

SafetyShield G2 is the strongest safety film in the world, engineered with premium polyester for exceptional clarity, superior tensile strength, and tear resistance that surpasses standard films. Its advanced G2 Adhesive Technology ensures unmatched glass-to-film bonding. This innovation delivers superior bonding performance and durability, making SafetyShield G2 a leader in protective film technology. Independently tested, SafetyShield G2 meets the most rigorous global standards, including ANSI Z97.1 for safety glazing, ASTM F 1642 for blast mitigation, ASTM F 3561 for forced entry resistance after simulated active shooter attack scenarios, and EN 356 for manual attack resistance. This makes it the most thoroughly vetted safety film and attachment system available today. Built on the legacy of the original SafetyShield platform, SafetyShield G2 delivers next-level innovation backed by years of field-tested reliability.

This installation guide will walk you through the process, ensuring your project benefits from the same clarity, strength, and protection that define our global reputation.

Application Solution

Residual applicator solution under the film is one of the greatest but least recognized causes of film re-installations. These microscopic particles prevent the adhesive and film from making direct contact with the glass and provide a starting point for bubbles, fingering, wash boarding, demetallization and other types of deterioration. Using proper applicator solution in the right concentration, along with the correct squeegeeing techniques with the proper squeegee will help prevent these problems.

Madico does not recommend using a soap surfactant, Johnson's® Baby Shampoo or liquid soap, as an application solution or additive to concentrated mounting solutions like Madico 30-1-1 or Fusion All Type mounting solution.

Madico supplies 30-1-1 Window Solution Concentrate (gallon jug part # 516602) or Fusion All Type (½ quart Part # GT2094), which is used as a window cleaner, application solution, and a squeegee lubricant. These solutions have been evaluated and found to be neutral to both the films and adhesives that Madico uses. However, proper concentration is critical. Water evaporates from between film and glass quite easily, but the soapy portion of the solution can leave some residue. To minimize this, when using 30-1-1, the recommended

dilution is 30 parts distilled water to one-part solution. Never use more solution (>1 part per 30 parts water) than this and use less if possible. In fact, use as little of the concentrated solution as possible while still maintaining the ability to move the film on the glass. The recommended dilution of Fusion All Type 1 ounce to 1 gallon of distilled water.

Squeegee Techniques

The proper squeegee and squeegee technique also helps remove applicator solution from between the film and the glass. Madico has found the best combination of squeegee firmness in the 5" Fusion Big Mouth Stretch Handle (Part # GT057BM). There are also other squeegees that use the 5" Big Mouth 3/8" Thick No Bevel Squeegee Blade (Part # GT2117) that will remove the mounting solution quite well. When squeegeeing, be sure to push the mounting solution out from under the film ahead of the blade rather than pulling it behind as is done when cleaning windows. Always lubricate the film surface first, then use as much pressure as possible on the squeegee to remove all the solution. Generous lubrication will prevent the squeegeeing process from scratching the film. Firm overlapping squeegee passes by half the squeegee blade width will help.

Please note: For slow-drying products that have multiple layers, like SafetyShield G2, it is important that the proper applicator solution be used and squeegeed out thoroughly during installation. Retained water can lead to failure where the pockets of mounting solution collect and pool. Inspect the installed film closely and squeegee out any water pockets that are observed.

Equipment

- Application solution, Madico 30-1-1 Window Solution Concentrate, (Part # 516602).
- Or, Application solution, Fusion All Type, (Part # GT2094).
- Spray container, Stainless Steel 5 Gallon Sprayer, (Part # GT101-N).
- Squeegee, 5" Fusion Big Mouth Stretch Handle, (Part # GT057BM).
- Squeegee blade, 5" Big Mouth 3/8" Thick No Bevel Squeegee Blade, (Part # GT2117).
- Edge guide tool, 5-Way Trim Guide, (Part # GT190WHITE).
- Trimming Knife, Olfa® "Silver" Stainless Steel Knife, (Part # GT126).
- Pressure-sensitive tape, available locally.
- Cut-resistant gloves, available locally.
- Razor scraper, 6" Triumph® Scraper, (Part # GT107).
- Paper towels (lint free towels are best), available locally.
- Film handler, (Part # GT911).

Application

These guidelines and suggested practices ensure proper installation.

- **SafetyShield G2 should only be installed with mounting solution, or wet application method.**
- **SafetyShield G2 is not recommended to be installed by dry lamination methods.**
- **Installation is not recommended in dusty environments or when temperatures fall below 40 °F (5 °C).**

1. Completely Clean Window

Cleaning the window completely and thoroughly is the single most important step.

- a. Wash window with solution and squeegee.
- b. Wet window with solution then scrape entire surface with razor scraper.
- c. Wash and squeegee again.
- d. Wipe edges carefully with paper towel.
- e. Make sure that all loose dirt is removed.

2. Film Preparation

For thicker films, like SafetyShield G2, better results can be obtained if the product is precut to match the window/surface dimensions. Madico has found that 30-1-1 Window Solution can help improve results.

Film Preparation with Film Handler

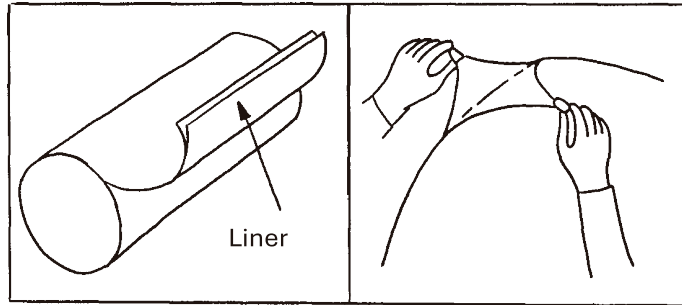
- a. Prepare windows as in Step #1
- b. Take the film out of the box. Remove end plugs and protective sleeve. Save plastic to protect film when job is completed. Place end plugs back into box. Set box aside for storage of remaining film later.
- c. Install film on Film Handler
- d. Measure window glass from inside the frame.
- e. Mark and set blade to cut film to exact width with Film Handler.
- f. Pull enough film from the Film Handler to exact length required.
- g. Proceed to Step #3

3. Release Liner Removal

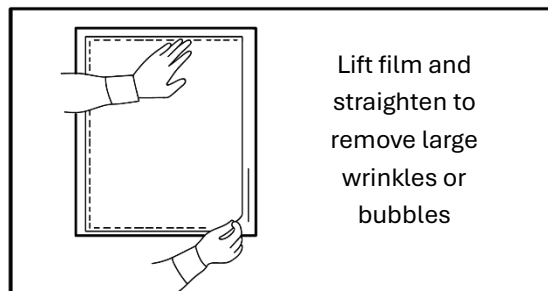
SafetyShield G2 adhesive is pressure sensitive and sticks to anything with which it comes in contact. During application, the release liner must be removed. Protect the film and exposed adhesive during the entire installation procedure. Do not let it touch anything but the glass on which it is to be installed.

- a. Apply pressure-sensitive tape on one side of an upper corner of the film. Place a second piece of tape on same corner on opposite side of film (see diagram). Be careful not to let exposed tacky surfaces of the tape touch each other.

- b. Grasping one piece of tape in each hand, pull the piece nearest you towards yourself, separating release liner from film.



- c. As you pull the liner off the film, begin to spray adhesive surface with the mounting solution, completely soaking exposed adhesive. Continue pulling down on clear release sheet while spraying solution on adhesive. The solution will neutralize the adhesive, preventing it from sticking to anything. Once initial removal of liner begins, try to pull it down evenly across the film. Removal will be easier. Discard release liner.
 - d. With adhesive surface completely exposed, spray one final time with solution to ensure that 100 percent of adhesive is wet.
4. Film Application
- a. Soak the window thoroughly with solution.
 - b. Holding the film at uppermost corners, being careful not to allow film to touch the floor or any other surface, place the film on window with adhesive side against glass. Care must be taken to avoid bending or creasing the film.
 - c. Since the applicator solution has made the window surface slippery, you can now slide film so that one edge of the film is approximately 1/16th inch (1.5 mm) from one side of the window. If necessary, lift film to remove large wrinkles or bubbles. Properly-sized, pre-cut films, leave enough gap, up to 1/8th inch (3mm), at all edges so it can be positioned/centered into place.



- d. Soak the side of the film facing you with Solution.
 - e. Beginning at center of window, squeegee once across top to right side of window. Going back to top center, squeegee across to left hand edge of the window, then squeegee each half of the window in straight, smooth, downward strokes working from center out to edge of the window until all excess applicator solution has been squeegeed out from under film and film is lying flat. It is important to apply ample pressure to remove all the water and solution from under the film. Use EVEN, OVERLAPPING, FIRM PASSES.
 - f. However, squeegee will not float across a dry surface, so be sure to re-lubricate with applicator solution as needed.
5. Large Glass Panels and Heavy Gauge Film Installation Points
- a. With larger windows and heavy-gauge films, two technicians are sometimes necessary.
 - b. Heavy gauge film is not cut and fit on the window. First measurements are taken and then a film handler cutting device is used to make precise cuts.
 - c. It is important that when the release liner is removed, and the adhesive is exposed, that a full, even flow of solution on both the film and glass surface is there before the film is positioned on the glass.
 - d. Squeegeeing on larger windows is the same as above. Use EVEN, OVERLAPPING, FIRM PASSES. Heavy gauge films require repeating this procedure until all visible moisture is evacuated from between the film and glass surface.