 | 7 | -40 | 250 |
| **99786NP** | Same as 9786 except an unprinted liner. | 5.5 | Non-woven | 58# PCK Unprinted | 4.2 | 54" x 180 yd | – | | | | | | | |
| **9832** | General purpose tape with improved temperature resistance. | 4.8 | PET | 58# PCK | 4.2 | 54" x 250 yd | – | | | | | | | |
| **9832HL** | Same as 9832 except with a heavier liner. | 4.8 | PET | 58# PCK | 6.2 | 54" x 250 yd | – | | | | | | | |
| **340 (High Tack Acrylic)** | | | | | | | | | | | | | | |
| **9456** | High tack acrylic adhesive with good adhesion to many plastics. | 5.0 | Tissue | 55# DK | 3.2 | 54" x 180 yd | – | 6 | 6 | 5 | 4 | 8 | -40 | 180 |
| **9824** | Foam lamination. Gasket attachment. | 3.1 | PET | 55# DK | 3.2 | 54" x 250 yd | – | | | | | | | |
| **9828** | | 4.0 | PET | 55# DK | 3.2 | 54" x 250 yd | – | | | | | | | |
| **9828PC** | High tack acrylic adhesive with good adhesion to many foams. | 4.0 | PET | 74# PCK | 5.6 | 54" x 250 yd | – | | | | | | | |
| **350 (High Performance Acrylic)** | | | | | | | | | | | | | | |
| **9500PC** | High performance with good chemical resistance. | 5.6 | PET | 61.5 PCK | 4.5 | 48" x 108 yd | – | 9 | 10 | 10 | 9 | 8 | -40 | 450 |
| **3028EK** | Same as 9500PC with an extensible kraft liner which facilitates narrow slitting. | 5.6 | PET | Extensible Kraft | 5.5 | 48" x 108 yd | – | | | | | | | |
| **375 (High Performance Double Coated)** | | | | | | | | | | | | | | |
| **9086** | Easy tearing, easy handling. | 7.5 | Tissue | Glassine Black Logo | 3.0 | 54" x 750 yd | – | High | High | Med | Low | Good | -10 | 250 |
| **9087** | Thick adhesive to bond rough surfaces. | 10.2 | PVC | Glassine Green Logo | 3.0 | 54" x 750 yd | – | | | | | | | 185 |
| **400 (Acrylic Adhesive)** | | | | | | | | | | | | | | |
| **415** | Splice papers, films and foils. | 4.0 | PET | 60# DK | 4.0 | 48" x 108 yd | – | 5 | 5 | 5 | 5 | 5 | -60 | 250 |
| **9576** | | 4.0 | Clear PP | 60# DK | 4.0 | 27" x 360 yd | – | | | | | | | |

## Values: 1 = Lowest Performance; 10 = Highest Performance

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**Note:** The technical information and data on these pages should be considered representative or typical only and should not be used for specification purposes.

# 3M™ Double Coated Tapes

| Product | Description/Application Ideas | Tape Cal. (mils) | Carrier Type | Liner | | Master Size | Specs | Adhesion | | | | Chem. Resist. | Temp. Range | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Type | Caliper (mils) | | | Metal | HSE Plastic | LSE Plastic | Foam | | Low (°F) | High (°F) |
| **Silicone/Acrylic Differential** | | | | | | | | | | | | | | |
| **9731** | Differential adhesive. Silicone/Acrylic double coated tape. Ideal for attaching silicone materials to HSE or LSE materials. | 5.5 | PET | Clear PET/54# Tan PCK | 3.0/5.4 | 48" x 180 yd | – | 10 | 10 | 9 | 8 | 8 | -40 | 300 |
| **Silicone** | | | | | | | | | | | | | | |
| **96042** | Silicone attachment. Silicone linered for easier processing. | 5 | PET | White PET | 2 | 48" x 180 yd | – | 9 | 8 | 7 | 6 | 10 | -40 | 350 |
| **700/745/760 (Synthetic Rubber)** | | | | | | | | | | | | | | |
| **9443NP** | High tack rubber adhesive with good adhesion to most plastics. | 6 | HDPE | 60# DK | 3.7 | 27" x 120 yd | – | 8 | 9 | 9 | 2 | 2 | -40 | 200 |
| **9579** | Core starting on metal cores. | 9 | HDPE | 62# DK | 3.7 | 27" x 144 yd | – | | | | | | | |
| **9589** | Carpet attachment. | 9 | HDPE | 60# DK | 3.7 | 26" x 144 yd | – | | | | | | | |
| **830/850/860 (Natural Rubber)** | | | | | | | | | | | | | | |
| **401M** | Used for mounting rubber or photopolymer printing plates. | 9.0 | Paper | 54# DK | 3.0 | 22" x 108 yd | – | 8 | 8 | 8 | 5 | 1 | -40 | 180 |
| **410M** | Core starting/end tabbing of papers, films and foils. | 6.0 | Paper | 54# DK | 3.0 | 23.5" x 108 yd | – | 8 | 8 | 8 | 5 | 1 | -40 | 200 |
| **900 (Miscellaneous)** | | | | | | | | | | | | | | |
| **9737** | Clear, thin PET carrier. Aggressive and versatile splicing tape. | 3.5 | PET | 55# DK White | 3.5 | 54" x 180 yd | – | 5 | 5 | 2 | 5 | 7 | -10 | 300 |
| **9738** | Clear, non-woven tissue carrier. Aggressive and versatile splicing tape. | 4.3 | Non-woven tissue | 55# DK White | 4.3 | 54" x 180 yd | – | | | | | | | |
| **9740** | Clear, high peel, tack and shear strength. Performance grade splicing tape for corrugators. | 3.5 | PET | 55# DK | 3.5 | 54" x 180 yd | – | 6 | 6 | 2 | 3 | 6 | 10 | 425 |
| **9741** | Clear, thick, super aggressive tape. Adheres to a wide variety of substrates for splicing applications. | 6.5 | PET | 55# Glassine | 6.5 | 54" x 180 yd | – | 7 | 7 | 3 | 7 | 5 | -40 | 200 |
| **9816L** | General purpose, high tack, rubber-based adhesive. | 3.5 | PET | 60# Kraft | 3.5 | 54" x 200 yd | – | 8 | 8 | 7 | 7 | 3 | -40 | 150 |
| **9816M** | | | | 74# Kraft | 3.5 | 54" x 200 yd | – | | | | | | | |
| **9816H** | | | | 14 pt. Board | 3.5 | 54" x 200 yd | – | | | | | | | |
| **9817L** | Exposed side is acrylic, liner side is rubber-based. Excellent quick stick and adhesion to high and low energy surfaces. | 3.3 | PET | 60# Kraft | 3.5 | 54" x 200 yd | – | 8 | 7 | 6 | 7 | 3 | -40 | 175 |
| **9817M** | | | | 74# Kraft | 3.5 | 54" x 200 yd | – | 8 | 8 | 7 | 6 | 3 | | |
| **9817H** | | | | 14 pt. Board | 3.5 | 54" x 200 yd | – | | | | | | | |
| **Specialty Differential Rubber/Acrylic** | | | | | | | | | | | | | | |
| **9377** | Flame retardant double-coated tape for carpet installation to bond carpet to interior floorboards. | 11.0 | PP | 58# PCK | 4.2 | 24" x 25 yd | – | 4, 10 | – | – | – | 8 | 40 | 250 |

## Values: 1 = Lowest Performance; 10 = Highest Performance

Rankings are a general guide. Adhesives should be tested with actual components to ensure acceptable performance.

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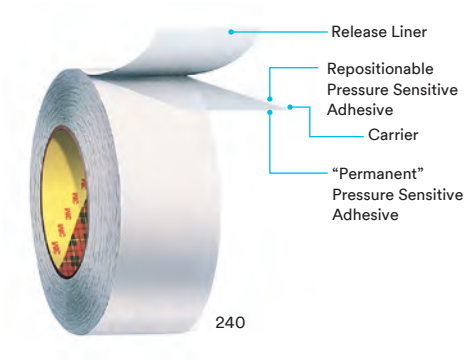
# 3M™ Removable/Repositionable Tapes

### Versatility for Many Substrates on On-Off and Open-Close Applications

Some 3M™ Removable/Repositionable Tapes feature a "permanent" adhesive on one side of a film or tissue carrier and a removable/repositionable adhesive on the other side.

Other tapes in the line offer different levels of adhesion on each side. And others feature equal adhesive strength on each side for reliable attachment but with easy separation for repositioning or multiple openings and closings. You can join substrates that include glass, metals, wood, paper, painted surfaces and many plastics.

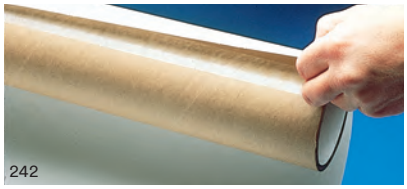
With lined versions, you can initially join one side to a surface while the other side is covered with the liner, ready to be joined later to the second surface. Linerless versions are used for bonding both surfaces at the same time.







**3M™ Removable/Repositionable Tape seals hosiery bags for shipment and display but also lets the customer open and re-close the bag as necessary.**




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

| Product | Description/Application Ideas | Tape Cal. (mils) | Carrier Type | Liner | | Master Size | Specs | Adhesion | | | | Chem. Resist. | Temp. Range | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Type | Caliper (mils) | | | Metal | HSE Plastic | LSE Plastic | Foam | | Low (°F) | High (°F) |
| **400/1000* (Differential Adhesive)** | | | | | | | | | | | | | | |
| **9415PC** | Differential adhesive; polyester film carrier. | 2 | PET | 78# PCK | 6.0 | 48" x 216 yd | – | 5 | 5 | 5 | 4 | 5 | -20 | 150 |
| **9416** | Differential adhesive; tissue carrier. | 1 | Tissue | 70# PCK | 5.6 | 48" x 216 yd | – | 3 | 1 | 1 | – | 2 | | |
| **928ATG** | Reverse wound ATG version of 9416 on 1" core. Used with ATG700 Applicator. | 1 | Tissue | 70# PCK | 5.6 | Up to 3/4" W Up to 36 yd L | – | 3 | 1 | 1 | – | 2 | | |
| **420/1050* (Differential Adhesive)** | | | | | | | | | | | | | | |
| **9425** | High tack/medium tack for repositionable parts. | 5.5 | UPVC | 58# PCK | 4.2 | 48" x 144 yd | – | 8 | 7 | 1 | 4 | 2 | -20 | 125 |
| | | | | | | | | 3 | 1 | 1 | 1 | 2 | | |
| **9425HT** | High tack/medium tack acrylic adhesive offers permanent adhesion to one substrate with removability to the other. | 5 | PET | 58# PCK | 4.2 | 48" x 144 yd | – | 8 | 7 | 1 | 4 | 2 | -20 | 250 |
| | | | | | | | | 3 | 1 | 1 | 1 | 2 | | |
| **400/1070 (Repositionable Acrylic)** | | | | | | | | | | | | | | |
| **665** | Differential adhesive; linerless. | 3.5 | UPVC | None | – | 46" x 108 yd | – | 5 | 5 | 5 | 4 | 5 | -60 | 125 |
| **666** | Differential adhesive; linered. | | UPVC | LDPE | 4.0 | | – | | | | | | | |
| **800 (Natural Rubber)** | | | | | | | | | | | | | | |
| **401M** | Temporary positioning or fixturing of parts during machining operations and plate mounting. | 9 | Paper | 54# DK | 3 | 22" x 108 yd | – | 8 | 8 | 8 | 5 | 1 | -40 | 180 |
| **410M** | | 6 | | | | 23.5" x 108 yd | | | | | | | -40 | 200 |

*Second number reflects removable adhesive side.

## Values: 1 = Lowest Performance; 10 = Highest Performance

Rankings are a general guide. Adhesives should be tested with actual components to ensure acceptable performance.

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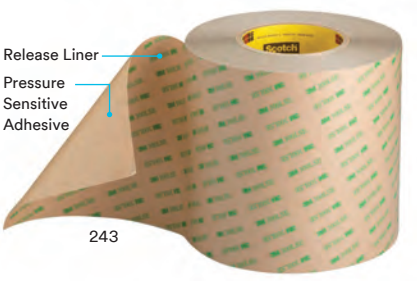
# 3M™ Adhesive Transfer Tapes

## Neat, Precise Application and High Performance in a Variety of Applications

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.





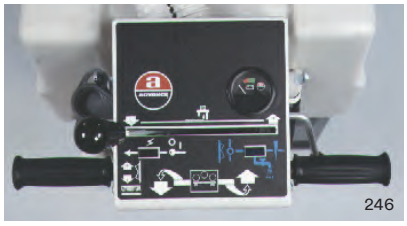


**With high cohesive strength, 3M™ Adhesive 200MP bonds aggressively with excellent temperature resistance. Meets the non-fogging specifications of the automotive industry.**

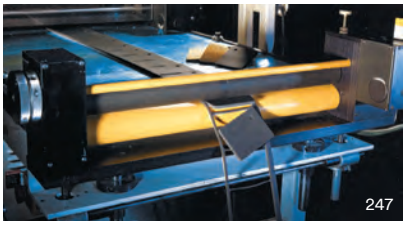





**For bonding flexible vinyl in such applications as door gaskets, 3M™ Adhesive Transfer Tape F9465PC resists the effect of plasticizers that tend to migrate from the vinyl.**




**3M™ Laminating Adhesive 300LSE is the solution for low energy surfaces such as polyolefins and powder coat paint. Graphics hold securely and stand up to tough environmental conditions.**




**3M™ Adhesive Transfer Tapes provide conformability in a variety of foam laminating applications. The acrylic adhesive also provides high shear strength and good environmental aging properties.**




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




**3M™ Adhesive Transfer Tape 467MP is used to laminate metal foil to a circuit board to reduce interference on electronic circuitry.**




**For graphic beauty, 3M™ Acrylic Adhesive 100 attaches graphics in closed environments. With low odor, reduced outgassing and low fogging, it is used extensively in the automotive, aerospace and appliance industries.**

**Note:** The technical information and data on these pages should be considered representative or typical only and should not be used for specification purposes.

# 3M™ Adhesive Transfer Tapes




| Product | Description/Application Ideas | Adhesive Caliper (mils) | Liner | | Master Size | Specs | Adhesion | | | | Chem. Resist. | Temp. Range | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Type | Caliper (mils) | | | Metal | HSE Plastic | LSE Plastic | Foam | | Low (°F) | High (°F) |
| **100MP* (High Performance Acrylic)** | | | | | | | | | | | | | |
| **F9460PC** | High performance industrial joining and metal fabrication. | 2 | 58# PCK | 4.2 | 60" x 180 yd | UL | 10 | 7 | 1 | 2 | 10 | -40 | 500 |
| **F9469PC** | High performance industrial joining and metal fabrication. | 5 | 58# PCK | 4.2 | 60" x 180 yd | UL | | | | | | | |
| **F9473PC** | High performance industrial joining and metal fabrication. | 10 | 58# PCK | 4.2 | 60" x 180 yd | UL | | | | | | | |
| **200MP (High Performance Acrylic)** | | | | | | | | | | | | | |
| **467MC** | Same as 467MP with a paper MicroChannel liner to aid in bubble and wrinkle free graphic attachment. | 2 | 58# PCK | 4.2 | 54" x 180 yd | – | 10 | 9 | 1 | 3 | 9 | -40 | 400 |
| **467MCF** | Same as 467MP with a polyester MicroChannel liner to aid in bubble and wrinkle free graphic attachment. | 2 | PET | 4.2 | 54" x 180 yd | – | | | | | | | |
| **467MP** | Graphic attachment and general industrial joining. Industry standard. 60" width master also available. | 2 | 58# PCK | 4.2 | 48" x 180 yd | UL MH | | | | | | | |
| **467MPF** | Polyester liner for rotary processing of graphic and die cut parts. | 2 | PET | 2.0 | 54" x 180 yd | UL | | | | | | | |
| **468MC** | Same as 468MP with a paper MicroChannel liner to aid in bubble and wrinkle free graphic attachment. | 5 | 58# PCK | 4.0 | 54" x 180 yd | – | | | | | | | |
| **468MCF** | Same as 468MP with a polyester MicroChannel liner to aid in bubble and wrinkle free graphic attachment. | 5 | PET | 4.0 | 54" x 180 yd | – | | | | | | | |
| **468MP** | Industry standard for graphic attachment and die cut parts. 60" width master also available. | 5 | 58# PCK | 4.2 | 48" x 180 yd | UL MH | | | | | | | |
| **468MPF** | Thicker version of 467MPF. | 5 | PET | 2.0 | 54" x 180 yd | UL | | | | | | | |
| **9667MP** | Same as 467MP on heavy, lay-flat liner for kiss-cutting. 48" width master also available. | 2 | 83# PCK | 6.2 | 54" x 180 yd | UL | | | | | | | |
| **9668MP** | Same as 468MP on heavy, lay-flat liner. 48" width master also available. | 5 | 83# PCK | 6.2 | 54" x 180 yd | UL MH | | | | | | | |
| **9668MPL** | Better lay-flat properties. | 5 | 94# PCK | 7.0 | 60" x 180 yd | – | | | | | | | |
| **220 (Industrial Acrylic)** | | | | | | | | | | | | | |
| **9502** | Economical attachment of graphics and industrial joining. 60" width master also available. | 2 | 58# PCK | 4.2 | 48" x 180 yd | UL | 8 | 7 | 1 | 2 | 8 | -40 | 350 |
| **9505** | Thicker version of 9502 for textured surfaces. 60" width master also available. | 5 | 58# PCK | 4.2 | 48" x 180 yd | UL | | | | | | | |
| **9552** | Double-lined laminating adhesive version of 9502. | 2.3 | 58/58# PCK | 4.2 | 48" x 360 yd | UL | | | | | | | |
| **9555** | Double-lined laminating adhesive version of 9505. | 4.9 | 58/58# PCK | 4.2 | 48" x 360 yd | UL | | | | | | | |

*Products in this platform are 3M™ VHB™ Tapes offering our highest strength.
MH meets Mil-P-19834B Type I.

## Values: 1 = Lowest Performance; 10 = Highest Performance

Rankings are a general guide. Adhesives should be tested with actual components to ensure acceptable performance.

**Note:** The technical information and data on these pages should be considered representative or typical only and should not be used for specification purposes.

# 3M™ Adhesive Transfer Tapes  292

| Product | Description/Application Ideas | Adhesive Caliper (mils) | Liner | | Master Size | Specs | Adhesion | | | | Chem. Resist. | Temp. Range | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Type | Caliper (mils) | | | Metal | HSE Plastic | LSE Plastic | Foam | | Low (°F) | High (°F) |
| **290 (Low Outgassing Acrylic)** | | | | | | | | | | | | | |
| **501FL** | Ultra-clean adhesive for low outgassing applications. | 1 | PET | 2.0 | 54" x 180 yd | – | 9 | 7 | 1 | 2 | 9 | -40 | 450 |
| **502FL** | Ultra-clean adhesive for low outgassing applications. | 2 | PET | 2.0 | 54" x 180 yd | – | | | | | | | |
| **300 (High Strength Acrylic)** | | | | | | | | | | | | | |
| **927** | Attach gaskets and a variety of industrial foam materials. | 2 | 60# DK | 3.5 | 48" x 180 yd | – | 7 | 9 | 9 | 9 | 6 | -40 | 250 |
| **950** | Thicker version of 927. | 5 | 60# DK | 3.5 | 48" x 180 yd | UL | | | | | | | |
| **950EK** | Thicker version of 927 with extensible Kraft liner. | 5 | 78# EK | 6.0 | 48" x 180 yd | – | | | | | | | |
| **992U** | For performance-engineered labels. UV indicator in adhesive. | 2 | 55# DK | 3.2 | 48" x 180 yd | UL | | | | | | | |
| **9458** | Thin, high tack adhesive for rotary processing HSE and LSE parts. | 1 | 55# DK | 3.2 | 54" x 360 yd | UL | | | | | | | |
| **9459W** | White version of laminating adhesive 9459S. | 1.5 | 55# DK | 3.2 | 48" x 360 yd | UL | | | | | | | |
| **9471** | For smooth LSE plastics. | 2 | 60# DK | 3.5 | 48" x 180 yd | UL $M^H$ | | | | | | | |
| **9472** | 5.0 mil version of 9471; for textured surfaces. | 5 | 60# DK | 3.5 | 48" x 180 yd | UL $M^H$ | | | | | | | |
| **9653** | A 3.5 mil version of 9471 on a heavy, lay-flat liner for kiss-cutting. | 3.5 | 83# PCK | 6.2 | 48" x 180 yd | UL | | | | | | | |
| **9671** | Heavier linered version of 9471 for easy handling, lay-flat properties. | 2 | 83# PCK | 6.2 | 48" x 180 yd | UL $M^H$ | | | | | | | |
| **9672** | Heavier linered version of 9472 for easy handling, lay-flat properties. | 5 | 83# PCK | 6.2 | 48" x 180 yd | UL | | | | | | | |
| **9673** | Same as 9671 with unprinted liner. | 2 | 83# PCK | 6.2 | 48" x 180 yd | UL $M^H$ | | | | | | | |
| **300FR (Flame Retardant)** | | | | | | | | | | | | | |
| **9372W** | Flame retardant. Moisture stable liner. | 2 | 83# PCK | 6.2 | 60" x 180 yd | UL | 8 | 9 | 9 | 9 | 6 | -40 | 250 |
| **9372DKW** | Flame retardant. Rotary diecuttable liner. | 2 | 55# DK | 3.2 | 60" x 180 yd | UL | | | | | | | |
| **9375W** | Flame retardant. Moisture stable liner. | 5 | 83# PCK | 6.2 | 60" x 180 yd | UL | | | | | | | |

*Products in this platform are 3M™ VHB™ Tapes offering our highest strength.
MH meets Mil-P-19834B Type I.

## Values: 1 = Lowest Performance; 10 = Highest Performance

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**Note:** The technical information and data on these pages should be considered representative or typical only and should not be used for specification purposes.

# 3M™ Adhesive Transfer Tapes




| Product | Description/Application Ideas | Adhesive Caliper (mils) | Liner | | Master Size | Specs | Adhesion | | | | Chem. Resist. | Temp. Range | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Type | Caliper (mils) | | | Metal | HSE Plastic | LSE Plastic | Foam | | Low (°F) | High (°F) |
| **300LSE (Low Surface Energy Acrylic)** | | | | | | | | | | | | | |
| **9453FL** | Film lined version of 9453LE for rotary processing. | 3.5 | PET | 2.0 | 54" x 180 yd | UL | 9 | 10 | 10 | 1 | 7 | -40 | 300 |
| **9453LE** | A 3.5 mil version of 9471LE for application to rough surfaces. 48" master width available. | 3.5 | 58# PCK | 4.2 | 54" x 180 yd | UL | | | | | | | |
| **9471FL** | Film lined version of 9471LE for rotary processing. | 2.3 | PET | 2.0 | 54" x 180 yd | UL | | | | | | | |
| **9471LE** | Bonds graphics to powder coatings, LSE plastics and oily materials. | 2.3 | 58# PCK | 4.2 | 54" x 180 yd | UL | | | | | | | |
| **9472FL** | A 5 mil version of 9471LE with film liner for textured surfaces. | 5.2 | PET | 2.0 | 54" x 180 yd | UL | | | | | | | |
| **9472LE** | Thicker adhesive for textured LSE plastics and powder coatings. | 5.2 | 58# PCK | 4.2 | 54" x 180 yd | UL | | | | | | | |
| **9653LE** | Heavy lined 9453LE for easy handling and lay-flat properties. | 3.5 | 83# PCK | 6.2 | 54" x 180 yd | UL | | | | | | | |
| **9671LE** | Heavy lined 9471LE for easy handling and lay-flat properties. | 2.3 | 83# PCK | 6.2 | 54" x 180 yd | UL | | | | | | | |
| **9672LE** | Heavy lined 9472LE for easy handling and lay-flat properties. | 5.2 | 83# PCK | 6.2 | 54" x 180 yd | UL | | | | | | | |
| **300MP (High Tack Acrylic)** | | | | | | | | | | | | | |
| **6035PC** | Resists fogging for automotive interior fabric joining applications. | 5 | 58# PCK | 4.2 | 60" x 180 yd | – | 7 | 7 | 8 | 8 | 7 | -40 | 250 |
| **6035PL** | Heavy lined version of 6035PC for easy handling, lay-flat properties. | 5 | 83# PCK | 6.2 | 60" x 180 yd | – | | | | | | | |
| **6038PC** | Low fogging. Automotive fabric and carpet attachment. | 8 | 58# PCK | 4.2 | 60" x 180 yd | – | | | | | | | |
| **6038PL** | Low fogging. For rough embossed surfaces with heavy liner for steel rule die-cutting. | 8 | 83# PCK | 6.2 | 60" x 180 yd | – | | | | | | | |
| **9772WL** | Provides excellent bond to various fabricated foams, fabrics and substrates. | 2 | 96# PCK | 7.0 | 60" x 180 yd | – | | | | | | | |
| **9773WL** | | 3 | | | | | | | | | | | |
| **9774WL** | | 4 | | | | | | | | | | | |
| **9775WL** | | 5 | | | | | | | | | | | |
| **320 (High Tenacity Acrylic)** | | | | | | | | | | | | | |
| **9447** | Designed for use with 3M™ Label Component Systems. | 1 | 55# DK | 3.2 | 54" x 360 yd | – | 5 | 5 | 1 | 1 | 5 | -60 | 250 |
| **350 (High Performance Acrylic)** | | | | | | | | | | | | | |
| **9442** | Excellent temperature and solvent resistance; high bond to low surface energy substrates. | 2 | 55# DK | 3.2 | 48" x 180 yd | UL | 9 | 10 | 10 | 9 | 8 | -40 | 450 |
| **9445** | Thicker version of 9442. | 5 | 55# DK | 3.2 | 48" x 180 yd | UL | | | | | | | |
| **9482PC** | High tack and shear strength; excellent adhesion to plastics and foams. | 2 | 58# PCK | 4.2 | 48" x 180 yd | UL | | | | | | | |
| **9485EK** | Thicker version of 9482PC with an extensible Kraft liner. | 5 | 78# EK | 6.0 | 48" x 180 yd | – | | | | | | | |
| **9485PC** | A 5 mil version of 9482PC. | 5 | 58# PCK | 4.2 | 48" x 180 yd | UL | | | | | | | |
| **9675** | Heavy lined version of 9485PC for easy handling, lay-flat properties. | 5 | 83# PCK | 6.2 | 48" x 180 yd | – | | | | | | | |

*Manufactured using a solventless adhesive coating process.

## Values: 1 = Lowest Performance; 10 = Highest Performance

Rankings are a general guide. Adhesives should be tested with actual components to ensure acceptable performance.

**Note:** The technical information and data on these pages should be considered representative or typical only and should not be used for specification purposes.

# 3M™ Adhesive Transfer Tapes  292

| Product | Description/Application Ideas | Adhesive Caliper (mils) | Liner | | Master Size | Specs | Adhesion | | | | Chem. Resist. | Temp. Range | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Type | Caliper (mils) | | | Metal | HSE Plastic | LSE Plastic | Foam | | Low (°F) | High (°F) |
| **400 (Acrylic Adhesive)** | | | | | | | | | | | | | |
| **463** | High tack and excellent adhesion to most paper stocks. For automatic dispensing. | 2 | 60# DK | 3.5 | 48" x 180 yd | – | 5 | 5 | 5 | 4 | 5 | -60 | 250 |
| **465** | Same as 463, but with easy liner release for manual or hand application. | 2 | 60# DK | 3.5 | 48" x 180 yd | – | | | | | | | |
| **9457** | Adhesive with long term stability, excellent outdoor performance and UV resistance. Adhesive 400 is best if necessary to apply at cooler temperatures. | 1 | 55# DK | 3.2 | 54" x 360 yd | UL | | | | | | | |
| **9665** | Thicker version of 9457. | 2 | 58# PCK | 4.2 | 48" x 180 yd | – | | | | | | | |
| **420 (Acrylic Adhesive)** | | | | | | | | | | | | | |
| **F9752PC** | High tack; can be applied in temperatures as low as 32°F (0°C). | 2 | 58# PCK | 4.2 | 54" x 360 yd | – | 7 | 7 | 8 | 4 | 6 | -40 | 300 |
| **F9755PC** | Thicker version of F9752PC for textured surfaces. | 5 | 58# PCK | 4.2 | 54" x 360 yd | – | | | | | | | |
| **430 (Acrylic Adhesive)** | | | | | | | | | | | | | |
| **9497** | Pink tinted high temperature splicing tape. | 2 | 60# DK | 3.5 | 48" x 360 yd | – | 6 | 6 | 5 | 4 | 5 | -40 | 350 |
| **9499** | Transparent version of 9497. | 2 | 60# DK | 3.5 | 48" x 360 yd | – | | | | | | | |
| **Specialty Acrylic** | | | | | | | | | | | | | |
| **9379** | Jet fuel and hydraulic fluid resistant adhesive transfer tape. | 2 | PET | 2 | 48" x 200 yd | MH* | 9 | 8 | 1 | 2 | 9 | -40 | 350 |
| **9380** | Thicker version of 9379. | 5 | PET | 2 | 48" x 200 yd | MH* | | | | | | | |
| **F9465PC** | Vinyl plasticizer resistant adhesive. | 5 | 58# PCK | 4.2 | 54" x 360 yd | – | 10 | 10 | 7 | 5 | 5 | -40 | 200 |
| **F9467U** | Vinyl plasticizer resistant adhesive. | 3.5 | 58# PCK | 4.2 | 54" x 180 yd | – | | | | | | | |
| **Silicone** | | | | | | | | | | | | | |
| **91022** | Silicone attachment. Silicone linered for easier processing. | 2 | White PET | 2 | 48" x 180 yd | – | 9 | 8 | 7 | 6 | 10 | -40 | 500 |

*MH meets Mil-P-19834B Type I.

## Values: 1 = Lowest Performance; 10 = Highest Performance

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# Scotch® ATG Adhesive Transfer Tapes

## Finger Touch Application of Pressure Sensitive Adhesive

Versatility, convenience and speed. That's what you get with Scotch® ATG Adhesive Transfer Tapes for assembly operations in businesses ranging from appliance and printing to P.O.P. and electronics. Readily bond, join, mount, or laminate materials such as paper, plastics, metal, foam and more.

With Scotch® ATG Applicators, a touch of the finger triggers a quick, controlled application of Scotch® ATG Adhesive Transfer 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.







**Save time and effort with Scotch® ATG Adhesive Transfer Tapes and Applicators. You apply a precise strip of adhesive at the same time as the liner rewinds into the applicator.**




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




**Scotch® ATG Applicator 700 for 3/4" and 1/2" wide tape**




**Scotch® ATG Applicator 714 for 1/4" wide tape**




**Scotch® ATG Applicator 752C for 3/4", 1/2" and 1/4" wide tape (1/4" adapter purchased separately)**




**Scotch® ATG Applicator 3662 for 2" wide tape**

| Product | Tape Thickness w/o Liner mils (mm) | Description | Temperature Resistance | | Solvent Resistance | Relative Adhesion | | Application Ideas | Adhesive Transfer Tape Equivalent |
|---|---|---|---|---|---|---|---|---|---|
| | | | Min Hr | Days Weeks | | HSE | LSE | | |
| **350 (Firm Acrylic)** | | | | | | | | | |
| **926** | 5 (0.13) | High adhesion, excellent shear holding power to a variety of substrates. UV resistant. | 450°F (232°C) | 300°F (149°C) | Very Good | High | Med-High | Nameplates on award plaques, bonding foam insulation. | — |
| **300 (Soft Acrylic)** | | | | | | | | | |
| **969** | 5 (0.13) | Very high initial adhesion, good shear holdng power to a variety of materials including plastics. | 250°F (121°C) | 180°F (82°C) | Med | High | Med-High | Assemble point of purchase displays, attach fabric swatches in sample books. | — |
| **300 (High Tack Acrylic)** | | | | | | | | | |
| **976** | 2 (0.05) | High tack. Excellent adhesion to most plastics. | 250°F (121°C) | 150°F (65°C) | Med | High | High | Attach fabric swatches in sample books. | 927 |
| **400 (General Purpose Adhesive)** | | | | | | | | | |
| **924** | 2 (0.05) | General purpose. Excellent adhesion to most paper stocks. | 250°F (121°C) | 180°F (82°C) | Med | Med | Low | Seal pocket in folders. Bond mat board in picture frames. Splice paper, films, foils. General purpose bindery attaching. | 465 |
| **987*** | 1.7 (0.040) | | | | | | | | 9498 |

*3M Brand

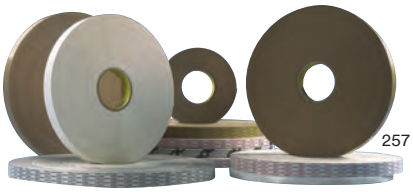
**Relative Adhesion: HSE** – High Surface Energy; LSE – Low Surface Energy

**Note:** The technical information and data on these pages should be considered representative or typical only and should not be used for specification purposes.

# 3M™ Extended Liner Tapes

## Versatile Pressure Sensitive Adhesive on Easy-to-Remove Liners

3M™ Extended Liner Tapes offer the adhesive versatility of 3M tapes but with liners wider than the adhesive. This leaves an easy-to-lift edge for convenient and easy liner removal. With the variety of adhesives, you have a selection of performance characteristics such as high tack for coated papers and plastics, low tack for temporary attachment, high temperature resistance and more. Apply manually or with equipment matched to your production volume requirements.


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258

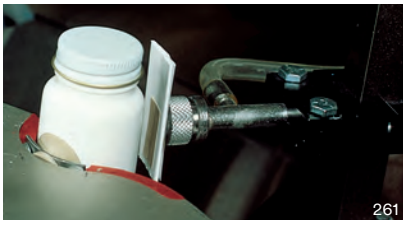
**3M™ Extended Liner Tapes are available with a release liner wider than the adhesive. This provides an easy-to-grab edge for convenient liner removal.**


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**Depending on adhesive type, 3M™ Extended Liner Tapes are applied to envelopes, polybags, boxes or tubes. User simply peels off liner to expose the adhesive for an immediate, secure closure.**


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**Automatic and semi-automatic equipment is available for higher volume applications. For example, apply tape to business forms, literature, bounce back and business reply cards.**


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**3M™ Extended Liner Tapes 450XL, 450EK and 465XL immediately bond product information "outserts" to polyethylene bottles. Holds tightly but can be cleanly removed.**

| Product | Tape Thickness w/o liner mils (mm) | Liner Type | Description | Temperature Resistance | | Solvent Resistance | Relative Adhesion | | Application Ideas |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Min Hr | Days Weeks | | HSE | LSE | |
| **340** | | | | | | | | | |
| **466XL** | 2 (0.05) | 62# DK White with Black Print | High tack; Permanent | 180°F (82°C) | 150°F (65°C) | Med | High | High | Coated papers and low surface energy (LSE) plastics. Overnight envelopes. Features an end-of-roll indicator tab for automated dispensing. |
| **400** | | | | | | | | | |
| **465XL** | 2 (0.05) | 60# DK Tan with Green Print | General purpose | 250°F (121°C) | 180°F (82°C) | Med | Med | Low | Seal flaps on overnight envelopes. Pressure sensitive edging on business forms. General commercial joining applications. For attaching materials that require more adhesive thickness. Larger outsert attachments. |
| **450EK** | 1 (0.025) | 78# Extensible Kraft White without Print | | | | | | | Pharmaceutical outsert attachment. For applications requiring a more tear resistant liner. |
| **450XL** | 1 (0.025) | 60# DK Tan with Green Print | | | | | | | Pharmaceutical outsert attachment. General paper attachment. |
| **920XL** | 1 (0.025) | 40# DK White with Red Print | | | | | | | Seal flaps on polybags and envelopes. Pressure sensitive edging on business forms, literature, photos, posters and labels. |
| **9926XL** | 1 (0.025) | 40# DK White with Red Print | General purpose | 180°F (82°C) | 150°F (65°C) | Med | Med | Low | Economical alternative for general paper-to-paper applications. |
| **600** | | | | | | | | | |
| **9934XL** | 4 (0.10) | 60# DK tan without Print | High tack to LSE materials | 150°F (65°C) | 120°F 49°C) | Med | High | High | P.O.P. displays. Difficult splicing applications, shelf talkers, price tags, polyethylene foam bonding. Indirect food-contact applications. High tack to LSE materials. |
| **760** | | | | | | | | | |
| **476XL** | 6 (0.16) | 62# DK White with Red Print | High tack, double coated film | 150°F (65°C) | 120°F 49°C) | Med | High | High | Heavy-duty sealing. Mounting of promotional items. Core starting. Closure of overnight boxes, tubes and envelopes. Indirect food-contact applications. |
| **770** | | | | | | | | | |
| **9925XL*** | 2.5 (0.065) | 43# DK White with Black Print | Tissue reinforced; High initial adhesion to a wide variety of materials | 150°F (65°C) | 100°F 41°C) | Low | Med | Med | General mounting. P.O.P. items. Attaching tags and labels. Core starting. Permanent bonding paper-to-paper, business forms, traffic tickets, novelty items and literature. Indirect food-contact applications. |

*Non-liner side is adhesive coated full width.

**Relative Adhesion:**
HSE – High Surface Energy
LSE – Low Surface Energy

**Note:** The technical information and data on these pages should be considered representative or typical only and should not be used for specification purposes.

# Notes:

Specialty Technologies

# Supporting your designs behind the seams.

## Powerful Fastening Solutions

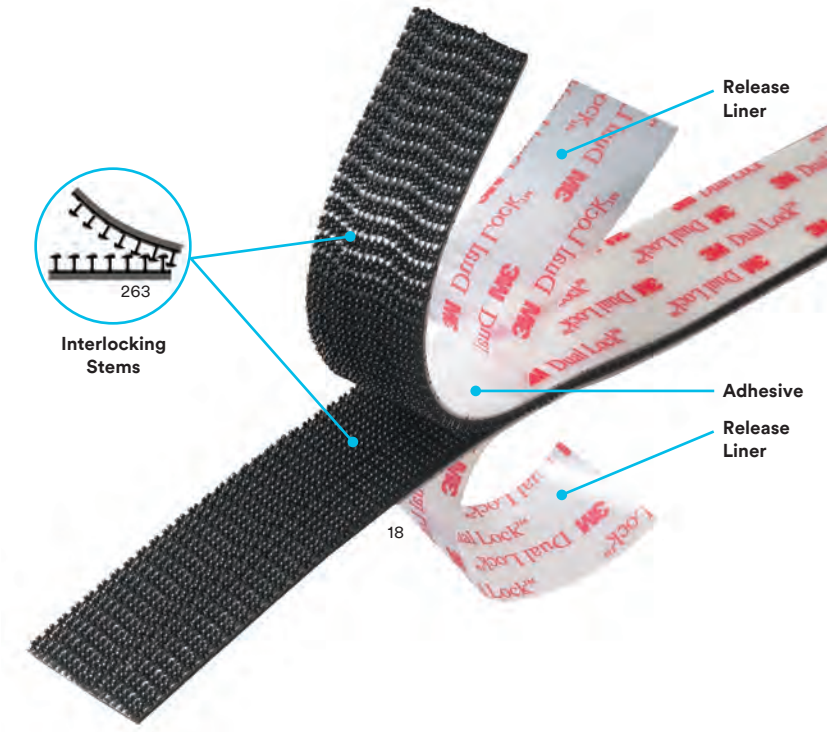
3M™ Reclosable Fasteners provide secure fastening with easy access and enhanced gripping for a wide range of applications. Weather-resistant single coated foam tapes are practical solutions that protect against moisture, dust, vibration and impact, and remain flexible.

# 3M™ Dual Lock™ Reclosable Fasteners

## Holding Power to Replace Screws, Bolts and Rivets

Durable enough to last through repeated opening and closing. Unique mushroom-shaped heads snap shut and stay locked.

- Durable — up to 1,000 openings and closings before losing 50% of original tensile strength
- Helps reduce vibration
- Temperature, moisture and UV resistant
- Strong, pressure-sensitive adhesive bonds on contact
- Interlocking mushroom-shaped heads have **5X the tensile strength** of hook-and-loop products







**Secure plastic signs to window glass.**



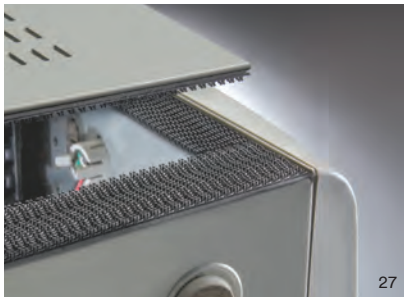

**Anchor vehicle accessories to dashboard.**




**Attach elevator control panel to interior wall.**




**Fasten ceiling panels to interior for future access.**




**Attach access panels to industrial, electronic and electrical equipment.**

# 3M™ Dual Lock™ Reclosable Fasteners and Applications



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■ Best Suggested Product
● Primer Recommended
▲ Performance Dependent on Selected Attachment Method

| Product | Stem Density (per sq/in) | Adhesive | Color | 3M Liner | Engaged Thickness | Temperature Resistance °F (°C) | Substrates | | | | | Use | Markets | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Metals (Al & SS) | Glass | Plastics (Acrylic, PC, ABS) | Powder Coated Paints | Low Surface Energy (PP,PE) | Indoor/ Outdoor | Aerospace & Rail | Appliance & Electronics | Design & Construction | Furniture & Upholstery | General Industrial | Marine & Specialty Vehicle | POP, Display & Signage |
| **SJ3540** | 250 | Rubber | Black | White, 5 mil (0.13mm) Polyolefin | 0.23 in (5.7mm) | 120 (49) | ■ | | ■ | ■ | ■ | Indoor | | | | ■ | ■ | | ■ |
| **SJ3541** | 400 | | | | | | | | | | | | | | | | | | |
| **SJ3542** | 170 | | | | | | | | | | | | | | | | | | |
| **SJ3550** | 250 | White Acrylic | Black | Clear, 4 mil (0.10mm) Polyolefin | 0.23 in (5.7mm) | 200 (93) | ■ | ■ | ■ | ● | ● | Indoor/ Outdoor | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| **SJ3551** | 400 | | | | | | | | | | | | | | | | | | |
| **SJ3552** | 170 | | | | | | | | | | | | | | | | | | |
| **SJ3558** | 250 | White Acrylic | Clear* | Clear, 4 mil (0.10mm) Polyolefin | 0.23 in (5.7mm) | 200 (93) | ■ | ■ | ■ | ● | ● | Indoor/ Outdoor | | ■ | ■ | ■ | ■ | ■ | ■ |
| **SJ3560** | 250 | Clear Acrylic | Clear | Clear, 4 mil (0.10mm) Polyolefin | 0.23 in (5.7mm) | 220 (104) | ■ | ■ | ■ | ● | ● | Indoor/ Outdoor | | ■ | ■ | ■ | ■ | ■ | ■ |
| **SJ3561** | 400 | | | | | | | | | | | | | | | | | | |
| **SJ3562** | 170 | | | | | | | | | | | | | | | | | | |
| **SJ3550CF** | 250 | Clear Acrylic | Black | Clear, 4 mil (0.10mm) Polyolefin | 0.23 in (5.7mm) | 220 (104) | ■ | ■ | ■ | ● | ● | Indoor/ Outdoor | | ■ | ■ | ■ | ■ | ■ | ■ |
| **SJ3551CF** | 400 | | | | | | | | | | | | | | | | | | |
| **SJ3552CF** | 170 | | | | | | | | | | | | | | | | | | |
| **SJ3870** | 250 | Modified Acrylic | Black | Red, 4.5 mil (0.11mm) Polyolefin | 0.24 in (6.1mm) | 140 (60) | ■ | | ■ | ■ | ● | Indoor/ Outdoor | | | | ■ | ■ | | ■ |
| **SJ3871** | 400 | | | | | | | | | | | | | | | | | | |
| **SJ3872** | 170 | | | | | | | | | | | | | | | | | | |
| **SJ3782** | 250 | Low Surface Energy Acrylic | Black | Brown, 83# Polykraft | 0.16 in (4.1mm) | 120 (49) | ■ | | ■ | ■ | ■ | Indoor/ Outdoor | | ■ | | ■ | ■ | | ■ |
| **SJ3440** | 250 | None | Black | No Liner | 0.15 in (3.86mm) | 220 (104) | ▲ | ▲ | ▲ | ▲ | ▲ | Indoor/ Outdoor | | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ |
| **SJ3441** | 400 | | | | | | | | | | | | | | | | | | |
| **SJ3442** | 170 | | | | | | | | | | | | | | | | | | |
| **SJ3443** | 400 | Non-woven Backing with No Adhesive | Black | No Liner | 0.28 in (7.1mm) | 220 (104) | ▲ | ▲ | ▲ | ▲ | ▲ | Indoor/ Outdoor | | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ |
| **SJ3444** | 170 | | | | | | | | | | | | | | | | | | |
| **SJ3445** | 250 | | | | | | | | | | | | | | | | | | |
| **SJ3460** | 250 | None | Clear | No Liner | 0.15 in (3.86mm) | 220 (104) | ▲ | ▲ | ▲ | ▲ | ▲ | Indoor/ Outdoor | | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ |
| **SJ3463** | 400 | Piece Part Circle† | Black | No Liner | 0.20 in** (5.1mm) | 220 (104) | ■ | | ■ | ■ | ■ | Indoor/ Outdoor | | ■ | ■ | ■ | ■ | ■ | ■ |
| **SJ3481** | 400 | Rigid Strip† | Black | No Liner | 0.20 in** (5.1mm) | 220 (104) | ▲ | ▲ | ▲ | ▲ | ▲ | Indoor/ Outdoor | | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ |
| **Low Profile** | | | | | | | | | | | | | | | | | | | |
| **SJ4570** | Low Profile/ Thin | Low Surface Energy Acrylic | Clear | Brown, 83# Polykraft | 0.098 in (2.489mm) | 158 (70) | ■ | | ■ | ■ | ■ | Indoor/ Outdoor | | ■ | ■ | ■ | ■ | | ■ |
| **SJ4575** | | | Black | | | | | | | | | | | | | | | | |
| **SJ4580** | | Clear Acrylic | Clear | Red, 4.5 mil (0.11mm) Polyolefin | 0.12 in (3.0mm) | 200 (93) | ■ | ■ | ■ | ● | ● | Indoor/ Outdoor | | ■ | ■ | ■ | ■ | ■ | ■ |

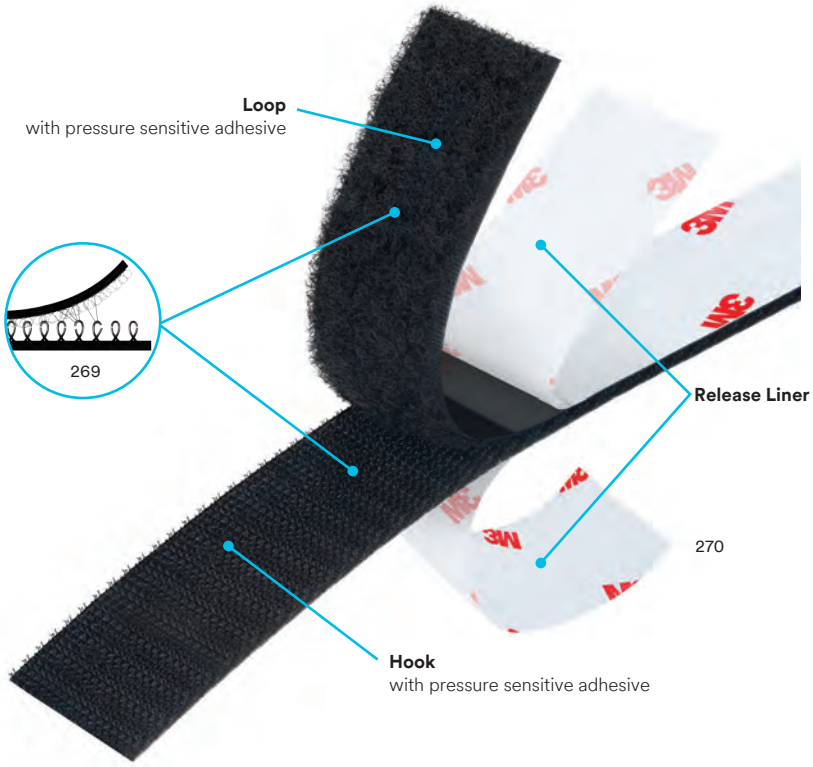
*Clear fastener utilizes a white adhesive giving the product a white appearance **Single thickness; not engaged †No adhesive

**Note:** The technical information and data on these pages should be considered representative or typical only and should not be used for specification purposes.

# 3M™ Hook and Loop Reclosable Fasteners

## Hooks on One Side, Loops on the Other for Secure, Repeated Closures

- Reliable PSA holds on contact with a variety of materials
- Low profile options, as much as 75% thinner than standard product
- Up to 5,000 closures for standard Hook and Loop
- Flame resistant product available
- Also available without adhesive







**Attach cushioning panels in an ambulance or bus.**




**Sew to the fabric and leather of jackets and gloves.**




**Use as a replacement for string, tapes, rubber bands, wire and strapping.**




**Attach removable seat cushions.**




**Hang graphics and banners that change frequently.**

# 3M™ Hook and Loop Reclosable Fasteners and Applications



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- ■ Best Suggested Product
- ● Performance Dependent on Selected Attachment Method
- ▲ Primer Recommended
- □ Back-to-back fastener which can wrap around any type of surface or substrate

| Product | Type | Adhesive | Closure Life | Product Material | Liner Description | Engaged Thickness | Temperature Resistance °F (°C) | Substrates | | | | | Use | Markets | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Metals (Al & SS) | Glass | Plastics (Acrylic, PC, ABS) | Powder Coated Paints | Low Surface Energy (PP, PE) | Indoor/Outdoor | Aerospace & Rail | Furniture & Upholstery | General Industrial | Marine & Specialty Vehicle | POP, Display & Signage |
| **Best** | | | | | | | | | | | | | | | | | | |
| **SJ3526N** | Hook | High Performance Rubber | 5,000 | Nylon | White, 3 mil (0.08mm) Polyethylene Film 3M Red Print | 0.14" (3.6mm) | 120 (49) | ■ | | ■ | ■ | ■ | Indoor | | ■ | ■ | | ■ |
| **SJ3527N** | Loop | | | | | | | | | | | | | | | | | |
| **SJ3572** | Hook | High Performance Acrylic | 5,000 | Nylon | Clear, 4 mil (0.10mm) Polypropylene Film Embossed 3M Logo | 0.14" (3.6mm) | 200 (93) | ■ | ■ | ■ | ▲ | ▲ | Indoor/ Outdoor | | ■ | ■ | ■ | ■ |
| **SJ3571** | Loop | | | | | | | | | | | | | | | | | |
| **Better** | | | | | | | | | | | | | | | | | | |
| **SJ3522** | Hook | Plasticizer Resistant Acrylic | 5,000 | Nylon | Clear, 3.5 mil (0.08mm) Polyolefin Film, No print | 0.14" (3.6mm) | 158 (70) | ■ | | ■ | | | Indoor/ Outdoor | | ■ | ■ | ■ | ■ |
| **SJ3523** | Loop | | | | | | | | | | | | | | | | | |
| **SJ3530** | Hook | High Tack Rubber | 5,000 | Nylon | Yellow, 3 mil (mm) Polyethylene Film No Print | 0.14" (3.6mm) | 90 (32) | ■ | | ■ | ■ | ■ | Indoor | | ■ | ■ | | ■ |
| **SJ3531** | Loop | | | | | | | | | | | | | | | | | |
| **General Purpose** | | | | | | | | | | | | | | | | | | |
| **SJ30H** | Hook | Rubber | 5,000 | Nylon | White, 3 mil (0.08mm) Polyethylene Film No Print | 0.14" (3.6mm) | 100 (38) | ■ | | ■ | | ■ | Indoor | | | ■ | | ■ |
| **SJ30L** | Loop | | | | | | | | | | | | | | | | | |
| **SJ60H** | Hook | Acrylic | 5,000 | Nylon | Clear, 4 mil (0.10mm) Polypropylene Film Embossed 3M Logo | 0.125" (3.2mm) | 180 (82) | ■ | | ■ | | | Indoor/ Outdoor | | | ■ | | ■ |
| **SJ60L** | Loop | | | | | | | | | | | | | | | | | |
| **SJ3401** | Loop | None | 5,000 | Nylon | None | 0.12" (3.0mm) | 200 (93) | ● | ● | ● | ● | ● | Indoor/ Outdoor | | ● | ● | | ● |
| **SJ3402** | Hook | | | | | | | | | | | | | | | | | |
| **Low Profile/Thin** | | | | | | | | | | | | | | | | | | |
| **SJ3506** | Hook | Acrylic | 25 | Polypropylene | Brown #83 Polykraft Green Print | 0.034" (0.84mm) | 158 (70) | ■ | ■ | ■ | ▲ | ▲ | Indoor/ Outdoor | | | ■ | | ■ |
| **SJ3507** | Loop | | | Polyester | | | | | | | | | | | | | | |
| **SJ3000** | Back-to-Back Hook and Loop | None | 10 | Polypropylene/ Nylon | None | 0.053" (1.3mm) | 200 (93) | □ | □ | □ | □ | □ | Indoor | □ | □ | □ | □ | □ |
| **Flame Resistant** | | | | | | | | | | | | | | | | | | |
| **SJ3519FR** | Hook | Flame Resistant | 5,000 | FR Nylon | White, 3 mil (0.08mm) Polyethylene Film 3M Red Print | 0.14" (3.6mm) | 158 (70) | ■ | | ■ | ■ | ■ | Indoor | ■ | ■ | ■ | ■ | |
| **SJ3518FR** | Loop | | | | | | | | | | | | | | | | | |
| **SJ3419FR** | Hook | None | 5,000 | FR Nylon | None | 0.12" (3.0mm) | 200 (93) | ● | ● | ● | ● | ● | Indoor/ Outdoor | ● | ● | ● | | |
| **SJ3418FR** | Loop | | | | | | | | | | | | | | | | | |



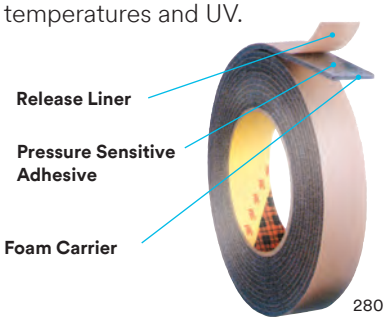
**Note:** The technical information and data on these pages should be considered representative or typical only and should not be used for specification purposes.

# 3M™ Single Coated Foam Tapes

## Roll-on Protection Against Moisture, Dust, Noise, Vibration and Impact

3M™ Single Coated Foam Tapes are strips of foam in a roll with high strength acrylic adhesive on one side of the foam. Cut to length, they seal, damp, insulate or cushion. For die-cut shapes, 3M™ Single Coated Foam Tape Series 4100, 4300, and 4700 is protected by a liner. With 3M™ Single Coated Foam Tape Series 4500, the liner is on the non-adhesive side to minimize foam stretching while placing the gasket.

Urethane foams seal, cushion, damp sound, and absorb vibration. Weather-resistant vinyl foams seal out light and dust when under compression and remain flexible even when exposed to variable temperatures and UV.







**In a computer printer, 3M™ Urethane Foam Tape 4318 is a very soft, low density cushion that helps absorb impact and vibration.**




**When compressed 50%, the open cell construction of 3M™ Urethane Foam Tape 4314 provides an air barrier and cushion in electronic equipment.**




**To help prevent light leakage around a sign perimeter, 3M™ Vinyl Foam Tape 4726 attaches securely on contact.**




**In outdoor mailboxes, strips of 3M™ Vinyl Foam Tape 4504 helps seal the inside from rain and dirt. Vinyl provides excellent aging characteristics and remains flexible.**

| Product | Color | Description | Adhesive | Approximate Thickness in (mm) | Density lb/cu ft (kg/cu m) | Tensile Strength psi (kPa) | Compression Deflection 25% psi (kPa) | Compression Set % Loss | Temperature Tolerance | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | Short-term | Long-term |
| **Urethane** | | | | | | | | | | |
| **4104*** | Natural White | Firm, rigid, open cell urethane foam for cushioning. Allows air or gas vapors to pass through. Not recommended for outdoor use. | 350 Acrylic | 0.250(6) | 12 (192) | 115 (795) | 4 (27.6) | 8 | 350°F (176°C) | 200°F (93°C) |
| **4108** | Natural White | | | 0.125 (3) | 16 (256) | 130 (895) | 6 (82.8) | 8 | | |
| **4116** | Natural White | | | 0.062 (1.5) | 18 (288) | 115 (795) | 12 (82.8) | 12 | | |
| **4314** | Charcoal Gray | Soft conformable, low density foam for sealing out air, dust and light when compressed 30%. Used to help damp sound and absorb vibration in electronics. | 430 Acrylic | 0.250 (6) | 2 (32) | 25 (170) | 0.3 (2.1) | 5 | 250°F (121°C) | 150°F (66°C) |
| **4317*** | Charcoal Gray | | | 0.375 (9.5) | | | | | | |
| **4318** | Charcoal Gray | | | 0.125 (3) | | | | | | |
| **Vinyl** | | | | | | | | | | |
| **4504*** | Black | Durable, flexible, closed cell vinyl foams with excellent aging characteristics. Weather resistant. Application ideas include dust and moisture seal. | 430 Acrylic | 0.250 (6) | 20 (320) | 90 (620) | 4 (27.6) | 15 | 250°F (121°C) | 150°F (66°C) |
| **4508*** | Black | | | 0.125 (3) | 20 (320) | 100 (690) | | | | |
| **4516*** | Black | | | 0.062 (1.5) | 25 (400) | 130 (895) | | | | |
| **4714*** | Black | Same as above except lower density and liner over PSA. | 430 Acrylic | 0.250 (6) | 14 (225) | 75 (515) | 2 (13.8) | 5 | | |
| **4718*** | Black | | | 0.125 (3) | 20 (320) | 100 (690) | 4 (27.6) | 15 | | |
| **4726*** | Black | | | 0.062 (1.5) | 20 (320) | 130 (895) | 3 (20.7) | 15 | | |

*Meets requirements of UL 94HBF.

**Note:** The technical information and data on these pages should be considered representative or typical only and should not be used for specification purposes.

# 3M™ Converter Markets Center

## Converting 3M Technology into Successful Applications

3M Converters match 3M technologies to customer requirements with the exact form, fit, and functionality for application success in identifying, bonding, protecting, and electrical shielding or conducting.

Converter expertise includes part design, quick prototyping, laminating adhesives to various surfaces, printing labels and durable graphics, slitting, and die-cutting.

3M technologies include the following:

- 3M™ Performance Label Materials
- 3M™ Thin Attachment Tapes
- 3M™ Adhesive Transfer and Double Coated Bonding Tapes such as 3M™ VHB™ Tapes
- 3M™ Single Coated Tapes such as crepe masking tape
- 3M™ Reclosable Fasteners
- 3M™ Bumpon™ Protective Products
- And more




**3M™ Performance Label Materials with Structured Adhesive — With unique microchannels throughout the structured adhesive, air flows freely from between the label adhesive and substrate. Hand-applied large labels go on smoothly and stay that way permanently without unsightly wrinkles and bubbles.**




**For permanent attachment of die-cut durable graphics, 3M™ Low Surface Energy (LSE) Acrylic Adhesive 300 bonds on contact and stays tight on low surface energy plastics, powder coated paints, and lightly oiled metals.**




**Dimensionally-stable 3M™ Double Coated Tapes are pre-applied to foam gasketing material and die-cut to precise shape and size for fast, easy application.**



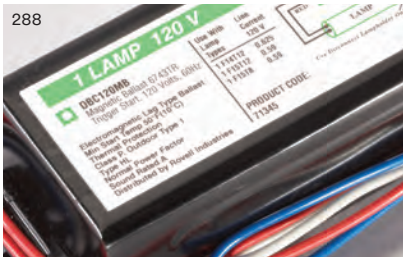

**3M converters can slit 3M™ Masking Tapes to specified widths and roll lengths, as well as die-cut to unique shapes for specialized applications.**




**For hundreds to thousands of openings and closings, 3M converters customize 3M™ Reclosable Fasteners to meet exact customer requirements for form, fit, mating strength, and liner.**




**For a little touch of quiet and skid resistance on a PDA or other small product, custom 3M™ Bumpon™ Protective Products are scaled for the design. Adhesive is formulated to hold even a small bonding surface.**




**From the 150,000 possible combinations of adhesives, facestocks, overlaminates and liners, 3M has many choices for durable labels requiring UL and/or RoHS compliance.**

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**3M Industrial Adhesives and Tapes Division**
**3M Center, Building 225-3S-06**
**St. Paul, MN 55144-100 USA**

**Phone** 800-362-3550
**Fax** 877-369-2923
**Web** 3M.com/assemblysolutions

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