

Guide to Installation and Maintenance of Hanita **SafetyZone** Safety & Security Window Film

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GENERAL INTRODUCTION

All window film professionals have their own methods of installation, the result of experience, skill and familiarity with the films, techniques and tools that they use. The purpose of this document is not to educate in the art of installation, but to impart installation and maintenance advice concerning Hanita Safety & Security Window Films. The following illustrated instructions are a generic guide to the internal installation of safety and security films.

PRODUCT DESCRIPTION

SafetyZone interior films are polyester based multi-laminates with a removable clear PET release liner, with Pressure Sensitive (PS) adhesive for glass substrates. Films are available in 4-15 Mil thickness, and in SafetyZone Safe solar control versions combining security and energy savings, that can enable a significant return of investment.

PRODUCT APPLICATION

SafetyZone films are recommended for internal use on vertical, sloped or horizontal architectural glass, for public, commercial, governmental and military projects, ensuring the perfect solution for different threats and hazards.

INSTALLATION AND MAINTENANCE INSTRUCTIONS

Tip

Use Hanita's free InfoZone application by iPhone, iPad or iPod Touch to streamline the process of estimating film projects. By downloading InfoZone to your Apple hardware, and entering the details of the project, you can instantly and efficiently calculate the amount of film needed in each size for the project, even taking into account the widths of film you have in stock. Use the app's film-to-glass chart to check film compliance, and immediately email the measurements and summary of the project to your base. You'll be saving time, effort and film – what could be better?



Download Hanita's free InfoZone application directly from your iPhone/iTouch/iPad via : Apple's AppStore – search on Hanita, InfoZone, or Window Film

Visit <http://itunes.com/apps/hanitainfozone> - if you download it on iTunes, it will be in your iTunes library, and you will have to sync your device to iTunes to have it appear.

If you're unfamiliar with iPhone, HanitaTek has produced a series of simple demonstration videos, which will help you take your first steps <http://www.youtube.com/user/hanitatek>

Tools:

- **Squeegees:** Use a 6" heavy-duty safety film squeegee in perfect condition. Remember replacement rubbers.
- **Spray tank:** Cleaned and rinsed; undamaged spray head.
- **Mounting/cleaning solution:** Distilled water; Johnson's No-Tears Baby Shampoo.
- **Knives:** New, break-off stainless steel blade. Replacement blades.



Glass Preparation

- Be extra diligent in the cleaning and preparation of the window and frame to minimize dirt and blemishes under the film.
- Use wetting solution based on water and detergent-free soap (such as Johnson's Baby Shampoo).
- Use only non-abrasive cloth and soft squeegees to clean the glass.
- Use a new scraper blade to clean the glass surface from dirt, dust or any other small particles.

Film Installation

- Do not install film on double pane windows when the outside temperature is lower than -1° F/-18 °C, or for single pane, 32° F/ 0°C. If the slightest trace of ice is trapped between glass and film, serious quality problems can result.

At the site:

- Wipe frame, and wash window. Pay attention to thorough cleaning and preparation of the window and frame.
- Open the box in a clean place with as little dust or surrounding contamination as possible. Keep film tightly wound around the core when opening the roll in order to cut off the required sheet. If the film opens up (releases itself), it should be wound up again and tightly attached to the roll. Use adhesive tape to attach the edge to the roll, to prevent re-release.
- For 8 & 12 mil films, we advise whenever possible to avoid precutting before arrival at the site. In any case, avoid bending the film, specifically when the liner is on the inside. Keep the sheets loosely wound (minimum outside diameter of 10"/25cm), and roll the sheets against the film direction "memory" with the liner outside.

Tip

These Security films are wound on 3" cores. Once opened, rolls of Security film have a strong tendency to spring open and uncoil, which may cause tunneling of the film. After opening and use, the film remaining on the roll must always be firmly sealed shut with adhesive tape. We also advise securing the film by inserting a roll of paper towel between the film and the box, as illustrated below.



Wetting Solution

The wetting solution should contain water with detergent-free soap (such as Johnson's Baby Shampoo). **Use 6cc (~6 drops) soap per liter of water** for slip solution. Any soap-free soap used should not contain additives such as lanolin or silicone that may affect adhesive bond strength.

General Instructions for Installing Safety Films (interior daylight installation)



Step 1 > Recommended tools:

½ liter spray bottle with distilled water and 6 drops of detergent-free soap (ie Johnson’s Baby Shampoo); 6” heavy-duty rubber squeegee; Stanley knife; ruler; two pieces of adhesive tape; scraper, lint-free paper towels.



Step 2 >

Clean the window and frame thoroughly with soapy water (slip solution) and scraper. Dry. Repeat. Rewet.



Step 3 >

Measure the window and cut film to dimensions + 4 cm each side, and place it on the wet window,



Step 4 >

Cut the film to the size of the window, leaving 2 cm overlapping edge all around.



Step 5 >

Remove the film from the window, and thoroughly clean window once more.



Step 6 >

Re-wet the window, using lots of slip solution.



Step 7

Thoroughly wet the film on both sides. Rewet the glass surface.



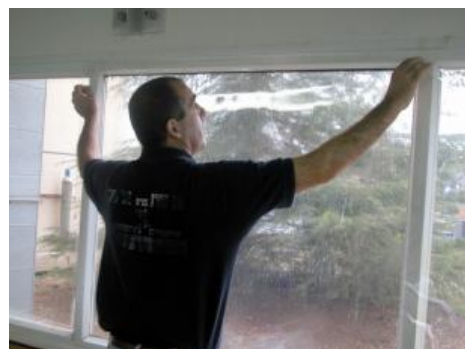
Step 8 >

Using two pieces of adhesive tape, separate the backing liner from the film.



Step 9

Spray the exposed adhesive with plenty of slip solution.



Step 10

Place wet adhesive side of the film on to the glass.



Step 11

Using the squeegee, wipe out from the center with firm downward and outward movements, removing water and air bubbles trapped between the film and the glass. *See below for detailed explanation of squeegee technique.*



Step 12

Trim the edges of the film adjacent to the window frame, using the ruler and Stanley knife, leaving a 1/32-1/16" space gap between the edge of the film and the gasket/frame (daylight installation). *See below for explanation of cutting technique.*



Step 13>

Wet the film surface again, and pressing hard with the squeegee, wipe out from the center until all the air bubbles and remaining water have been removed from the edges. ***See section below for precise method recommended.***

Allow the film to dry for 24 hours before touching the window.



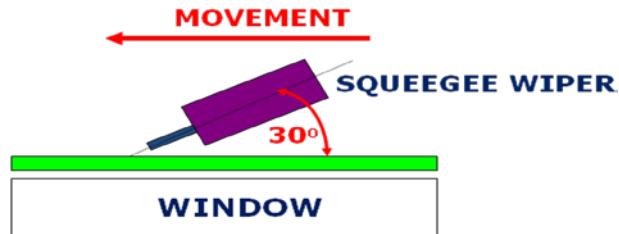
Step 14>

Wipe dry the edges of the film and the window using the paper towels.

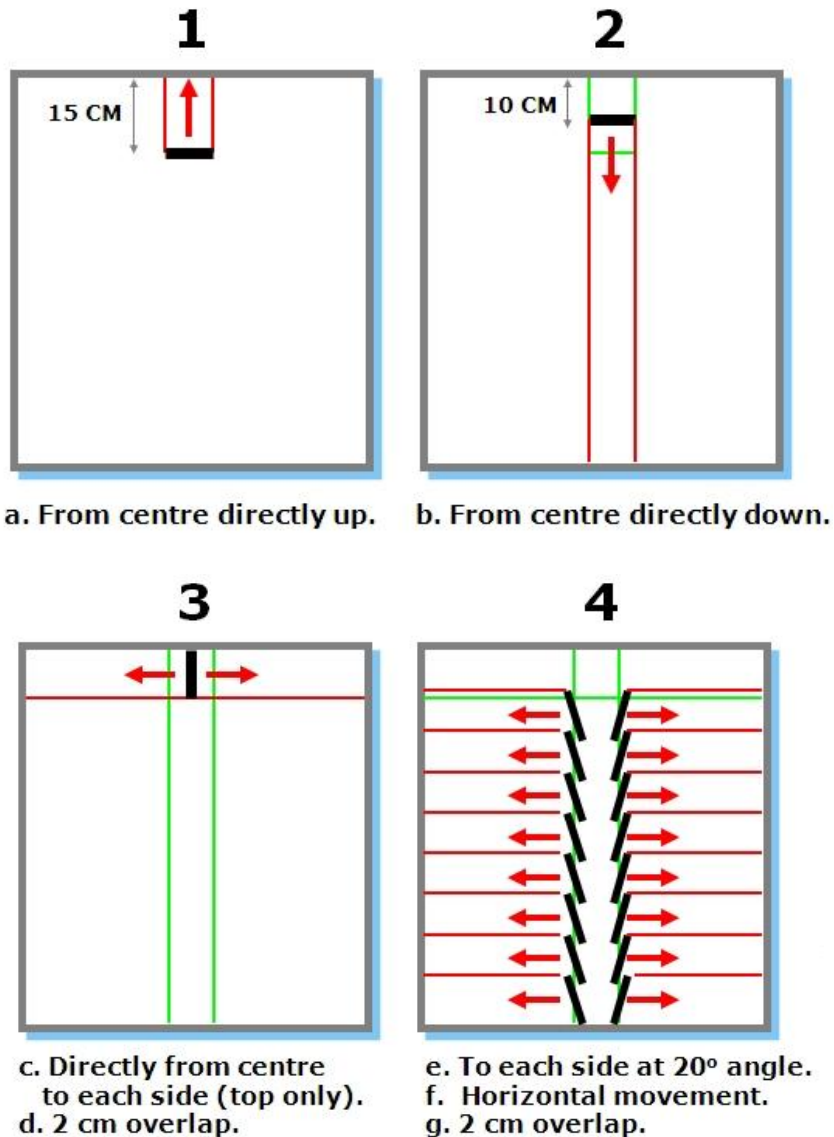
Recommended Squeegee Technique

Squeegee Angle & Movement

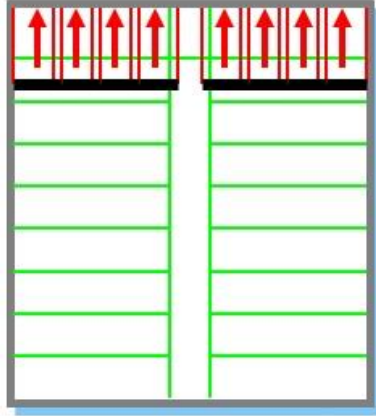
Note that the angle between the squeegee wiper and the window is about 30°, and that the direction of movement is opposite to wiper inclination.



Squeegee Technique:

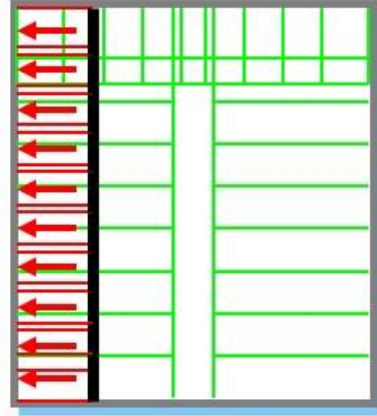


5



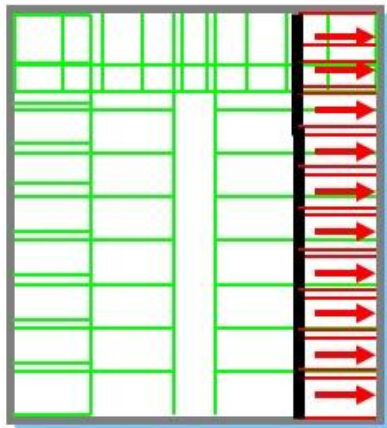
**h. Total width directly up.
i. 2 cm overlap.**

6



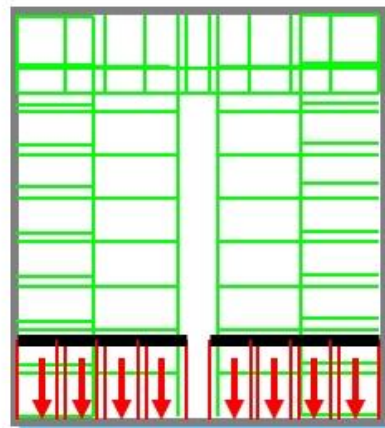
**j. Total width directly left.
k. 2 cm overlap.**

7



**l. Total width directly right.
m. 2 cm overlap.**

8

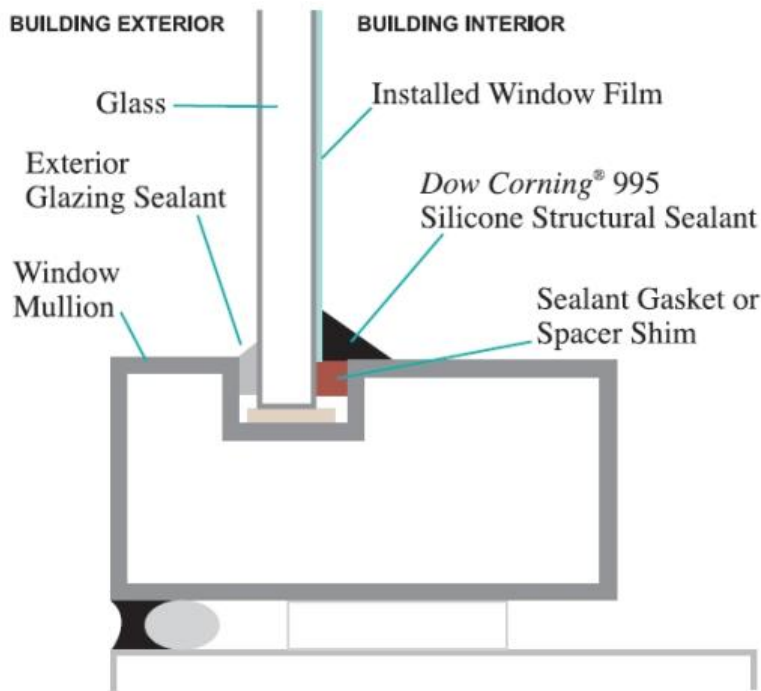


**n. Total width directly down.
o. 2 cm overlap.**

General Instructions for Installing Sealed Safety/Security Films

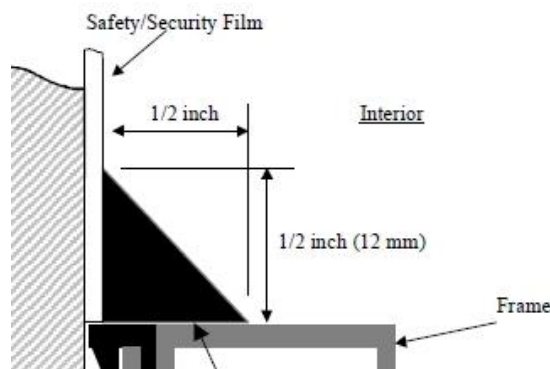
- interior wet-glaze installation

For wet-glaze installations, the film is installed using the daylight installation method. After complete drying, (this may take several days), the installation is then sealed using a special silicone-based structural sealant, such as Dow Corning 995.



©Dow Corning

1. Adhere 1" wide strip of low-tack painters' masking tape to both filmed glass and frame ½" in from the edge of the film to all four sides of the window to form a sealant channel.
2. Using a standard caulking gun, and Dow Corning 995 or similar silicone sealant, and following manufacturer's instructions, apply sealant bead into the channel formed by the masking tape. Make sure a minimum ½" of adhesive is in contact with the film and ½" of adhesive is in contact the window frame.
3. Smooth sealant band with plastic putty knife.
4. Carefully remove masking tape.



After Installing

Although most Hanita films dry within a few days, drying time can be increased due to ambient temperature, film thickness, and presence of sunlight. Do not clean your windows for 30 days after installation to allow mounting adhesives to adhere properly. Do not try to “pop” bubbles and release retained water as this could void your warranty.

CLEAN windows with a quality glass cleaner or a solution of one (1) tablespoon of liquid dish soap per quart of clean water. As with all window surfaces, use soft cloths to clean window film rather than paper towels which could scratch the surface over time.

Maintenance

General information and Drying Period

The installation procedure used a special solution of detergent and water, followed by squeegeeing to remove the excess water. However, the drying process is still continuing, and it will take several weeks to complete. In the meantime, there will be some bubbling and smearing, which is normal, but these blemishes will disappear after about four weeks. Within this time, the adhesive will complete its polymeric bonding process, and the moisture will disappear, leaving the windows perfectly clear.

Advise customer not to try to remove the bubbles by popping or pressing them; depending on the film type and local weather conditions; the bubbles will disappear by themselves within weeks. The warmer the weather, the shorter the drying period. Fogging and optical distortions may be present, but they too will disappear during the drying process.

Cleaning instructions

- Although all Hanita’s films have excellent scratch resistance, it is preferable not to use abrasive products.
- Use 10% washing up liquid diluted in water to clean windows. Do not use ammonia solution. Wipe with synthetic sponge, very soft cloth or chamois leather.
- Rinse with clean water, and wipe off with a squeegee. Final traces of water can be removed with absorbent paper.
- **Remember:** Always tell client to inform window cleaners that film is installed, and to make sure they follow the above instructions. Use of a vapor cleaner is not recommended.

Removal of window film

1. Carefully and gently cut vertical stripes 15 cm apart on the entire film surface, without touching the glass.
2. Slowly peel each section individually, from top to bottom,
3. Use a wide scraper or razor blade and plenty of soapy water to scrape any remaining adhesive from the window.