

Introduction

The purpose of this installation guide is to establish a 3M-recommended procedure for installing 3M DI-NOC Architectural Finishes (the “Product”) on basic interior doors. Refer to the *3M™ DI-NOC™ Installation Guide* for additional information.

Application Surfaces

DI-NOC finishes can be applied to many types of application surfaces. Please refer to “Adhesion Compatibility with Application Surfaces” in the [3M™ DI-NOC Installation Guide](#) and “Considerations for Design Selection” in the [3M™ DI-NOC™ Technical Data Sheet](#) for further details.

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.

i IMPORTANT NOTE

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.

i IMPORTANT NOTE

Before covering application surfaces susceptible to swelling, such as wood doors, wood core doors, or gypsum board, **ensure that the environmental conditions, such as temperature and humidity, are stable.** Wide changes in humidity or temperature can affect the application surface, which may cause wrinkles or bubbles in the applied Product. Doors with pre-existing swelling could cause the DI-NOC to wrinkle around fastened hardware due to expansion and contraction of the door surface.



Figure 1. Before installing DI-NOC, check for existing swelling of doors caused by large changes in humidity and temperature. As shown above, a straight edge can be used to check the door face.

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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.

3M™ Comply™ Adhesive Technology: The adhesive technology used on the backside of the Product, which has air bleeding channels.

Below are some terms that describe the application 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.
- **Sealer:** A coating applied to the substrate to seal a porous surface.

Adhesion Promoter (recommended for overlaps, edges and ends): Adhesion promoter increases the adhesion between the substrate and the product. Also helps minimize shrinkage of the applied product.

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
- An appropriate container for holding discarded cutting blades or tools
- Liner cutting tool (i.e. Seam Buster tool)
- Steel ruler with nick-free edges
- Scotch™ Masking Tape
- 3M™ Air Release Tool 391X
- Measuring tape
- Adhesion promoter and brush
- Industrial heat gun capable of attaining and sustaining 100 °F -500 °F (38 °C - 260 °C) or equivalent
- Clean, lint-free cloths
- Isopropyl alcohol (70% alcohol, 30% water)
- Cordless drill or screwdriver for door hardware
- Putty knife
- Bondo® or non-water-based filler (if needed)
- 180-220 grit sand paper
- Sanding block

Installation Procedure

This section contains procedures needed to install the Product on interior doors. An experienced installer's techniques may vary.

NOTE: When refurbishing rooms, the application of the film should be the last step. All dirt and debris should be cleaned from the area to ensure a clean work area. Also, all of the furniture should be back in the room prior to the installation to avoid damage to the door.

Lighting: The application area should be well lit to expose any surface or application defects, and allow the installer to correct them. Use portable lighting if necessary.

Cleanliness: Ensure the application surface is as clean and dust free as possible prior to application.

Recommended application temperature: 54 °F to 100 °F (12 °C to 38 °C)

Surface Preparation

It is very important that the substrate is prepared correctly prior to application of DI-NOC. A very smooth application surface allows the best adhesion and ensures that no surface texture shows through the film. Although different substrates require different preparation processes, the basic surface preparation procedure is as follows:

1. Remove all hardware except hinges from the door (**Figure 2A**).
2. Clean the application surfaces of the door using a 70% IPA and 30% water solution.
3. If required, repair any damage to the door using Bondo®. Once fully cured, sand the repaired area until perfectly smooth, then repeat Step 2.
4. Starting with the hinge side of the door and the two edges, apply adhesion promoter to ALL the edges of the door and around any other elements, including window frames, that could not be removed (**Figure 2B and Figure 2C**).

NOTE: Typically, adhesion promoter should only be used on edges, corners and seams, not on the entire surface of the door.

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NOTE: Refer to the product documentation for the specific adhesion promoter you are using for drying times and other information.



A. Removing hardware



B. Applying adhesion promoter



C. Applying adhesion promoter

Figure 2. Removing hardware and applying adhesion promoter

Terminology:

Vertical Hinge: A single vertical cut in the liner of a DI-NOC sheet that allows the installer to apply the main section of the film before cutting around an object. In this case, the three protruding door hinges. This should be the first cut made into the liner. Use a liner cutter (seam buster) to achieve this. The cut should be clean and straight. If the cut starts to fray the liner, stop immediately, pull out the liner cutter and change the blade.

Zipper Setline: Two horizontal cuts in the liner of the DI-NOC sheet about 1-1/2 in. apart. The cuts should be located parallel to the top of the sheet and about 6 - 8 in. down. The zipper setline allows the installer to align the DI-NOC sheet on the door with no adhesive exposed, preventing premature sticking. Once the sheet is aligned, let the top of the sheet fall back, pull out the zipper and set the adhesive, making sure the sheet stays flat against the door. Double check the alignment before continuing the installation.

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Cutting the Film

1. Measure the door height and width (see **Figure 3A**) (including the two edges) adding an extra inch in each direction for trimming.
2. Cut the film to size and prep the back of the liner. Use a liner cutter to cut a vertical hinge in the film about 5 - 6 in. wide. This will be applied on the hinge side of the door (see **Figure 3B**).
3. Determine the best setline to use and cut it into the liner making sure not to cut into the vertical hinge (see **Figure 3C**).

CAUTION

Sharp blades are used during the installation process. Use caution when cutting the film to avoid injury.

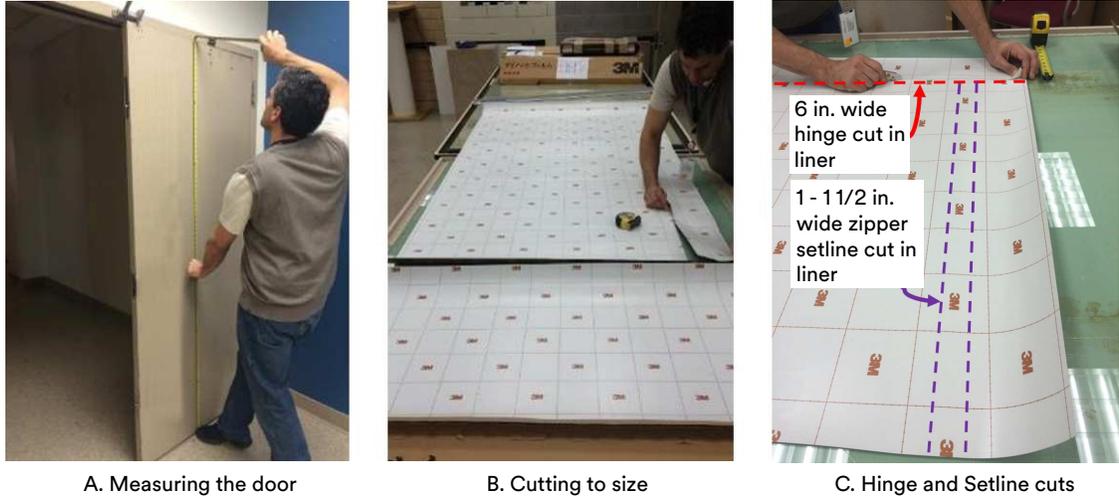


Figure 3. Measuring and cutting

Applying the Film

1. Align the DI-NOC panel on the door (see **Figure 4A**) making sure the pattern is straight and will cover the whole door when wrapped around the edges.
2. Remove the zipper and affix the setline, ensuring that the alignment is correct and that the film flat against the door and not sagging down on the sides (see **Figure 4B**).
3. Finish installing the DI-NOC above the setline (see **Figure 4C**).



Figure 4. Aligning the DI-NOC panel and affixing the setline

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Applying the Film (continued)

- Continue installing the rest of the film down to the bottom of the door (see **Figure 5**).



Figure 5. Continue installing the film

- Bring the DI-NOC around the latch side of the door (see **Figure 6A**), making sure to keep it tight around the corner with no bubbling around the edge. Trim the excess off the door using the razor knife held at a 45 degree angle (see **Figure 6B**). Trim around any latch plates or hardware on the edge of the door (see **Figure 6C**).



A. Applying DI-NOC on the side of the door

B. Trimming on corners

C. Trimming around latch plate

Figure 6. Applying and trimming DI-NOC

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Applying the Film (continued)

6. On the hinge side of the door, with the liner still in place on the vertical hinge, use a squeegee to crease the DI-NOC up tight to each door hinge (see **Figure 7**). Use the razor knife to trim out each section of DI-NOC around the hinge (see **Figure 8**). Make a cut from the top point of the hinge to the edge of the DI-NOC cutting down towards the hinge. Next, make another cut from the bottom point of the hinge to the edge of the DI-NOC up towards the hinge. Using a putty knife, trim the section of DI-NOC against the length of the hinge. Do this for all the door hinges.



Figure 7. Creasing the DI-NOC tight to the hinges

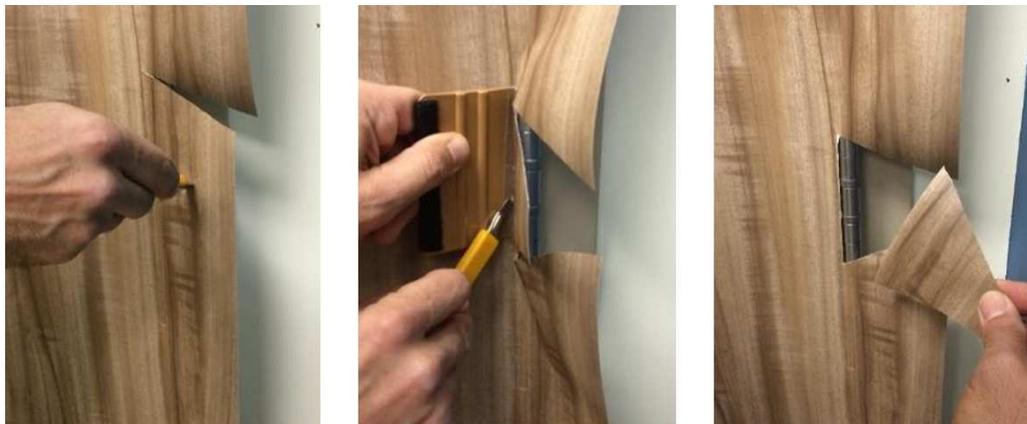


Figure 8. Trimming around a hinge

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Applying the Film (continued)

7. Remove the remainder of the liner and squeegee the rest of the film to the door surface (see **Figure 9**). Make sure the excess DI-NOC is not sticking to the door frame. Open the door all the way and pull the DI-NOC through the gap between the door and the frame.



Figure 9. Removing liner and squeegeeing film

8. Install each section between the hinges, making sure the film is applied tightly around the edge of the door (see **Figure 10**).

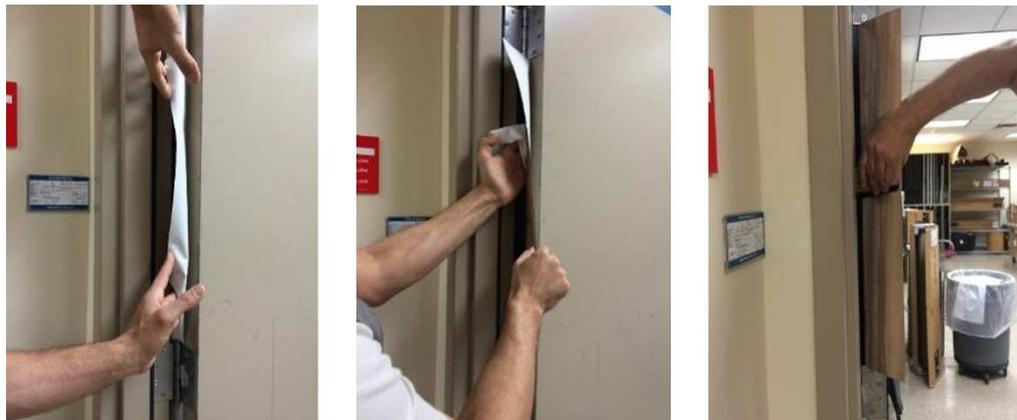


Figure 10. Installing sections

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- Trim off the excess DI-NOC at the top and bottom of each hinge and at a 45 degree angle at the edge of the door (see **Figure 11A** and **Figure 11B**).



A. Trimming around hinges



B. Trimming at the edge of the door



C. Sanding the edges of the door

Figure 11. Trimming and sanding edges

NOTE: Be sure to cut out around any fire rating labels or badges on the inside edge of the door (i.e. UL or Warnock Hershey). It is unlawful to remove or cover over this information.

- To prepare the first panel for the second panel to be overlapped, first use a 220 grit sand paper to sand the two edges of the first panel that is already adhered to the door (see **Figure 11C**). This is where the DI-NOC will be overlapped. Clean with Isopropyl alcohol and apply adhesion promoter on both edges where the DI-NOC will overlap (see **Figure 12A**).
- Measure the second side of the door, height and width (including the two edges) adding an extra inch in each direction or trimming, then cut the DI-NOC appropriately (see **Figure 12B**). Determine the best setline to use and cut it into the liner. There is no need for the 5 - 6 in. hinge on this sheet.



A. Apply adhesion promoter



B. Cutting in the setline



C. Applying DI-NOC to the second side of the door

Figure 12. Applying DI-NOC to the second side of the door

- Repeat Step 1 - Step 9 to complete the opposite side of the door as required (see **Figure 12C**).

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Trimming doors with sharp 90 degree edges (i.e. Wood, Laminate, etc.):

13. Using a sanding block with 220 grit sand paper, hold the sanding block at a 45 degree angle and sand directly on the sharp corner until you get through the top layer of DI-NOC (see **Figure 13**). Peel off the excess strip and lightly sand the corner to achieve a clean corner edge.



Figure 13. Sanding the film to remove excess film from a sharp corner

Trimming doors with rounded edges (i.e. metal doors):

14. If the edge of the door is rounded on the outside corner, the sanded seam technique will not work well. Use a single cut technique with a straight edge and a razor knife (see **Figure 14**) (do NOT cut the layer of DI-NOC underneath). Trim the DI-NOC back from the edge about 1/8" to 1/4". Where possible, line up the cut with existing hardware on the edge of the door. Clean off any excess primer if necessary.



Figure 14. Trimming a rounded corner

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15. Re-squeegee the entire door and remove any bubbles as necessary.



Figure 15. Re-squeegee the entire door

16. Once both panels are on the door and complete, make sure to sand the top and bottom edges of the door to prevent pick points.
17. Reinstall hardware as required. Clean the door per the instructions in the Cleaning and Maintenance section.



Figure 16. Completed application

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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
Mar	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.
Indentation	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.
Scratch	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.
Gouge	Breaking through the entire film, such as severe impact from sharp chairs or carts. The repair of the film is subject to the integrity of the substrate material.	Patch 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. Refer to 3M.com/AMD for instructional videos to repair the film.

Removal

Although Products may be removed, application techniques and adhesion promoters increase adhesion. Depending on the application surface, removal without possible damage may be unlikely.

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 °F - 200 °F (66 °C - 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.

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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](https://www.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.

WARNING

To reduce the risks of personal injury and/or property damage associated with glass breakage:

A glass surface covered by a film with areas of high opacity or dark-colored ink will absorb more heat than other glass surfaces when exposed to sunlight. Heat absorption can create thermal expansion that could result in glass breakage or cracking. Do not use a film with areas of high opacity or dark-colored ink on glass surfaces with significant exposure to sunlight.

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.

Warranty

Please refer to the applicable product's technical data sheet for warranty information.

Commercial Solutions

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