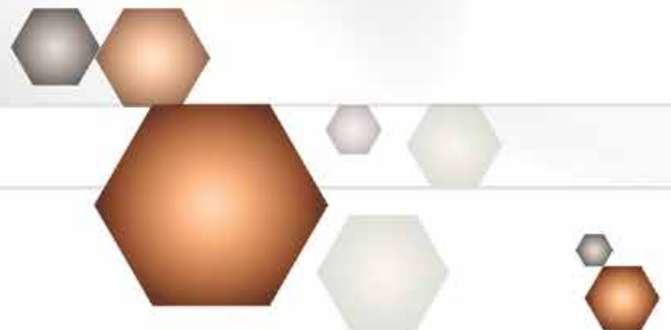


3M Metalworking Guide
Industrial Adhesives & Tapes Division



Design, Fabricate & Deliver Strong Solutions

Transforming the Metalworking Landscape



3M



The 3M Advantage

3M is a Proud Partner in this Enduring and Changing Industry

3M has been a part of the metalworking industry for over 100 years. We are proud to be a partner of this industry as it changes and grows. 3M Products bond, protect and seal metals and alloys. If you are looking for an alternative to mechanical fastening, welding, or joining dissimilar materials, 3M has solutions for you.

3M can help enhance your work efficiency and competitiveness when it comes to metal working by:

- Simplifying your design
- Improving your product aesthetically
- Reducing corrosion issues
- Providing greater flexibility in your process



3M WILL SUPPORT YOU AT ALL STAGES WITH:

Technical & Sales Support

3M technical and sales support is here for you. Our engineers and scientists are happy to work with your team to address the most challenging requirements for assembling and finishing.

Customer Service

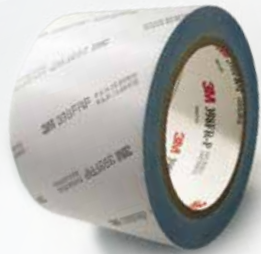
3M has a dedicated customer service team ready to serve you. By calling 1-800-410-6880 for assistance, a trained customer service representative will provide you with a response to your request.

New Technologies

3M is a pioneer in developing and applying technologies in new and groundbreaking ways.



Delivering
performance
when it counts



Prepare Your Surface

3M™ Specialty High Temperature Masking Tape 501+ 3M™ Glass Cloth Tape 398FR

High temperature masking with excellent holding power to get the job done is now possible with 3M™ Specialty High Temperature Masking Tape.

For more demanding applications requiring high adhesion, an abrasion-resistant backing and flame retardant properties, consider 3M™ Glass Cloth Tape.



Getting Ready for the Next Stage – Sanding

- Scotch-Brite™ Roloc™ Surface Conditioning Discs are aggressive yet conformable for use on right angle die grinder tools to remove contamination and prepare the surface for bonding without affecting the substrate.
- Scotch-Brite™ Handpads are non-contaminating nylon abrasive pads that can be used by hand to remove light corrosion and prepare the surface for bonding without affecting the substrate.
- Scotch-Brite™ Roloc™ Flap Brushes are conformable abrasive products for cleaning the surface of a metal panel and providing a satin brushed finish.



Make Your Product
Stand Out

Electroplating Solutions

3M™ Lead Foil Tape 420

Using a “thief” in electroplating, where the edges must fully contact the metal base, while requiring excellent conformability can be achieved with 3M™ Lead Foil Tape.

Powder Coating

3M™ Polyester Tapes 8902

Clean removability from stainless steel, anodized aluminum and glass after a 5 hour bake cycle is possible with 3M™ Polyester Tapes.

Anodizing

3M™ Polyester Tape 8402

Protect panels subject to mild caustic or acid bath etching from scratching during handling with 3M™ Polyester Tape.



SEALING



EXTREME SEALING



BONDING



EXTENDING VISIBILITY



SECURING GAUGES



FLOOR BONDING



IDENTIFYING



Durable Framework

Frame Building

3M™ VHB™ 4956

3M™ Scotch-Weld™ Structural Adhesives DP8810/DP8805/DP8405

3M™ Fastbond™ Contact Adhesive 30LM

3M™ Two-Part Polyurethane Sealant

Possible replacement of rivets, screws and spot welds when bonding roof, floor or side panels while increasing the strength, durability and productivity with 3M™ VHB™. As an alternative approach, try floor bonding with 3M™ Fastbond™ Contact adhesive and for other types of bonding with 3M™ Scotch-Weld™ Structural adhesives or 3M™ Two-Part Polyurethane Sealant.

Sealing

3M™ Extreme Sealing Tape 4411/4412

3M™ Polyurethane Adhesive Sealant 550 Fast Cure

Sticking on contact to many surfaces, even in extreme weather conditions is now possible with paintable 3M™ Extreme Sealing Tape. Improve productivity without drying time, dripping, oozing or clean-up. This tape conforms easily over contours, edges and rivets. As an alternative approach, try a variety of 3M™ Sealants like 3M™ Polyurethane Adhesive Sealants.

Extending the Visibility and Protecting Your Shields

3M™ Scotchgard™ Multi-Layer Protective Film 1004

Protect surfaces from intentional and unintentional damage caused by scratching, etching, abrasion and graffiti. Extend the lifespan of your surface with optically transparent 3M™ Scotchgard™ Multi-Layer Protective Films.

Securing Your Gages with Confidence

3M™ Scotch-Weld™ Threadlocker Anaerobic Adhesives

Prevent threads and gages from getting loose and/or leakage due to vibration with 3M™ Scotch-Weld™ Threadlocker Anaerobic Adhesives.

Identifying

3M™ Thermal Transfer Polyimide Label Material 7812

3M™ Acrylate Overlaminating Film 7735FL

For ultra-high temperature performance inside an HVAC system, labeling is possible with 3M™ Thermal Transfer Polyimide Label Materials.

For exceptional UV resistance on the outside of the HVAC system, labels can be protected up to 5 years with 3M™ Acrylate Overlaminating Film.



EXTREME SEALING



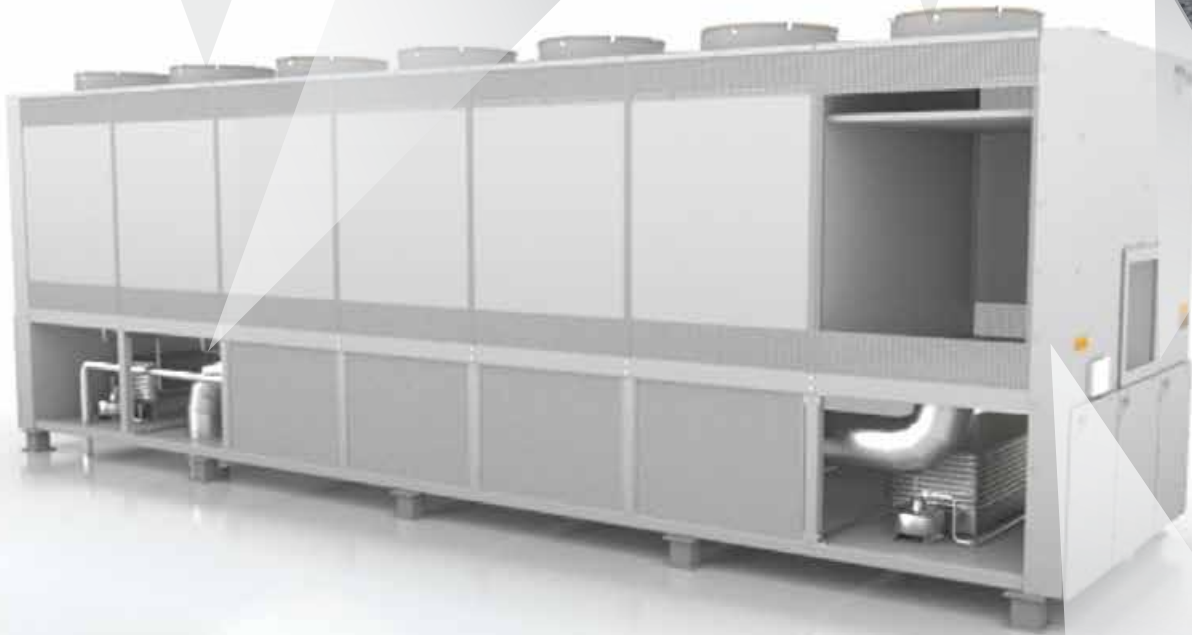
DUCT SEALING



JOINT SEALING



BOLT SETTING



IDENTIFYING



Effective Installations

Sealing With Confidence

3M™ Extreme Sealing Tape 4412

3M™ Polyurethane Adhesive Sealant 550 Fast Cure

3M™ Hybrid Sealant 755 FC

Sticking on contact to many surfaces, even in extreme weather conditions is now possible with paintable and conformable 3M™ Extreme Sealing Tape. Improve productivity without drying time, dripping, oozing or clean-up. This tape conforms easily over contours, edges and rivets.

As an alternative approach, with the ability to paint when wet and great UV performance try 3M™ Hybrid Sealant or a variety of other 3M™ Adhesive Sealants.

Bolt Setting

3M™ Scotch-Weld™ Concrete Repair DP-600

With a squeeze of a trigger, easily dispense a bubble free self-leveling liquid for custom tapping of bolts and screws into concrete and masonry with 3M™ Scotch-Weld™ Concrete Repair. It builds a tough, non-brittle bonding of metal and plastic. Ideal for your HVAC installations.

Ductwork Essentials

3M™ Aluminum Foil Tape 425

3M™ Aluminum Foil Tape 427

Easy-release aluminum foil tapes are essential for HVAC installations and maintenance. 3M™ Aluminum Foil Tapes are certified to meet the following:

- Flame resistant. Meets U.L. 746C (File E 122798) and 723, Class "L" low flammability rating (File R 7311).
- 3M™ Aluminum Foil Tape 425 can be certified to meet SAE-AMS-T-23397 and L-T-80B.
- Meets requirements of F.A.R. 25.853(a).

Identifying and Labeling

3M™ Thermal Transfer Polyester Label Materials 7871, 7872, 7873

3M™ Acrylate Overlaminating Film 7735FL

For premium durability and moisture resistance on the outside of HVAC systems, 3M™ Thermal Transfer Polyester Label Materials are ideal.

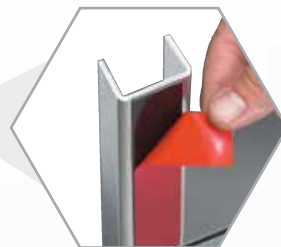
For exceptional UV resistance on the outside of the HVAC system, labels can be protected up to 5 years with 3M™ Acrylate Overlaminating Films.



PANEL
BONDING



TRIM
BONDING



SEALING



SOUND
DAMPING



For lasting
seals you can
trust



Protect Against the Elements

Panel and Trim Bonding

3M™ VHB™ 4941

3M™ RP VHB

3M™ Scotch-Weld™ Flexible Epoxy Adhesive LSB90

Replace rivets, screws and spot welds with insurmountable strength and long term durability with 3M™ VHB™ Tapes Family. For an economical alternative, consider our 3M™ RP VHB line of products.

As an alternative approach, try our 3M™ Scotch-Weld™ Flexible Epoxy Adhesives.

Sealing

3M™ Two Part Polyurethane Adhesive Sealant 550B

3M™ Adhesive Sealant 550FC

3M™ Adhesive Sealant 755FC

3M™ Two-Component Adhesive Sealant System is a simple, time-saving solution. With a guaranteed cure rate of just one hour, this multi-purpose adhesive sealant can dramatically improve your production line efficiency and productivity.

As an alternative approach, try a variety of other 3M™ Adhesive Sealants.

Sound Dampening Solutions

3M™ Damping Foil 2552

Reduce noise by controlling resonant vibrations in temperatures between 0° to 60°C with the unique construction of 3M™ Damping Foil.

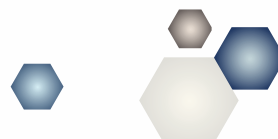
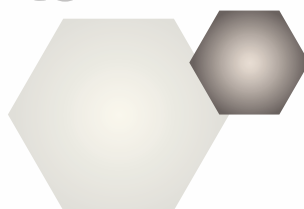
Protection from Production to Delivery

3M™ Co-Extruded Multi-Polymer Protective Tapes 2A825 and 2A826

Many surfaces require protection during production and material handling stages. A wide range of 3M™ temporary protection products provide the protection you need. For clean removability you can try 3M™ Co-Extruded Multi-Polymer Protective Tapes.



Solutions committed to
innovation
 and **quality**





SEALING

BUILDING FOR COMFORT

EXTENDING VISIBILITY

IDENTIFYING

STRONGER GRIP

SOUND DAMPING

Go the Distance

Sealing – Seal cabins with 3M™ 700-Series Hybrid Sealant and Hybrid Adhesive Sealant products or 3M™ Polyurethane Adhesive Sealant 550 Fast Cure.

Extending Visibility – Extend the life of your windshields with 3M™ Scotchgard™ Multi-Layer Protective Films 1004.

Stronger Grip – Get a Stronger Grip and improve safety with 3M™ Gripping Material GM110 and GM400.

Sound Damping – Create Quieter work environments with 3M™ Damping Foil 2552 and bonding panels with 3M™ VHB™ Tape 5952.

Identifying – Track your assets with 3M™ Screen Printable Polyester Performance Label 7220SA with Structured Adhesive.

Building for Comfort – Build seats with comfort in mind with 3M™ Fastbond™ Foam Adhesive 100 or 3M™ Fast Tack Water Based Adhesives 1000NF.

Equipment That Works As Hard As You Do

Pipe Fitting and Protection

3M™ Performance Yellow Masking Tape 301+

3M™ Duct Tape 6969

3M™ Scotch-Weld™ Epoxy Adhesive DP920

Piping is the backbone of the Oil and Gas Industry. To get the proper pipe fitting and flange preparation, mask with 3M™ Performance Yellow Masking Tape. For heavier masking with abrasion resistance and water proofing, 3M™ Duct Tape.

To save the cleaning and energy cost of heat, use the room temperature curing 3M™ Scotch-Weld™ Toughened Epoxy Adhesive to seal even on surfaces contaminated with surface oil.

Protect From Abrasion

3M™ UHMW Film Tape 5423

Wear due to abrasion is a constant problem with material handling equipment. Extend the life of your equipment with the protection of a durable abrasion resistant and self-lubricating 3M™ UHMW Film Tape. This tape is used for roller wrapping, wire harnessing, squeak reduction, noise reduction, insulating, lining, shielding, protecting, composite bonding, and flash breaking.

Aisle Marking and Identifying

3M™ Vinyl Tape 471

3M™ Safety Stripe Tape 5700 (Black/White)

3M™ Safety Stripe Tape 5702 (Black/Yellow)

Keeping your organization safe is a priority. 3M offers a line of multi-colour vinyl tapes that are an alternative to painting for:

- Aisle Markings
- Identifying Hazardous Machine Parts
- Colour Coding
- Abrasion Protection



Deliver Your Finished Product with Confidence

3M™ Citrus Base Cleaner

3M™ Citrus Base Cleaner is a liquid cleaner/degreaser used to help dissolve and remove dirt, grease, tar, and many non-curing types of adhesives. It can also be used in some cases to degrease substrates for adhesive bonding in place of many chlorinated or petroleum based solvents.

Protect your Work

3M™ Commercial Graphics

- 3M™ Commercial Graphics products offer total graphics solutions for back-lit signage.
- 3M™ Panaflex™ and Panagraphics™ flexible sign materials to produce lightweight and impact resistant façades, canopies and awnings.
- 3M™ Scotchcal™ Translucent films for the production of durable decorations.
- Scotchcal™ 3630 translucent film has unique thermoformability capacities.
- Digitally printable films for the production of full colour translucent capacities.
- 3M™ Light management films offering diffuser, blackout, day/night, light enhancement and dual colour properties.

Change your Product Character

3M™ Paint Application Solutions

An innovative system from 3M™ that enables painters to mix less paint, improve transfer efficiency, reduce solvent usage and speed clean up.

- The 3M™ Accuspray™ system helps painters reduce coating consumption, while boosting productivity. It also maximizes the benefits of the 3M™ PPS™ System.



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Product Use: All statements, technical information and recommendations contained in this document are based upon tests or experience that 3M believes are reliable. However, many factors beyond 3M's control can affect the use and performance of a 3M product in a particular application, including the conditions under which the product is used and the time and environmental conditions in which the product is expected to perform. Since these factors are uniquely within the user's knowledge and control, it is essential that the user evaluate the 3M product to determine whether it is fit for a particular purpose and suitable for the user's method of application.

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1309-02405 E BA-13-18454



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