

# ClearPlex®

## Installation Methodologies

### Installation Overview

The condition of the windshield is important to a successful installation. The Invisible Windshield Protection Film bonds best with a new windshield. A cracked or pitted windshield will tend to trap additional moisture during the installation resulting in an installation that may not look as good as a new windshield with protection applied.

A clean windshield is crucial in achieving an optically clear installation. Please ensure that the cleaning steps outlined below are followed. Any foreign materials that remain on the glass will remain for the life of the Invisible Windshield Protection Film™.

### Invisible Windshield Protection Film™ Installation

Step One: Clean and inspect the windshield. The cleaning is crucial to a successful installation.

- Spray the windshield with a warm water / soap solution. The Madico 30:1 slip agent available from ClearPlex is recommended as it does not contain any additional chemicals that could cloud over time.
- Use a window razor to remove any dirt, bugs or debris by scraping the windshield. Be sure to have enough cleaning solution to avoid scratching the windshield. A razor can scratch a dry windshield.



**Figure 1 - Clean with window razor**

- Using a damp paper towel, wipe around the window molding to remove any debris. Extra care should be taken around the molding for excess debris.
- Use the pro handle w/clear max blade or a squeegee to remove the cleaning solution and debris.



**Figure 2 - Remove cleaning solution with squeegee**

- Spray the windshield a second time with cleaning solution. Rub your hand over the windshield to “feel” for any remaining debris. If any debris is found, use the razor to remove it.
- Use a squeegee or pro handle w/clear max to remove the cleaning solution and debris.
- The windshield is now clean and ready to accept the Invisible Windshield Protection Film™. Spray the windshield with your solution to prepare for the Invisible Windshield Protection Film.

**Step Two:** Select the correct ClearPlex Invisible Windshield Protection Film™ for the vehicle to be protected. Measuring the windshield’s width and length will insure proper film selection. Place the Invisible Windshield Protection Film™ on the windshield in the proper orientation (as though it were actually installed with the release liner against the window and the hard coated surface out).

**Step Three:** Trim the film to an approximate final fit. Trim the film with the blade angling in toward the center of the windshield. Steps four and five are skipped for flat panel or pre-formed installations. Be sure to use a stainless steel knife blade.

**Note: A carbon or aluminum blade will chip and scratch the glass surface!**

**Step Four:** Conformity Check – Check the Invisible Windshield Protection Film for wrinkles or folds.



**Figure 3 - Conformity Check**

Step Five: Heat Shrink – For non pre-formed installations or where the Invisible Windshield Protection Film™ is not fitting perfectly, use a heat gun and Wet Edge squeegee to remove any folds and wrinkles (fingers).

- Wet the windshield with slip agent.
- Use the squeegee to gently remove the water from the center of the film.
- Stretch the film to each side. Then work any “fingers” from the sides to the top and bottom of the film. Try to create smaller evenly spaced “fingers” across the top and bottom of the film. The film will shrink better on the top and bottom rather than on the ends. Also it is easier to shrink many smaller fingers rather than a few large ones.
- Carefully apply heat with the heat gun to warm the Invisible Windshield Protection Film™ and start the shrinking process. Work from the outside edge on the wrinkle, getting the edge down first then heat from the end of the finger toward the outside edge. Use the Wet Edge squeegee’s micro fiber side to carefully conform the Invisible Windshield Protection Film™ to the windshield. Moving the finger from side to side will help to see if your film is laying flat on the edge of the film. Work around the windshield until all the wrinkles are removed. Do not overwork an area, move the finger to a new area if needed. Additional solution may be needed behind the film.



**Figure 4 - Heat shrink film to surface**

- When finished the Invisible Windshield Protection Film™ should lie on the windshield without any wrinkles or folds.

Step Six: Dust & Particle Removal – Remove the Invisible Windshield Protection Film™ from the windshield. Roll the film up and note which side you started from. We recommend that you always work from the same side. Spray the windshield with solution using the spray bottle. Use the squeegee to remove the water and any dust or particles. The windshield is now ready for the Invisible Windshield Protection Film™ to be applied.

Step Seven: Release Liner Removal – Locate the release liner on the back of the Invisible Windshield Protection Film™ (IWFP). Attach a piece of tape to one corner to help in the removal of the release liner.

If you are doing the install with only one person or doing the install outdoors use the reverse roll method to remove the liner. This will minimize the adhesives exposure to the elements. Unroll the film upside down. Gently pull the release

back, spraying as you go, lay the liner back down. Do the same procedure on the other side. Coat the liner again with solution and roll film up.

If you have a glass panel/wall, place the film, adhesive/release liner side out on the glass. Do not remove the liner till you are ready to install the IWPF on the windshield.



**Figure 5 - Adhesive liner removal**

**Note: Spray the adhesive side of the IWPF with slip agent while removing the release liner to stop the creation of static electricity. Removal of the release liner creates static charge, which attracts dirt and dust.**

Starting at one corner, carefully peel the release liner from the IWPF using one smooth continuous motion, spraying slip agent as you go.

**Note: Stopping and starting while removing the release liner will cause lines in the adhesive that may be visible after the installation.**

Be careful not to allow anything to come in contact with the adhesive. If for example any lint or other small object does come in contact, it may be possible to wash the lint off using the slip agent.

- Step Eight: Slip Agent – The slip agent is critical for a successful installation. Coat the windshield and the adhesive side of the Invisible Windshield Protection Film™ with a generous coating of slip agent. Too much slip agent is not possible. Too little slip agent may cause a difficult or failed installation.
- Step Nine: Apply the Invisible Windshield Protection Film™ – With a wet windshield and the film, position the Invisible Windshield Protection Film™ onto the windshield. Avoid touching the adhesive. Prepare for the squeegee process by applying a coat of slip agent to the hard coat side of the Invisible Windshield Protection Film™. This will act as a lubricant during the squeegee process.
- Step Ten: Use the pro handle w/clear max blade to remove the slip agent and trapped air that is between the Invisible Windshield Protection Film™ and the windshield.
- Check the Invisible Windshield Protection Film™ for proper alignment.
  - Start in the top and center of the windshield and draw a vertical line in the downward direction with the squeegee to hold the Invisible Windshield Protection Film™ in place. Next squeegee from the middle of the windshield to the outside edge.

- Continue using upward and downward strokes working from the center to each side of the windshield.
- Spray additional slip agent on the outside of the Invisible Windshield Protection Film™ as needed to act as a lubricant until the squeegee process is completed. This helps reduce the possibility of scratches from the squeegee. The pressure on the squeegee blade is hundreds of times higher than the pressure on the wiper blade in normal operation.
- Continue working from the center pushing the water out to the edges until all the air bubbles and slip agent is removed. It is desirable to remove as much of the slip agent as possible before the adhesive becomes fully tacked to the windshield. If a small amount of moisture becomes trapped, it will evaporate through the Invisible Windshield Protection Film™ over the next few days or week depending on the ambient temperature.
- Wrap the Conqueror squeegee or Teflon hard card with a paper towel and go over the edges of the film. Heating the film edges will also ensure a proper bond.

Step Eleven: Final Trim – Using a stainless steel knife, trim the excess Invisible Windshield Protection Film™ to within 1/8” to 1/4” of the windshields outside edge. Remember to angle the blade in toward the center of the windshield as you cut.

Step Twelve: Final Inspection – Use a cloth and window cleaner to remove any dirt or finger prints from the IWPF. Inspect the edges to ensure a proper bond. If any moisture pockets are found near the edges, use the Teflon hard card to push them out

## Frequently Asked Installation Questions

**Q.** Does the installation need to be indoors?

**A.** Where possible, indoor installations are preferred. The indoor installation provides a more controlled environment to reduce the chance of dirt or debris getting trapped between the windshield and the Invisible Windshield Protection Film™. Installations may be done outdoors. In this situation, the amount of time that the adhesive is exposed before it is applied should be as short as possible. Using the reverse roll method to remove the liner would work best.

**Q.** Does the windshield need to be new?

- If not, what is the effect of installing on an older windshield?
- If not, how much damage (pits, chips, wear from wipers) can be covered?

**A.** The windshield should be new if possible. If not, it should be nearly new condition. Existing problems in the windshield will remain. Cracks may continue to grow causing a windshield replacement while the ClearPlex™ Invisible Windshield Protection Film™ is still in perfect condition

**B.** A windshield that is heavily pitted will not look good when the Invisible Windshield Protection Film™ is applied. Each of the pits will contain trapped water, which may be noticeable to the driver under certain lighting conditions.

**Q.** What tools are needed?

**A.** The following tools are recommended and are available in the ClearPlex Deluxe Installer's Kit.

- Olfa Stainless Steel Knife (GT126)
- 32 oz Water Bottle (for slip agent) (GT090)
- Slip Agent, Madico 30-1-1 Solution (baby shampoo)
- 4" Wet/Dry Squeegee (GT-Wet/Dry)
- 1" Stainless Steel Auto Scraper (GT212)
- 3" Stainless Steel Auto Scraper (GT210)
- 1 Gallon of Water
- 5" Fusion Handle (GT1047) W/Angled Clear Max Blade (GT203A)
- Heat Gun, Milwaukee Variable Temperature
- Paper Towels
- Tape Measure

### **Frequently Asked Post Installation Questions**

**Q.** How soon after the installation can a vehicle be safely driven at freeway speeds?

**A.** Full adhesion will not occur for 72 hours or longer depending on outside temperatures. Using the ClearPlex approved slip agent, the Invisible Windshield Protection Film™ adhesive should reach a level of adhesion sufficient to handle freeway speeds within 1 hour of the installation.

**Q.** Are there any air moisture bubbles?

**A.** There should not be any air bubbles. Very small pockets of moisture may develop over the next 72 hours. This is normal. These moisture pockets will evaporate through the Invisible Windshield Protection Film™.

**Q.** Are there any areas of distortion?

**A.** There should not be any distortion other than distortion from any small moisture pockets that were left between the film and the windshield. These will evaporate as mentioned above.

**Contact us if you have questions or concerns:**

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