

This document includes guidelines for visual inspection, cleaning, and care for your newly applied 3M™ Window Films.

Visual Quality Guidelines for Window Films

Flat glass with applied Window Film is not expected to have the same visual quality as glass alone. Below are some criteria for evaluating the applied window film.

WHEN TO VIEW:

Since window films are applied with a detergent and water solution, the viewer should allow enough time for the solution to dry out. While an initial indication of quality can be assessed a day after installation, there will still be water present under the film that can cause visual distortion. Depending on humidity and temperature, final inspection should occur approximately 30 days after application when the water has dried, potentially longer for humid and cooler environments. Thicker films and films with a metallic layer can require substantially longer to completely dry. In addition, some water bubbles can take more than 30 days as well.

HOW TO VIEW:

The customer should view the glass and film from at least six feet, mainly at right angles to the surface. Natural daylight is best for viewing instead of bright, direct sunlight. Be sure that the inside and outside of the window surfaces are clean.

Note that visual clarity may vary depending on several factors. Film installation should be performed after all other construction trades have completed work. The Customer should make every attempt to provide a clean and dust-free work area when the films are installed, paying attention to ventilation systems which may deposit contamination from other work areas. Good installation will minimize the contamination so that it is not obtrusive to the viewer. Examples (and sources) of visible defects are:

- Dirt, debris, hair, and fiber particles (contamination)
- Adhesive gels, film color variation (product)
- Fingerprints, air bubbles, scratches, tears, large gaps, and creases (application)

Some level of contamination near the edges of the film is difficult to avoid and can be expected. Some particles are acceptable where poor frame condition makes contamination unpreventable. Similarly, applications of exterior window films have numerous sources of uncontrolled debris and may require acceptance of some defects.

Gaps between the film and the frame should be typically 1/32 to 1/16 inch (1-2mm). For thicker safety films, gaps may be as wide as 1/8 inch (3mm).

Commercial Solutions Division

3M Center, Building 220-12E-04 St. Paul, MN 55144
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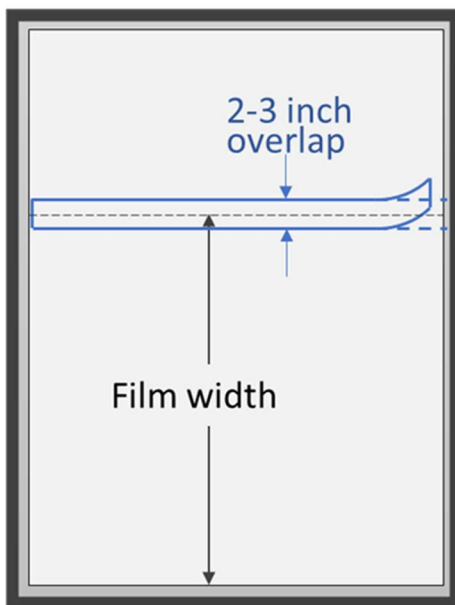
Splices

Some customers may find film splices objectionable, but they are required when both dimensions of the glass are larger than the largest width available for the 3M film. A butt splice is recommended for window film instead of an overlap splice. 3M has not performed industry standard testing with spliced safety film.

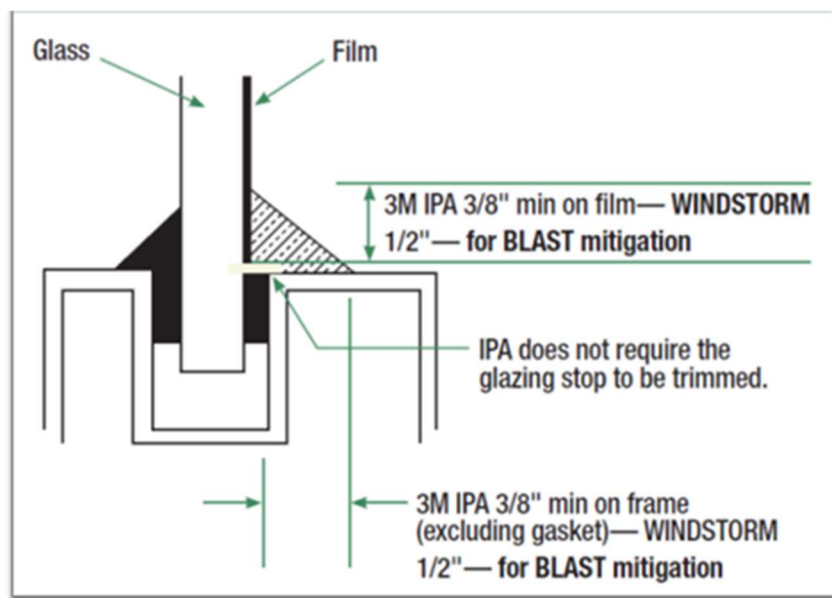
If splices are necessary with **safety film**, the splice should be in a location where impact is less likely (for example, up high for break & entry applications). Typically, this would be a horizontal splice high on the window. For example, a 72-inch wide piece of film can be applied horizontally above the sill, and a second piece above the 72 inches. 3M recommends using an additional 2-3 inch wide strip of clear safety film to overlap the butt splice for best performance, ensuring that at least one-inch of the film is applied on each side of the splice (applied before the Attachment system) as in Detail 1. Some Customers may find this strip objectionable and will need to determine the risk/benefit of not applying the strip.

Any Impact Protection Attachment Sealant (IPA) should be applied smoothly with straight edges with minimal or no concavity to the IPA for best performance. Note the triangular shape of the IPA cross-section in Detail 2. Ideally the Customer should view a mock-up in advance of the application of the IPA.

Detail 1: Splice With Overlap



Detail 2: 3M™ IPA Sealant Typical Configuration



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General Cleaning Instructions for 3M™ Window Films

To prevent any scratching of the Window Film, do not use knives, scrapers, brushes or abrasive cleaning materials on the window. Do not rub vigorously or apply heavy pressure to the window.

Recommended commercially available glass cleaners:

- Windex® Original Glass Cleaner or similar glass cleaner
- 3M™ Glass Cleaner Concentrate #1 (Green Seal™ GS-37 Certified)
- Iso-Propyl Alcohol (can be diluted with water, 2:1) or Rubbing Alcohol
- Other: Water with a few drops of dish soap when using a squeegee.

Recommended cleaning materials and techniques:

When using these materials	And these Cleaning solutions	Use this Cleaning method
Non-abrasive, good quality paper toweling	Glass Cleaners (above)	Light wiping motion
Clean, soft cloth or microfiber cloth	None (Dry)	Light wiping motion
Clean, synthetic sponge and rubber squeegee	Water with dish soap	Light wiping motion then remove solution with the rubber squeegee

Additional Tips:

- Use a different towel for cleaning the frame/sills. Be sure to use separate cloths/sponges/buckets/squeegees for outside and inside windows.
- Low quality brown paper towels and newspaper are not recommended.
- Caution is recommended around splice areas. Wipe along the splice, not across.
- Do not leave the film wet, but squeegee it dry after cleaning.
- The detergent and water application solution can also be used for the initial cleaning of the film after installation.

Important Note for 3M™ Thinsulate™ Climate Control Window Film:

DO NOT use a **damp microfiber** cloth.

DO NOT **rub repeatedly** in one area.

DO NOT apply **heavy pressure** in any cleaning operation.

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General Use Instructions for 3M™ Window Films

- Do not affix tapes, suction cups, stickers, etc. to the film surface. Doing so will reduce the low emissivity properties of the film and will void your product warranty.
- Removal and replacement of window grids will reduce the low emissivity properties of the window and can damage the film.
- DO NOT WASH newly installed windows for 30 days to allow adhesion to build. This page can be left behind after window film installation, attached to the frame.

Use of 3M™ Disinfectant Cleaners

The following 3M™ Disinfectant Cleaners can be used on properly applied 3M Window Film without damaging the window film:

- 3M™ Neutral Quat Disinfectant Cleaner Concentrate 23
- 3M™ HB Quat Disinfectant Cleaner Concentrate 25
- 3M™ Disinfectant Cleaner RCT Concentrate 40
- 3M™ Quat Disinfectant Cleaner Concentrate 5
- 3M™ MBS Disinfectant Cleaner Fresh Scent Concentrate 41
- 3M™ MBS Disinfectant Cleaner Concentrate 42



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