



## Superior Chemical and Abrasion Resistance

### Application Process

#### Wet Application Method for Adhesive Backed Film

##### Tools Needed:

**Squeegee** - A professional automotive film applicator is necessary to install the Visgard® Premium LTF 300 anti-fog film. For best results, the squeegee blade must be made of urethane and attachable to a handle. Blue Max or Orange Crush squeegees are both acceptable brands. The squeegee blade should be approximately 15.25 cm/6 in. wide to ensure the least amount of application liquid entrapment.

**Room Temperature Application** - 99% DI water with 1% non-abrasive liquid hand soap is a good blend for laminating at room temperature.

**Freezer Door Application Liquid** - 74% DI water with no greater than 35% IPA by weight and 1% non-abrasive liquid hand soap will allow for direct installation on the inside glass of operating freezer doors.

**Atomizer (squirt bottle)** - Application liquid should be loaded into a squirt bottle for use.



#### Technique for Wet Laminating Film:

STEP 1: Begin by cleaning the glass.

STEP 2: Cut the film on a semi-hard surface with an X-ACTO® knife to the appropriate size for the application.

STEP 3: Slightly separate the adhesive liner at the edge of the film by using your thumb. If the liner is resistant, place a piece of Magic™ or Scotch® Tape at the corner of the film and pull to bring the liner up.

STEP 4: With the application liquid loaded into a spray bottle, soak the glass pane from top to bottom.

STEP 5: Separate the adhesive liner completely from the film and wet the adhesive side thoroughly.

STEP 6: Lay film adhesive side down on wetted glass pane and spray application liquid onto the top of the film to reduce friction when laminating.

STEP 7: Hold the top of the film with your thumb and index finger and run the squeegee down the middle length of the film. Removing the application liquid lengthwise will ensure that the film is locked into position and there will be no moisture entrapment in the middle of the film.

STEP 8: Beginning in the middle of the film, flush out the remaining application liquid by moving the squeegee inside out with overlapping strokes to ensure that there is no water entrapment.

STEP 9: Inspect the glass pane carefully to make sure there is no water entrapment or air bubbles. If there are imperfections in the film now, these imperfections will be amplified after the adhesive cures. Furthermore, the film is easiest to remove right after lamination, so if imperfections are showing and considered unacceptable it is best to remove the film and start

# Visgard® Premium LTF-300

## Anti-Fog Coated Film

## Application Process Continued

### Following Day

In 24 hours the adhesive should have good adhesion to the glass pane. It is now safe to remove the liner on the anti-fog coating, starting from the top left, or right corner pulling towards one's self. If white circles are visible behind the film this is an indication that the adhesive still needs time to cure. If by the third or fourth day the film still has white blotches, the application should be started over. If the film looks relatively clear with no signs of adhesive disturbance then the application has been a success.



### Anti-Fog Test

To test anti-fog performance, add 300 ml of water to a 1000 ml beaker and cover. Heat water inside to 50°C to allow steam to build up inside of the beaker. At

testing time, remove the cover from the beaker. The laminated glass pane should be placed anti-fog face down over the beaker and observed for condensation build-up on the anti-fog surface. Our coating should remain fog-free for at least 30 seconds of exposure to this testing condition. Another variation of the test is a pre-conditioning, where the coated part is soaked for one (1) hour in DI water followed by a two (2) hour air dry period and then tested the same. The results should show that the part still will not fog within that 30 second time period. In fact, FSICT coatings should be able to survive a 24 hour water soak and still pass the 50° C water bath test.



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Visgard® Premium LTF-300 Film