

### 3M Vikuiti™ Rear Projection Film

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### A. Introduction

#### Safety Information

Please read, understand, and follow all safety information contained in these instructions prior to the installation and use of the 3M Vikuiti™ Rear Projection Film. Retain these instructions for future reference.

**! Caution !** To reduce the risk of glass breakage which if not avoided may cause minor to moderate injury: Do not apply the screen to glass that is exposed to direct sunlight.

#### Intended Use

3M Vikuiti™ Rear Projection Film is a premium removable projection film intended for one time application to the back, or projector side of a clear surface, and projected on from behind for point of purchase or tradeshow digital signage. This product, when applied properly, is designed, manufactured and tested to be a high quality projection screen intended for the presentation of video program material in commercial application display signage in a dry indoor environment.

3M Vikuiti™ Rear Projection Film should be professionally applied by experienced Film applicators. Each customer must determine if this product meets the specific needs of their particular application.

#### Description

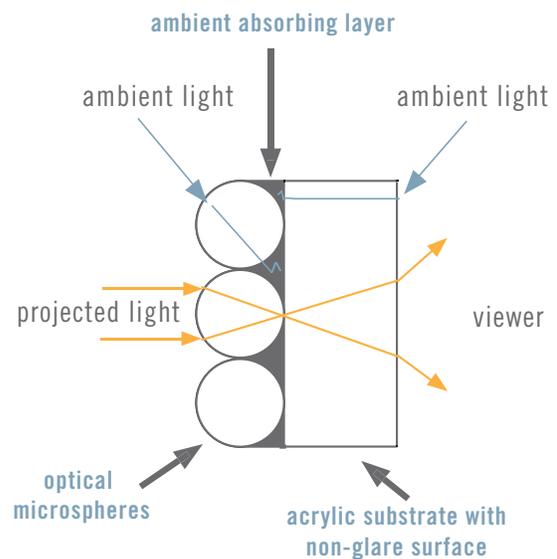
This instruction sheet details the general wet (water) application method for applying 3M Vikuiti™ Rear Projection Film to a variety of flat surfaces.

Note: The product and application technique described in this bulletin is not recommended for any vehicle applications or for compound-curved, textured, rough or ribbed surfaces.

#### Product

3M Vikuiti™ Rear Projection Film:  
This product is a removable rear projection Film that is adhered to a clear surface such as a window or a plastic sheet. This Film is designed and manufactured to be a high quality rear projection screen.

#### How it works



### Product Characteristics

**Film:** optical and adhesive layers plus liner

**Color:** black

**Thickness:** .3mm w/o liner, .5mm with liner

**Weight:** approx 38 grams/sqft (.4kg/sqM)  
(without liner)

**Adhesive:** positionable, pressure activated, removable, not reusable.

**Liner type:** polyethylene coated paper, suitable for kiss cutting

**Applied shrinkage:** up to .8mm typical

**Removal:** removable without heat or chemicals with little or no residue

## B. Setup and Installation

### Compatible Surfaces

- Glass
- Acrylic
- Polycarbonate

### Tools and Materials for Installers

- 3M™ Applicator PA-1 (Blue or Gold)  
SA-1 low friction sleeve
- Scotch™ Blue Masking Tape 2090
- Spray bottle with soapy, clean water
- Large, high-quality window squeegee recommended for large graphics.

### Key Application Tips for Installers

Clean work area. Make sure the work surface and surrounding area are properly cleaned to avoid contaminating the film.

### Temperature

Apply when the air and application surface temperature is at least 16 °C (60 °F). If applying the Film at or near the minimum application temperature, the adhesive bond will develop more slowly than in higher temperatures. Thoroughly re-squeegee the Film as directed in the application procedure.

### Squeegee tools and techniques

Use PA-1 (blue or gold) or similar plastic applicator that is smooth and not nicked. A large window squeegee may be used to remove the water. However, an applicator PA-1 with a low friction sleeve SA-1 is recommended to be used with firm, overlapping strokes. Re-squeegee the Film after 24 hours.

### Cutting Shapes

The paper liner/adhesive side is the viewer side; the black Film side is the projector side. Shapes must be cut reversed on the black Film side for correct viewing.

To remove an application tape, if used, always remove it at an angle as close as possible to 180 degrees and immediately re-squeegee the Film. For best performance, avoid applying the Film on a surface that will be in direct sunlight. Glare from sunlight will make the image hard to read and will heat the black Film increasing shrinkage and/or edge lift.

### Apply the Film

**Note: Keep the liner dry until ready to be removed. Film is applied to the 'back' or projector side of the glass or acrylic.**

1. If possible, lay the application surface substrate face up on a clean surface.
2. Spray the application surface with a mixture of soapy water (we recommend a mixture of 1 tablespoon to 1 liter of tap water).
3. Clean the Film with a clean, lint-free cloth.
4. Lay the Film, liner side up, in a dry location near the wetted surface.
5. Lift one corner of the liner while spraying the water onto the exposed adhesive. See Fig 1.

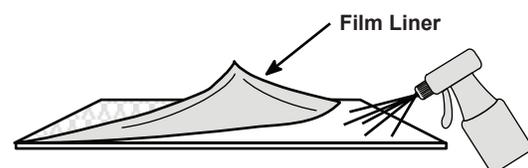
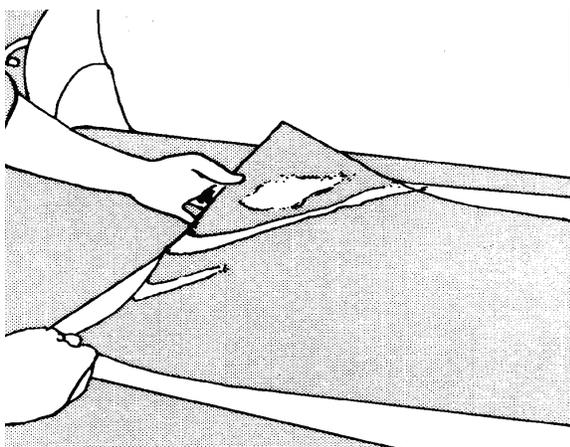


Figure 1

### Figure 1. Lift Corner; Spray Water

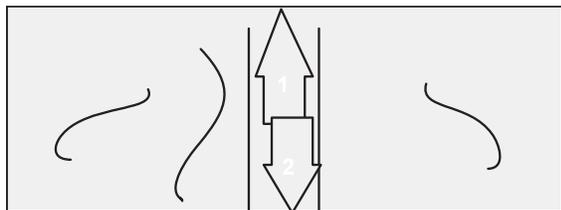
**NOTE:** Depending upon the size of the Film, another person may be needed to help complete the next steps.

6. Continue to remove the liner and spray the soapy water. By the time the liner is completely removed, the entire adhesive surface should be wet. Spray on more soapy water, if necessary.
7. Lift and turn over the Film, adhesive side toward the wetted application surface and align any registration marks. See Figure 2.



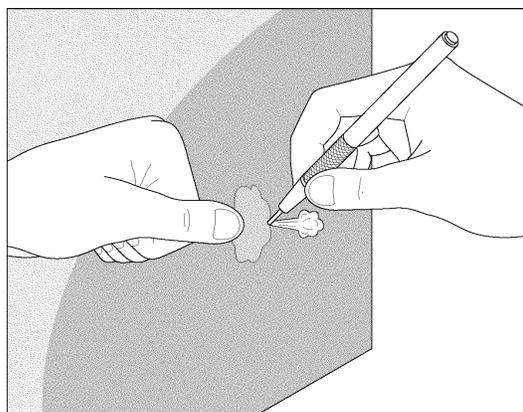
**Figure 2. Lifting and Turning over the Film**

8. To smooth out wrinkles and bubbles:
  - a. Use a large window squeegee and very light pressure to smooth out the entire graphic, starting at the center and working toward the edge, in the order shown in Figure 3. After this step, the Film should be flat on the substrate and most of the water squeezed out.



**Figure 3. Squeegee from the Center**

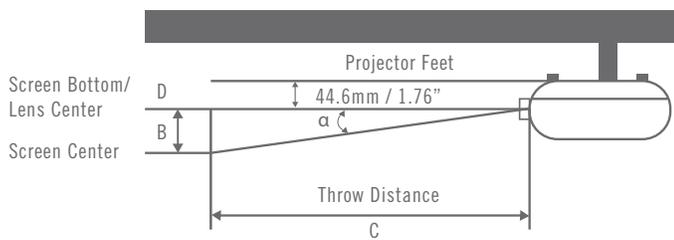
- b. Use the PA-1 Applicator to apply firm pressure to the entire screen, beginning in the center and working toward the edges in overlapping strokes. After this step, all of the water and as many bubbles as possible should be removed.
  - c. Wipe the entire surface dry.
9. Remove any remaining bubbles from the Film:
    - a. Puncture the Film at one end of the bubble with an air release tool or a pin. Do not use a razor or blade.
    - b. Use your thumb to carefully push the trapped air or wetting water toward the puncture. See Figure 4.



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**Figure 4. Push Trapped Air Out**

10. Keep the newly applied screen Film out of direct sunlight for 24 hours.
11. After 24 hours:
  - Use a PA-1 applicator with an SA-1 low friction sleeve to re-squeegee the Film.



B-Vertical distance between lense center and screen center  
 C-Throw distance  
 D-Vertical distance between lense center and top of screen  
 $\alpha$ -Throw angle

### Projector Setup Tips

Keep the projected light throw angle  $\alpha$  to the screen within  $\pm 15^\circ$  of straight on.

The throw distance of the projector is determined by the screen size and the projector lens to keep the throw angle to less than 15 degrees for center to corner brightness falloff of less than 50%. For an offset lens business projector the rule of thumb is throw distance of at least 1.8x the screen diagonal.

For a projector with center throw lens the rule of thumb for finding throw distance is 1.2x the screen diagonal.

$$(\text{Screen diagonal}) \times 1.2 = \text{Throw distance}$$

### C. Care and Handling

Perspiration and oil from skin contact can stain the Film.

Avoid laying Film on uneven or dirty work surfaces. Small chips or dirt particles can damage the Film surfaces or become trapped in adhesive during lamination.

### Cleaning Recommendations

The 3M Vikuiti™ Rear Projection Film can be cleaned by wiping with mild soap or detergent and lukewarm water. Use a clean soft cloth, such as the Spyglass Micro-Fiber Cleaning Cloth,

applying only light pressure. Rinse with clean water and dry by blotting with a dry cloth or chamois.

### D. Warranty and Disclaimers

3M warrants that its 3M Vikuiti™ Rear Projection Film (the "Product") will meet its published specification at the time of shipment and for one year and three months after the date of shipment provided the Product is stored in the original package at a temperature of 20 degrees C +/- 10 degrees C and at a relative humidity of 50% +/- 15%.

If Product is shown not to meet its published specification during this warranty period, 3M's sole liability and purchaser's exclusive remedy is, at 3M's option, for 3M to either refund the purchase price of the Product or provide replacement Product in the quantity shown not to meet the specification.

3M makes no additional warranties, express or implied, including but not limited to any implied warranties of merchantability or fitness for a particular purpose. In particular, but without limitation, 3M makes no representations or warranties concerning the effective life of the Product or its ability to survive user's environmental testing. User is responsible for determining whether the 3M Product is fit for the user's particular purpose and suitable for the user's method of production. Other than as set out in this limited warranty, 3M shall not be liable for any loss or damages, whether non-specified direct, indirect, special, incidental or consequential (including downtime, loss of profits or goodwill) in any way related to the Products regardless of the legal theory asserted.

