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Date: December 21, 2005

From: The Building Code Advisory Board (BCAB)

To: Press Release

Palm Beach County building jurisdictions do not require permits to install window film. Window film does not qualify under the Florida Building Code as approved hurricane protection for single-family dwelling units. Please see the attached clarification on window film from the International Window Film Association.

## Press Release to Media from International Window Film Association

Florida residents are becoming increasingly concerned about property protection during hurricanes and are seeking cost effective means to mitigate damage. Since occupants often cannot always evacuate during a hurricane, personal safety is also becoming an increasing concern. Window films are being purchased by homeowners who are seeking such protection. While it is true that security (window) films can provide substantially more protection from injury and property damage than unprotected glass, statements advertising window film as “approved hurricane protection” or “alternative to hurricane shutters” are, at best, misleading to a largely uneducated public or, at worst, fraudulent. Other published statements made by competitors of the window film industry that “window film is no better than duct tape” are equally inaccurate and misleading.

The International Window Film Association recommend that consumers consider the following information and take the appropriate steps to educate and protect themselves from uninformed or unscrupulous vendors when buying window film products for protection from storms and specific wind events, such as hurricanes. In addition to the information presented herein, the International Window Film Association and its manufacturer members have educational materials and training programs available for their members and customers, respectively, as well as for the public. Much of this information is publicly available on the Internet at either our website ([www.iwfa.com](http://www.iwfa.com)) or on individual manufacturers’ websites (links can be found on IWFA website).

### GENERAL

“Window film” is a generic term that is used to cover a wide range of products that perform various useful functions. Such products include energy-saving solar control films, UV protection films, decorative films, and safety/security films. Unlike other types of window film, safety/security films are suitable for use when a building owner desires increased protection against easy entry through windows or doors by criminals, or to hold glass fragments together in areas where bombs or explosions can occur, or in hazardous locations where injury due to human impact can occur, such as sidelites adjacent to entry doors, or on sliding glass doors. Research conducted after glass breakage occurs, regardless of the cause, points to flying or broken glass as one of the main causes of injury or death.

Safety/security window films do not protect against glass breakage. They are designed to help hold glass fragments in place **after glass breaks or to hold the broken glass in the frame longer after glass breaks** (when film is used with an attachment system). These types of window films offer an improved level of protection from glass fragments once glass is broken, regardless of the cause of breakage.

Although there may be some incidental added safety to any window covered by any type of film, there is no intended safety/security benefit, whether expressed or implied, other than what the product is tested for by its manufacturer.

Consumers should ask to see window film manufacturers' literature, which states the specific benefits of each particular product. Window film manufacturers have copies of the laboratory test reports validating that their products do, in fact, meet specific impact testing under specific conditions. The seller of the window film products must present the customer with information that clearly indicates the test data from the manufacturer of the product showing that it has, in fact, achieved the stated level of performance on the same type of glass in the same environment in which it is being offered for sale. *Note that all products specified for an end use must have passed the appropriate performance testing identified for that specified end use.*

To determine the appropriateness of the test reports that a consumer may request for products related to protection during a high wind event, see the information below for both new and remodeled construction, and also for retro-fitting existing construction with window film products.

## **FLORIDA BUILDING CODE REQUIREMENTS FOR NEW CONSTRUCTION, OR REMODELING, WHERE WINDOWS AND DOORS ARE BEING REPLACED -**

The new 2004 Florida Building Code (FBC) became effective on October 1, 2005. Any product, including window film, must be tested and approved per FBC Section 1609.1.4. Section 1609.1.4 states that windows (glazed openings) and doors with windows shall be impact resistant (such as laminated glass) or shall be protected with an impact resistant covering (such as shutters or other approved product) meeting the impact testing requirements of any one of the following approved test methods:

SSTD 12 -99

ASTM E 1886 and ASTM E 1996

Miami-Dade TAS 201, 202 and 203

## **IMPACT TESTS REQUIREMENTS -**

Each of these three impact tests listed above has two types of missile tests - The Large Missile Test and the Small Missile Test, and each missile test is followed by a series of over 4000 positive and negative pressure cycles:

**The Large Missile test** is a 9 lb. 2x4 which impacts the test specimen at 50 feet per second, which is intended to apply to glazed openings located within 30 feet (9.1 m) of grade and is appropriate for buildings located in wind speed zones over 100 mph. *(It is important to note that some of the test methods also have a reduced Large Missile Test consisting of a 4 lb. 2x4 which is intended to apply to buildings located in up to 100 mile wind speed zones - see map below)*

**The Small Missile test** is two grams of solid steel balls each which impact the test specimen at 130 feet per second, which is intended to apply to openings located more than 30 feet (9.1 m) above grade.

**Cyclic Wind Loading Test -**

INWARD ACTING PRESSURE		OUTWARD ACTING PRESSURE	
RANGE	NUMBER OF CYCLES 1	RANGE	NUMBER OF CYCLES 1
0.2 P MAX to 0.5 P MAX 2	3,500	0.3 P MAX to 1.0 P MAX	50
0.0 P MAX to 0.6 P MAX	300	0.5 P MAX to 0.8 P MAX	1,050
0.5 P MAX to 0.8 P MAX	600	0.0 P MAX to 0.6 P MAX	50
0.3 P MAX to 1.0 P MAX	100	0.2P MAX to 0.5 P MAX	3,350

A product is deemed to have passed with the Large Missile Impact Test if three test specimens reject two out of three Large Missile impacts without penetration and resists the cyclic pressure loading with no crack forming longer than 5 inches (127 mm) and 1 / 16 inch (1.6 mm) wide through which air can pass.

A product is deemed to have passed with the Small Missile Test if three test specimens reject the small missile impacts without penetration and resist the cyclic pressure loading with no crack forming longer than 5 inches (127 mm) and 1 / 16 inch (1.6 mm) in width through which air can pass.

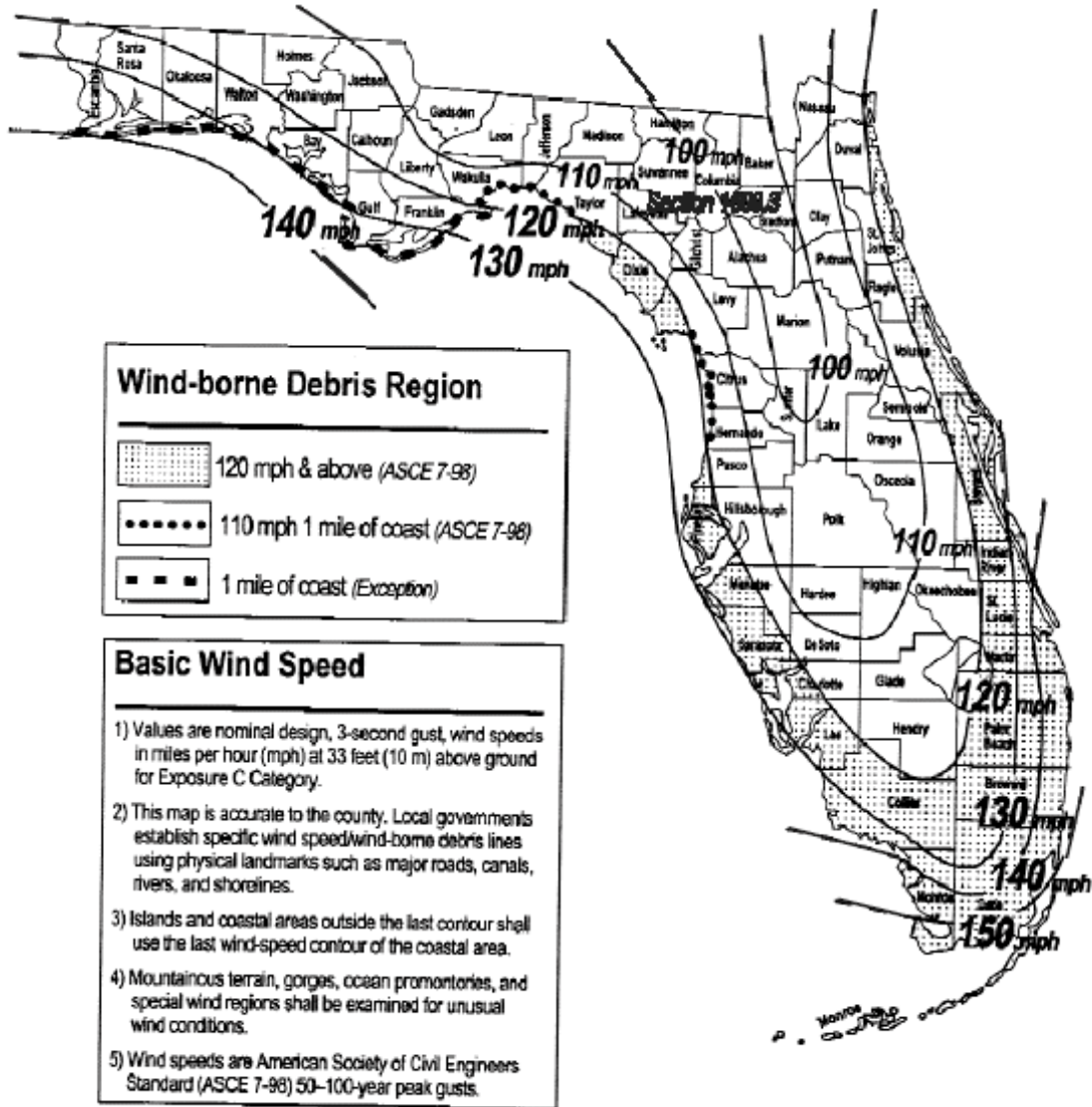
As of the summer of 2005, the IWFA is not aware of any security window film product that has successfully passed the Large Missile (9 lb. 2x4) Impact Test followed by the cyclic loading test. Such a product, if it exists, would meet the new building code requirements for glazed openings in the lower 30 feet of **new** construction in Palm Beach County. ***One very important note: meeting the impact part of the test without meeting the cycling part of the test is not approval*** as being code-compliant, but may only demonstrate some lesser protection level.

Several security film products have passed the small missile and cyclic loading test, which would comply with Florida Building Code requirements for glazed openings in all area of Florida where the wind speed zones are 100 mph or less, **or in all wind speed zones 30 feet above grade**. Additionally, some films installed in specific installation configurations, which include attachments to the framing or other considerations, have met the "large missile" requirements of the 90 - 100 mph windborne debris zone as defined by SSTD 12-99. This is the 4 lb. 2X4 traveling at 40 feet per second, impacting the test specimen once in the center and once in the corner. Any claim by a seller that his/her products has met **any impact test**, including human impact in hazardous locations, should alert the consumer to ask for a copy of the **actual written approval** for the specific product in question if the consumer is seeking the code-approved protection level.

# FLORIDA WIND SPEED ZONES

All coastal counties in Florida are in 120 mph wind speeds zones or greater. Palm Beach County, east of Seminole Pratt Road, is in the 140 mph wind speed zone.

FIGURE 1609  
STATE OF FLORIDA  
WIND-BORNE DEBRIS REGION & BASIC WIND SPEED



## RETRO-FITTING WINDOW FILM ON EXISTING BUILDINGS -

It is imperative that the test data presented to consumers is consistent with the customers' expectations for performance in weather-related events, particularly where the installation is being retro-fitted on existing construction and is NOT being upgraded to be code-compliant with the impact requirements for new construction.

Previous codes did not contain today's stringent building requirements for hurricane prone regions, and as a result, many components of existing Florida buildings, such as windows, sliding glass doors, and doors with glass openings, may provide little protection against windborne debris and flying glass. Any level of improvement may help mitigate losses. However, in choosing what level of protection is needed, building owners need to carefully evaluate their own wind speed zone, product options, product capabilities and limitations, costs, their own hurricane readiness or evacuation plans, and their expectations regarding product performance before, during, and after a hurricane.

Orientation of the building and anticipated wind speeds based on exposure to the wind direction, proximity to the coastline, terrain, proximity of potential missiles (such as roof shingles from nearby buildings, or tree limbs), building age and condition, and height of window openings above grade, insurance discounts, and similar issues are also factors to be considered when determining how much protection is needed in an existing building.

The window film manufacturers provide training to their dealers and installers, but the trade is not regulated by the Florida's Department of Professional Regulation and no license is required to buy or install window film. No permit or inspection by the local building department is required on existing construction where the window or door is not being replaced. *Therefore, the individual consumer assumes the responsibility for making the best choice for their situation.*

The International Window Film Association is extremely concerned about erroneous or misleading information overstating the benefits of film products as related to occupant safety and property protection during hurricane or other high wind events. Although security film provides a specific level of impact protection regardless of the cause of the impact, there are locations where security film is an inappropriate choice for hurricane protection. Conversely, there are locations where security film is a definitive improvement over no protection at all. The fact still remains, that there is an element of any industry, which would prey on the ignorance or fear of the public just to "make a fast buck." Of equal concern are consumers who, acting on impulse or out of fear, may be accepting claims that are not verifiable.

To overcome this misinformation barrier, the IWFA has taken the following steps:

- Prepared an accurate statement of the general benefits and shortcomings of films used in hurricane situations.
- Sent letters to all regional state attorneys' offices in Florida with copies of the abovementioned statement.
- Sent copies of this letter to all media outlets of which the IWFA is aware in Florida.
- Posted the industry statement on its website at [www.iwfa.com](http://www.iwfa.com), in both the public and industry sections.
- Sent copies of the letters and statement to all Florida state attorneys, to all major media outlets in Florida, and to all members of the IWFA in Florida.

Contact IWFA directly by phone (276-666-4932), by fax (276-666-4933), or by e-mail ([admin@iwfa.com](mailto:admin@iwfa.com)) for more information or assistance.

## **WHERE TO GET MORE FACTS ABOUT SAFETY/SECURITY FILM USES**

[www.iwfa.com](http://www.iwfa.com)

International Window Film Association

[www.protectiveglazing.org](http://www.protectiveglazing.org)

Protective Glazing Council

[www.protectingpeople.org](http://www.protectingpeople.org)

Protecting People First Foundation

[www.safeamerica.org](http://www.safeamerica.org)

SafeAmerica Foundation

[www.oca.gsa.gov](http://www.oca.gsa.gov)

General Services Administration