



## Product Description

3M DI-NOC and 3M DI-NOC E-Series Architectural Finishes, and 3M DI-NOC Whiteboard Film WH-111 (the “Product”) are durable, cleanable, flexible finishes that use 3M™ Comply™ Adhesive Technology for fast, easy and virtually bubble-free application. The Products can be used on flat or complex curved application surfaces, walls, furniture, fixtures, and more. Many designs can be applied to 3-dimensional surfaces. The Products are ideal for both new construction and refurbishment.

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## Application Surfaces

The Products can be applied to many types of application surfaces. See [Adhesion Compatibility with Application Surfaces on page 4](#).

## Glossary of Terms

**Application Surface:** The actual surface to which a Product is applied. This may be a bare application surface or a finish on an application surface, such as paint, varnish, or laminate.

**Porosity:** The amount of void compared to solid material in an application surface. Product may appear to adhere well initially to some porous application surfaces, but adhesion decreases significantly over time. Apply an appropriate product to seal porous surfaces.

**Sealer:** A coating applied to an application surface to seal a porous surface.

Below are some terms that describe the surface’s tactile feel, which has a significant effect on Product choice, ease of application, and adhesion. A very smooth application surface will have the best Product adhesion and coverage. For rough application surfaces, consider using a Product with more visual design and/or embossed texture.

- **Very smooth:** No surface variation, such as glass. Allows for the easiest Product application.
- **Fairly smooth:** Little surface texture, such as painted wallboard. Allows for easy Product application and good adhesion, but texture may show through some Products. A Level 5 Gypsum Board Finish (ASTM C840) is an example of a “fairly smooth” surface.
- **Rough:** Has obvious visual and tactile surface variations, such as concrete block, brick, textured wallpaper, etc. Product may not adhere well due to the adhesive not having full contact with the surface. In addition, the surface’s texture will show through almost all Products. See [Adhesion on page 2](#) and [Surface and Work Area Preparation on page 9](#) for instructions on rough application surfaces.

## Installation Tools and Supplies

- 3M™ Hand Applicator PA-1 (Blue or Gold) with 3M™ Low Friction Sleeve SA-1 (for use over the hand applicator)
- Razor blade knife with stainless steel replacement break-away blades
- Liner cutting tool (i.e. Seam Buster tool)
- Steel ruler with nick-free edges
- Scotch™ Masking Tape
- 3M™ Air Release Tool 391X
- Measuring tape
- An appropriate container for holding discarded cutting blades or tools
- Adhesion promoter and brush
- Industrial heat gun capable of attaining and sustaining 100°F–300°F (38°C–149°C) or equivalent
- Clean, lint-free cloths
- Isopropyl alcohol (70% alcohol, 30% water)

## Adhesion

### Initial and Final Adhesion

An adhesive-backed Product will have both initial and final adhesion. Adhesion will vary depending on the surface type and texture, installation conditions and techniques, and Product exposure conditions, any of which can prevent a Product from achieving a full bond to the application surface.

- Initial Adhesion is the bond needed to hold the Product in place during installation. 800 grams of adhesion is recommended when tested using a spring scale per the 3M Wall Adhesion Test section. A good initial adhesion requires that a substantial portion of the adhesive be in contact with the application surface.
- Final Adhesion, or maximum bond, is achieved in 24 to 48 hours after Product application. A good final adhesion requires all of the following: a suitable application surface with an optimal surface, correct Product installation techniques, and Product exposure conditions within those stated for the Product.

### Adhesion Considerations

- An adhesion promoter may aid in Product adhesion. See Adhesion Promoters in the following section.
- If Product is stretched during application, it may shrink later, which decreases adhesion. Using an adhesion promoter may minimize shrinkage.

### Adhesion Promoters

Using an adhesion promoter can significantly increase a Product's adhesion. However, before using an adhesion promoter, consider these points: the Product will be more difficult to reposition on the surface due to enhanced adhesion; and Product removal will be more difficult and may cause additional application surface damage, if attempted.

### Using Adhesion Promoter

- Adhesion promoter is recommended at Product overlaps, ends, corners or edges, or around fixtures. It should also be used wherever the Product is stretched.
- Adhesion Promoters are often not needed on flat or high energy application surfaces, such as metal or glass.
- Allow adhesion promoters to dry per manufacturer's instructions.
  - Allow the water-based adhesion promoter to dry at least 1 hour before Product installation.
  - Allow the solvent-based adhesion promoter to dry at least 5 - 15 minutes before Product installation.

**Adhesion Promoter Properties**

The following table contains general properties of adhesion promoters and general application surface types where useful.

<b>Adhesion Promoter Properties</b>	<b>WP-2000 (Water-based)</b>	<b>3M™ Tape Primer 94 (Solvent-based)</b>
<b>Type</b>	Synthetic rubber	Acrylic
<b>Container size</b>	3.75 liter can	Multiple sizes
<b>Usage</b>	Optional dilution with maximum 4 parts water	Do not dilute
<b>Coverage</b>	135 - 270 sq. ft./gal. (12.5 - 25.1 sq. meters/liter)	600 sq. ft./gal. (14.7 sq. meters/liter)
<b>Color</b>	Blue	Clear light yellow - clear dark orange
<b>Solids</b>	48%	6%
<b>Viscosity</b>	2400 cps (mPa-s)	1-10 cps (mPa-s)
<b>Compatible application surfaces</b>	<ul style="list-style-type: none"> <li>- MDF (w/sealer)</li> <li>- Gypsum board (w/ sealer)</li> <li>- Previously applied 3M DI-NOC Finishes</li> <li>- Metals</li> <li>- Plastics</li> </ul>	<ul style="list-style-type: none"> <li>- MDF (w/sealer)</li> <li>- Gypsum board (w/ sealer)</li> <li>- Previously applied 3M DI-NOC Finishes</li> <li>- Metals</li> <li>- Plastics</li> </ul>

### Adhesion Compatibility with Application Surfaces

The chemistry of paints has been changing over the years to drive down the level of Volatile Organic Compounds, VOCs, due to both sustainability efforts and regulatory requirements. These new paint formulations have changed how the painted surface interacts with the adhesive on the Product, affecting its ability to adhere to the paint.

Because the paint formulations are protected by trade secrets, it is difficult for any manufacturer to understand how adhesives interact with these paints. In fact, the Product may perform well on one paint and poorly on another paint. However, by using the new 3M™ Enhanced Adhesion Cleaning Method and testing the adhesion to the walls using the 3M™ Wall Adhesion Test, you can quickly, easily and successfully adhere almost any Product to nearly any paint or surface finish.

The following table contains peel adhesion information for the Product peeled from various surfaces. A number of surfaces have acceptable adhesion without the use of adhesion promoter. Examples of increased adhesion with adhesion promoters on certain surfaces is presented. Surfaces vary widely, so adhesion should be assessed for each customer application surface. Some surfaces are porous and must be sealed before application of film to prevent outgassing of the surface over time.

**Table A. Adhesion Compatibility with Application Surfaces**

Application Surface	Application Surface	Adhesion Promoter		
		NO ADHESION PROMOTER lb./in. (N/25mm)	WP-2000 (water-based) lb./in. (N/25mm)	3M™ Tape Primer 94 (solvent-based) lb./in. (N/25mm)
Wood	MDF (w/ sealer)	● 2 (8) <sup>3</sup>	● 11 (51)	● 4 (18)
	Painted MDF	● 4 (20)	● 12 (52)	● 7 (31)
Boards	Gypsum Board (w/skim coat & sealer)	● 2 (8) <sup>3</sup>	● 8 (35)	● 4 (19)
Metals	Aluminum	● 11 (47)	● 11 (48)	● 11 (47)
	Anodized Aluminum	● 5 (23)	● 13 (56)	● 11 (49)
	Stainless Steel	● 6 (26)	● 13 (56)	● 6 (28)
Glass	Glass	● 6 (26)	● 13 (58)	● 6 (26)
Plastics <sup>1</sup>	ABS	● 6 (28)	● 13 (56)	● 10 (44)
	Acrylic	● 5 (22)	● 12 (54)	● 10 (43)
	Polyester (PETG)	● 7 (29)	● 11 (51)	● 10 (45)
	Polypropylene	○ 1 (2)	● 4 (17)	● 4 (20)
	Polyethylene	○ 1 (3)	● 5 (21)	○ 1 (3)
	Polycarbonate	● 6 (28)	● 12 (53)	● 10 (44)
	3M DI-NOC Film	● 5 (24) <sup>2</sup>	● 11 (49)	● 9 (42)

Test specimens were applied to the application surface and conditioned at 68°F (20°C) for 48 hours, then peel tested at a 180 degree angle at a tensile speed of 12 inches (300mm) per minute.

WP-2000 undiluted for testing

- Acceptable adhesion
- Fails in adhesion

1 Bubbles may appear under film due to outgassing if plastic application surface is not fully cured before application.

2 If Product is wrapped and overlapped around edges, use of an adhesion promoter is highly recommended due to additional stress from wrapping the Product.

3 Sealer was wiped with Isopropyl alcohol to improve adhesion. Adhesion was tested after 15 minutes using a spring scale per the 3M Wall Adhesion Test and passed at 800-1000 g/in.

## 3M™ Wall Adhesion Test

This test is designed to show initial adhesion capability of the Product you plan to use when the wall is cleaned according to 3M's recommendations and the it is applied to a smooth indoor wall surface.

Product applied to contaminated walls, or walls that exhibit visible signs of peeling, lifting, bubbling, or dampness are likely to fail. The results of the 3M Wall Adhesion Tests will help determine if the wall is prepped accurately for 3M DI-NOC installation.

Paint that has not fully cured may continue to outgas. Product that is applied over paint that has not fully cured may develop air bubbles over time.

**NOTE:** Testing adhesion on smooth walls takes less than 30 minutes.

### Before Doing the Test

1. Review and use the Worksheet for Walls on page 14.
2. Understand the types of wall surfaces and the variables that influence adhesion. For example, the paint or wall finish used on different walls may look the same but have different paint chemistry or cure times that affect adhesion.
3. Test adhesion on each wall that will receive the Product.
4. For each Product being considered, test THREE samples of the same Product on the same wall and compare the results.
5. 3M is not responsible for the results of the Product installation.

### Test Considerations

- Perform the adhesion tests in an inconspicuous area of the same wall on which you will be applying the actual job.
- If you will be applying the Product to more than one wall, perform the tests on each wall. While one wall may look the same as another in color and gloss, they may have been painted at different times and with different paint, which can affect the adhesion test results. Performing the test on a different wall/paint than will be used in the job will not give you the adhesion values and information you need to make a good evaluation.

### Limitations of Test and Cleaning Method

This test cannot detect problems with pre-existing variations in the wall or poor paint-to-wall bond. Such problems may result in poor adhesion as well as wall damage upon attempted removal of the Product.

### Tools and Supplies

- Spring scale
  - 0-1000 grams, part number 8003-MN
  - 0-2000 grams, part number 8004-MA
- Isopropyl alcohol
- Lint free clothes
- 3M™ Rivet Brush RBA-1
- Copy or cut out the 3M Measured Reference Guide for Adhesion Test on page 17. This will be used during the test to help you gage how fast to pull the Product strip.
- Hole punch
- Strips of each Product you plan to test

### Prepare the Product Test Strips

1. Cut three, 1 inch by 10 inch (2.5 cm x 25 cm) strips of each Product you plan to test on a given wall.
2. Note the Product name or number on each test strip and on the Worksheet for Walls.
3. Remove about 2 inches (5 cm) of liner and fold over the Product, adhesive to adhesive, to make a tab.
4. Punch a hole in the tab.

### Adhesion Test Procedure

1. Clean the area of the wall you will be testing using the 3M™ Enhanced Adhesion Cleaning Method.
2. Use your thumb to initially adhere the Product strip (punched hole at the top) to the cleaned wall.

#### **i** IMPORTANT NOTE

Test THREE strips of each Product being evaluated on the same wall. After all three strips are tested, compare the results.

3. Working in the long direction of the test strip and using the RBA-1 rivet brush, use firm pressure and a circular motion to go over each strip three times to firmly adhere it to the wall. See Figure 2.
4. Tape the Measured Reference Guide next to the Product strip you are testing. See Figure 4.
5. Wait a full 15 minutes before proceeding with the test to allow some adhesion to build.
6. Make sure the scale is zeroed out per the scale manufacturer's recommendations. See Figure 3.
7. After 15 minutes, slide the scale's S hook through the punched hole in the Product strip.
8. Hold the scale in your palm, keeping it as straight as possible but without any portion of the scale or your hand contacting the wall during the test.
9. Pull the scale downward at a steady rate of about 1 inch (2.5 cm) in 5 seconds, using the Measured Reference Guide lines as a guide. Once you have started pulling, DO NOT STOP until the Product strip is fully released from the wall.



**Figure 1.** Preparing the test strips



**Figure 2.** Adhering Product strips



**Figure 3.** Zeroing the scale

**Adhesion Test Procedure (continued)**

**i IMPORTANT NOTE**

The Measured Reference Guide in Figure 4 is included at the end of this guide.

10. As you pull down on the scale:
  - a. Observe the release characteristics of the Product and compare to Table B.
  - b. Note and record the value in grams/inch that register on the scale using the Worksheet for Walls on page 14.
11. Repeat steps 2 to 10 for each of the same test strips. Record each of the three test values and average them together.

**Test Evaluation - Smooth Walls Only**

1. Averaging test results
 

If two or three out of three strips of the same Product perform the same way, use those characteristics to judge the suitability of that particular Product for that wall.
2. Use Table B to interpret scale values.

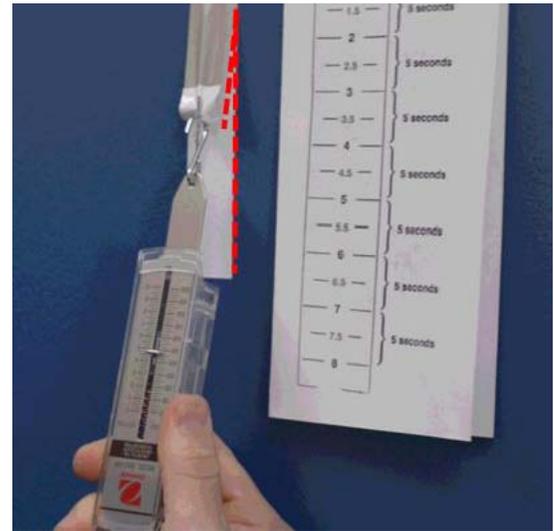
**NOTE:** 454 grams equal 1 pound.

**Table B. Adhesion Test Recommendations**

Scale Value	Adhesion Characteristics	Recommendation
Less than 800 grams/inch	Removes very easily; little or no resistance	Unacceptable adhesion; additional cleaning may be necessary
800-1000 grams/inch	Smooth, consistent release; no jerkiness but more difficult to release	Acceptable adhesion; may be removable with heat/chemicals; removal may cause wall damage
Greater than 1000 grams/inch	Smooth consistent release; no jerkiness, but substantial resistance to releasing	Excellent adhesion; removal will cause damage

- Unsatisfactory test results
  - a. Test strip removes unevenly.
    - Inconsistent or low adhesion value; due to high and low spots in the surface texture, the adhesive does not make full contact.
    - Cold wall and air temperature, which doesn't allow adhesive to flow or make full contact.
  - b. Test strip pulls paint off wall.

If any paint is pulled off with the test strip, the paint is not sufficiently bonded to the wall and the Product should not be applied until the problem is corrected, a new paint is fully cured, and the 3M™ Wall Adhesion Test on page 5 is performed again with satisfactory results.



**Figure 4.** Adhesion test

## 3M™ Enhanced Adhesion Cleaning Method

Using the 3M Enhanced Adhesion Cleaning Method ensures that the application surface is ready to receive and hold the Product. The installer must evaluate each application surface to determine cleaning requirements prior to Product installation.

### WARNING

For your safety, always wear protective eye wear and disposable gloves when cleaning application surfaces.

1. Ensure that any needed repairs to the application surface are completed prior to performing the 3M Enhanced Adhesion Cleaning Method.
2. Clean stubborn grease and grime using an appropriate, commercially available cleaning product.
3. Prepare a cleaning solution with 70% Isopropyl Alcohol (IPA) and 30% water in a spray bottle.
4. Soak a clean, lint-free cloth with the IPA cleaning solution until it is dripping wet. See Figure 5.
5. Clean the entire application surface with overlapping strokes. You may notice some migrated paint particles on the cloth. See Figure 6.

### IMPORTANT NOTE

Change cleaning cloths often to avoid redepositing contaminants on another part of the application surface. Soak each new cloth with the IPA cleaning solution.

6. Thoroughly soak another clean, lint-free cloth with the IPA cleaning solution and wash the application surface again.
7. The alcohol in the cleaning solution will lower the surface temperature of the application surface as much as 10 degrees F - a noticeable difference. When the alcohol has completely flashed off, which takes about 10 minutes, the application surface will return to its normal temperature. You can use an IR gun (see Figure 7) to accurately measure the temperature before cleaning and immediately after cleaning, or simply touch the back of your hand to the cleaned area. When it no longer feels cool, it is dry and you can proceed with the adhesion test, or if you are ready, with the Product installation.

### Estimated Time for Cleaning

About 30 minutes is required to clean a 125 sq. ft. (11.6 square meters) area, which is approximately an 8 ft. x 16 ft. (2.4 m x 4.9 m) wall. Keep this in mind as you estimate your next job.



**Figure 5.** Soaking a lint free cloth



**Figure 6.** Removing paint particles



Before Testing

Immediately After Testing

**Figure 7.** Testing wall temperature

## Surface and Work Area Preparation

Use the following steps to prepare the application surface for Product application. An experienced installer's techniques may vary.

### Inspect Application Surfaces

Before installation, contact the property manager or the general contractor of the installation site to ensure that the application surface is ready for installation.

#### CAUTION

It is critical that the paint, sealer and/or primer coatings be allowed to fully cure for the entire time period stated by the manufacturer.

### Repair Damaged Application Surfaces

Repair any damage such as holes, loose wallboard joints, and any chipped or peeling material.

1. Fill any holes or gouges with Bondo® or non-water-based filler. Assure that any filler is fully cured before proceeding.
2. Smooth by sanding and reclean the application surface with IPA.
3. If the surface is porous, seal the application surface with a minimum 2 coats of a primer or sealer. Follow the manufacturer's recommendations for surface preparation. Allow the sealer or primer to fully cure before Product installation.

### Clean the Application Surface

Wipe down the application surface with a lint-free cloth and 70/30 IPA cleaning solution, or use the 3M™ Enhanced Adhesion Cleaning Method on page 8 if needed.

## Installation Procedure

Recommended application temperature: 60°F - 100°F (16°C - 38°C)

These are the general Product application steps. An experienced installer's techniques may vary.

1. Measure the application surface to be covered.
2. Cut the Product to size with a minimum 1/2 in. extra on all sides for trimming.
3. Put a set line in the liner 6 - 8 inches from the top.
4. Align the Product with the application surface and set the set line.
5. Pull out the liner approximately 8 inches.
6. Starting in the center, use the squeegee to adhere the Product to the application surface using overlapping strokes. Repeat steps 5 and 6 until the panel is completely applied.
7. Re-squeegee entire panel for ultimate adhesion.

### Seams in WH-111

Seams in 3M DI-NOC Whiteboard Finish WH-111 tend to accumulate marker residue. Make seams as tight as possible when installing WH-111.

### Create a Double Cut

This technique is not recommended for 3-dimensional or curved surfaces, for which a standard overlap is recommended.

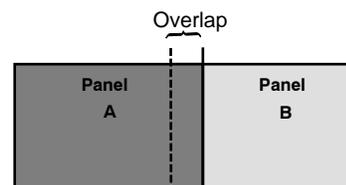
**NOTE:** If the same Product will be used on each side of the double cut, be sure to use Product from the same roll or lot.

1. Ensure that Product design and/or "grain" of an embossed pattern always runs in the same direction or the application may have obvious shifts in color, gloss and/or design.

#### **i** IMPORTANT NOTE

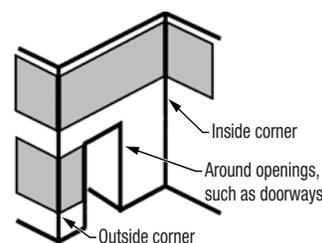
Do not use double cut seaming with Products that have a **W** designation in the 3M DI-NOC Architectural Finishes Product Catalog.

2. On the Product side where the seam will be, leave 1 inch (2.5 cm) of Product liner on the side of Panel A. See Figure 8.
3. Apply Panel A.
4. Apply Panel B overlapping Panel A by 1 inch (2.5 cm).
5. Remove the Panel B liner to adhere to panel A. The transition should be flat against application surface with no air pocket underneath.
6. Use a straight edge to cut through the overlap's center.
7. Remove the excess Product and then the Product liner.
8. Starting in the center of the seam, use your fingernail or appropriate tool to bring the two edges of the seam together and tight to the wall. There should be no overlap of the edges at this point. Complete a one inch section of the seam before going to the next step.
9. Starting in the middle of the one inch section, firmly squeegee the seam together with a rocking motion. Work the squeegee along the seam, keeping it tight to the film.



Cut through both layers of Product.

**Figure 8.** Creating a double cut



**Figure 9.** Re-squeegee to ensure good adhesion

### Trimming

After application, re-squeegee all Product edges to help ensure good edge adhesion before trimming. See Figure 9.

Outside corners should be cut at a 45 degree angle. Inside corners should have an overlap of 1/8 inch.

### Use Heat to Conform Product Around Three Dimensional Surfaces

You can improve many Products' conformability by heating the surface of the Product until it is pliable enough to form around a three dimensional surface.

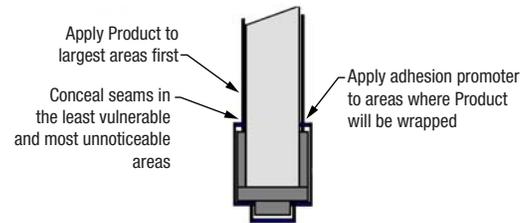
**CAUTION:** Overheating can result in damage to Product. Practice this technique on a test piece before attempting on finished Product.

### Compound Curved Surfaces

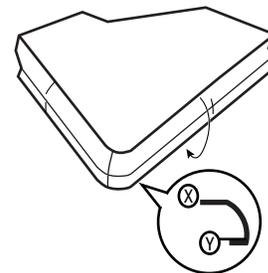
**NOTE:** 3M recommends testing and approving application to compound curved surfaces.

1. Ensure that you have enough Product to wrap around the edges to the surface's bottom. Allow a minimum of 3 inches around the entire panel.
2. Apply adhesion promoter to the edges, starting about 1/2 inch from where the shape changes (see Reference X) and extending to the back side of the surface for at least 1/2 inch (see Reference Y). Allow the adhesion promoter to dry to improve adhesion and minimize shrinkage. See Figure 11.
3. Apply the Product to the flat surface before conforming the corners and then along the straight edges in this sequence: A, then B, C and D, then E and F, etc. See Figure 12.
4. Neatly trim excess Product on the surface's back side.

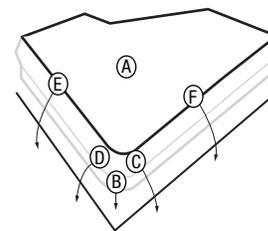
Products identified in the 3M DI-NOC Architectural Finishes Product Catalog with the **!** symbol, and also noted in the 3M DI-NOC Technical Data Sheet, cannot be wrapped around three dimensional surfaces. Please note that excessive stretching and heat may deform Product's design and texture.



**Figure 10.** Re-squeegee to ensure good adhesion



**Figure 11.** Apply adhesion promoter between X and Y



**Figure 12.** Apply the Product on the corner

## Cleaning and Maintenance

- Use mild detergent and water. Avoid using strong solvents or detergents that are either highly alkaline (pH>11) or acidic (pH<3).
- Use a soft cloth or sponge without abrasives.

Type of Surface Damage	Appearance of Surface Damage	Method to Reduce Visibility
<b>Mar</b>	Dragging an item, such as a colored briefcase, across the film and leaving a deposit of color on the surface.	Rub with a soft cloth and warm soapy water to remove the mar.
<b>Indentation</b>	Pressing into the film surface without breaking the surface, such as pressure from a chair	Carefully heat the indentation with a heat gun, which allows the film surface to rebound and reduce visibility.
<b>Scratch</b>	Breaking the surface layer of film leaving a slightly jagged whitish mark on the surface, such as by dragging a sharp rivet from a purse.	Rub with a surface restorer such as 3M™ Marine Vinyl Cleaner & Restorer to reduce the visibility of scratches.
<b>Gouge</b>	Breaking through the entire film, such as severe impact from sharp chairs or carts.	Repair by cutting out the damaged film and replacing that piece with the same pattern of film or remove and replace an entire panel of film.

## Removal

Although Products may be removed, application techniques and adhesion promoters increase adhesion, so clean removal without substantial damage is unlikely. The following removal techniques can be tried, but effort and results will vary:

1. Make Product cuts about 4 inches (10 cm) apart, assuring no damage to the application surface.
2. Optionally, use a heat gun set to 150° to 200°F (66° to 93°C) to soften Product adhesive.
3. Immediately pull the heated section of Product down at about a 180 degree angle.
4. Heat more Product and continue pulling.

## Health and Safety

### CAUTION

When handling any chemical products, read the manufacturers' container labels and the Safety Data Sheets (SDS) for important health, safety and environmental information. To obtain SDS sheets for 3M products go to [3M.com/SDS](http://3M.com/SDS), or by mail or in case of an emergency, call 1-800-364-3577 or 1-651-737-6501.

When using any equipment, always follow the manufacturers' instructions for safe operation.

### **CAUTION: Risk of Glass Breakage Due to Thermal Expansion**

When applying the Product to glass surfaces, please consider that surfaces exposed to sunlight will absorb heat. A glass surface covered by a film with high opacity or dark-colored ink, including films with small areas of high opacity or dark-colored ink, will absorb more heat. Heat absorption can create thermal stress that results in glass breakage, or thermal cracking. This can cause personal injury and property damage. 3M specifically does not recommend using a film with high opacity or dark-colored ink on glass surfaces with significant exposure to sunlight. Also, note that the adhesive side of the film will be visible on the non-application side of the glass unless Product is applied to both sides of the glass.

## Technical Information

Technical information and data, recommendations, and other statements provided by 3M are based on information, tests, or experience which 3M believes to be reliable, but the accuracy or completeness of such information is not guaranteed. Such technical information and data are intended for persons with knowledge and technical skills sufficient to assess and apply their own informed judgment to the information. The typical values shown should not be used for the purpose of specification limits. If you have questions about this Product, contact the Technical Service helpline at 1-888-650-3497.

**For more information or to order samples, please visit [3M.com/DI-NOC](http://3M.com/DI-NOC).**

## Troubleshooting

Every effort should be made to ensure that walls are in good condition before applying the Product. This generally reduces installation time while improving appearance, and if applicable, removal characteristics.

- Review all troubleshooting options before deciding on a course of action.
- Every wall paint must be fully cured for the full amount of time recommended by the paint manufacturer.
- Follow the 3M™ Wall Adhesion Test for every Product you intend to use and on each different wall included in the installation.
- Every installation wall must be cleaned with the 3M™ Enhanced Adhesion Cleaning Method before doing the 3M Wall Adhesion Test and before doing the full installation.

Problem	What To Look For	Recommended Solutions
<b>Installation Problems - Smooth Walls</b>		
The Product does not adhere well or falls off wall.	The Product was not tested on the wall prior to installation.	Always perform the 3M Wall Adhesion Test for each Product and on each application surface before committing to the complete installation.
	Low VOC paint was used on the wall.	
	Wall repairs were not properly sealed, primed, painted or cured.	
	Walls were not washed with 70% isopropyl alcohol and 30% water.	Always follow the 3M Enhanced Adhesion Cleaning Method in this guide to increase adhesion.
	The texture of the application surface is not well suited to the Product being used.	If the wall texture is other than just smooth, contact the general contractor. <ul style="list-style-type: none"> <li>• Some textured paint additives create too much texture for Products that are intended for smooth walls.</li> <li>• A wall with too little texture may prevent proper air bleed during installation, trapping air under the film. In this case, use the 3M™ Air Release Tool 391X to make a small hole in the film to allow the air to escape. Resqueegee as necessary.</li> </ul>
Application Surface temperature too low.	Refer to the Installation Procedure on page 10 for the proper installation temperature range.	
<b>Post-Installation Problems - All Walls</b>		
Edges of the Product lifting from application surface.	Poor installation technique, or wrong tools.	Review this Bulletin and make sure you are using the right Product, right tools, and right techniques for your walls. Lots of practice is critical for consistent success.
Large portion of the Product lifts or falls off.	Poor initial bond of paint to wall.	Perform the 3M Wall Adhesion Test. Perform the 3M Enhanced Adhesion Cleaning Method if the test results are less than 800 grams.
	Wall not properly cleaned.	Follow the procedure Surface and Work Area Preparation on page 9.
	Under-cured paint.	Be sure the paint is properly applied and fully cured per the manufacturer's specifications before applying the Product.

### Worksheet for Walls

Make copies of this page as needed.

Installation Site Information
Business Name
Address
City/State/Zip
Customer Information
Contact Name
Business Name
Address
City/State/Zip
Area Code/Phone

Adhesion Test Results		
Test Strip	Test Strip Product Number	Adhesion Value
3M DI-NOC sample 1		
3M DI-NOC sample 2		
3M DI-NOC sample 3		

Installation Site Information
Business Name
Address
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Customer Information
Contact Name
Business Name
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Adhesion Test Results		
Test Strip	Test Strip Product Number	Adhesion Value
3M DI-NOC sample 1		
3M DI-NOC sample 2		
3M DI-NOC sample 3		

## WARRANTY

### Product

3M DI-NOC, 3M DI-NOC E-Series Architectural Finishes and 3M DI-NOC Whiteboard Film WH-111 (the "Product").

### 3M Basic Product Warranty

The Product(s) specified in this document are warranted to be free of defects in materials and manufacture ("3M Basic Product Warranty") at the time of shipment ("Warranty Period") by 3M or its authorized distributor.

### Limited Warranty

1. 3M warrants that the Product will be free from defect in materials and manufacture ("Limited Warranty") for three years from the date of shipment by 3M or its authorized distributor ("Warranty Period"). EXCEPT TO THE EXTENT PROHIBITED BY APPLICABLE LAW, THE 3M WARRANTY IS MADE IN LIEU OF ALL OTHER WARRANTIES, RIGHTS OR CONDITIONS, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY, SATISFACTORY QUALITY, FITNESS FOR A PARTICULAR PURPOSE AND THOSE ARISING FROM A COURSE OF DEALING, CUSTOM OR USAGE OF TRADE. THE BUYER IS RESPONSIBLE FOR DETERMINING IF A PRODUCT IS SUITABLE FOR ITS PARTICULAR PURPOSE AND APPLICATION METHODS.
2. For a buyer's convenience, 3M may provide engineering or technical information, recommendations, installation instructions or guides, and other information or materials relating to a Product ("Other Product Information"), but 3M makes only the 3M Warranty and does not warrant any Other Product Information.
3. 3M has no obligation under the 3M Warranty as to Product that has been: (a) modified, altered or processed in any manner; (b) stored, applied, installed, or used in a manner other than that 3M recommends in this document and in all Other Product Information; (c) damaged through contact with a person or thing, misuse, accident, neglect, or other action by anyone other than 3M; (d) improperly installed, including, without limitation, installation after the expiration the Product's shelf life or installation without proper surface preparation, or (e) exposed to excessive heat, humidity, dirt or UV light.
4. 3M must receive any 3M Warranty claim in writing no later than 10 business days after (a) the end of the Warranty Period or (b) the discovery of the 3M Warranty claim, whichever is earlier.

### Limited Remedy

IF ANY PRODUCT IS PROVEN NOT TO HAVE MET THE 3M WARRANTY DURING THE WARRANTY PERIOD, THEN THE BUYER'S EXCLUSIVE REMEDY, AND 3M'S SOLE OBLIGATION, WILL BE, AT 3M'S OPTION, TO REPLACE THE NONCONFORMING PRODUCT OR TO REFUND THE NONCONFORMING PRODUCT'S PURCHASE PRICE.

### Limitation of Liability

3M WILL NOT UNDER ANY CIRCUMSTANCES BE LIABLE TO A BUYER FOR DIRECT (other than the Limited Remedy stated above), SPECIAL, INCIDENTAL, INDIRECT OR CONSEQUENTIAL DAMAGES (INCLUDING, WITHOUT LIMITATION, LOSS OF PROFITS) IN ANY WAY RELATED TO THE PRODUCT, THIS DOCUMENT OR OTHER PRODUCT INFORMATION, REGARDLESS OF THE LEGAL OR EQUITABLE THEORY ON WHICH SUCH DAMAGES ARE SOUGHT.

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**3M Measured Reference Guide for Adhesion Test**

