



# Instructional Bulletin

Application & Cleaning Instructions For Surface Applied Window Film

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## 1.0 Application Tools

- Lint Free Cloth or professional glass cleaning sponge and squeegee
- Decal Application Squeegee with felt edge or protective sleeve
- Wet application fluid - Water/soap Solution – approximately 5 ml liquid dish soap per 4 liters water
- Spray bottle for wet application fluid
- Razor Knife or Razor Blade
- Air Release Tool – (i.e. pin or needle tool)

*\*Note: The mild dish wash soap should have a Ph value in the range of 7.0 to 8.1. Do not choose liquid dish soap solutions with bleach additives, or hand lotion additives (i.e. soaps that make your hands soft, etc.)*

## 2.0 Glass Preparation

*All application surfaces must be considered contaminated and must be cleaned.*

1. Completely clean the glass as follows:
  - a. Place a drop cloth on the floor and or carpet below the glass panel on which you are working on.
  - b. Wash glass with a glass cleaning solution using lint free rags or professional glass washing applicators, and squeegee until the glass surface is dry.
  - c. If the glass has any particles remaining on the glass after the cleaning process in step 1b., then wet the glass with the glass cleaning solution and scrape the entire glass surface with a razor blade.
  - d. Wash the glass again as in step 1b.
  - e. Wipe edges of the glass with a lint free rag or towel.
  - f. Make sure that all dirt and contamination are removed.
2. Cleaning the glass completely and thoroughly is the single most important step in this process.

## 3.0 Temperature

The film can be applied if the ambient air and glass surface temperatures are between 60°F (16°C) and 90° (32°C). If the glass surface temperature is below minimum requirements, the glass must be heated until minimum application temperature has been achieved. During cold temperature months, it is recommended to use a heat gun or hair dryer on the surface of the glass before and after application. This will increase the surface temperature of the substrate and accelerate the ultimate adhesion of the film.

Ambient Air Temperature - Air temperature of environment.

Surface Temperature - Glass temperature.



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## 4.0 Key Application Tips Before Proceeding

- Surfaces must be completely clean and prepared prior to decal application. This is a critical first step toward successful decal application.
- The film must be thoroughly squeegeed to remove any entrapped application fluid or air bubbles after the decal has been properly placed. Wrap a squeegee sleeve or soft clean rag around the squeegee to prevent potential damage to the decal.
- Press hard on the squeegee to help remove all air and wet application fluid. Keep the surface of the decal wet at all times during decal application.
- It is recommended that the decals be applied to the glass by a professional decal applicator

## 5.0 Decal Preparation

- Upon receipt of the material, remove the material and sleeve from the cartons and clean the sleeve of any loose dirt or particles.
- Unroll the set of sheets onto a clean and flat surface.

## 6.0 Application Procedures

The following instructions show a step by step procedure for installing the decal to a flat piece of glass. The recommended method for applying the decal is using a “wet application method” to provide ease of placement and repositioning of the pressure sensitive film.

1. Make sure the decal and substrate temperatures are between 60° - 90°F (16° – 32°C) for the best results.

- The glass surface must be free of wax, grease, oil, dirt, etc. (see step 2.0 Glass Preparation)
- Make sure you have clean, wet hands (use application fluid) when handling the adhesive side of the decal to avoid any potential transfer of fingerprints, dirt, or oils, to the adhesive.
- Place decal face down on flat surface and separate the release liner from the adhesive by applying a piece of tape to one corner of the liner and the decal film and pull the liner away from the adhesive. Pull the liner back directly upon itself at an angle of 180°. As you begin pulling the liner back, begin to spray the exposed adhesive with the wet application fluid using the spray bottle. Be careful to not allow dirt or other contaminants to get on the adhesive. Do not let the adhesive touch anything but the glass on which is to be installed. Discard the release liner.
- Spray the entire surface of the glass with the wet application fluid using the spray bottle. Be generous since the entire surface must be wet. Keep the adhesive wet during the application to aid repositioning of the film. You can never use too much application fluid.
- Position the decal onto the glass.
- Spray the application fluid onto the surface of the film. This allows the squeegee to slide on the film surface.
- Beginning in the center and top of the decal, squeegee the wet application fluid and air from underneath the surface of the decal to the right edge of the glass. Now squeegee from the center and top of the decal to the left edge of the glass.
- Now move down the decal approximately one half of the width of the squeegee and squeegee in alternating paths from the center to the right edge, and then the center to the left edge. Always overlap each squeegee stroke. Always squeegee the trapped air or application fluid to the nearest edge. Re-spray the wet application fluid to the surface of the decal prior to each overlapping squeegee pass to keep the squeegee lubricated to prevent damage to the decal surface.





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10. The film may be removed and repositioned, but remember to keep the adhesive wet at all times and allow the film to relax back to original size and shape before reapplying. Please note that the decal material used for this project is very difficult to stretch and distort if handled properly. If an air bubble or wrinkle larger than 1 mm is created, then it is recommended that the decal be lifted from the glass surface and repositioned on the glass. Additional wet application fluid should be sprayed onto the glass and the adhesive when it is lifted.
11. Wipe excess wet application fluid that has been squeegeed away from the top surface and adhesive/glass interface from the glass edge.
12. Using a sharp razor knife, trim away the excess decal material from the perimeter of the glass.
13. Spray the surface of the decal with wet application fluid one additional time and squeegee the entire decal surface again, beginning in the center of the decal as in step 8.
14. Wipe the excess application fluid from the edges and surfaces of the glass.
15. Inspect the applied decal for any trapped water or air. If found, use the pin tool to poke one hole in the center of the air or water bubble and squeeze the air or water out completely. Wipe away any excess water.

The full adhesive strength of the decal will take several hours to several days to build, depending on the amount of wet application fluid removed during the squeegee process and on the temperature of the environment in which the glass is stored. Please use caution when handling the glass with the decals applied.

## 7.0 Maintenance

The decal material used for this project may be cleaned with a normal household glass cleaning solution using a soft cloth. It is also important that chemicals or solvents are not used on the decal material. For example, isopropyl alcohol, acetone, gasoline, mineral spirits, paint thinner and other solvents and chemicals can easily damage the decal material. Do not use sharp tools or abrasive cleaning pads on the surface of the decal to avoid scratching.