

# Security Window Film and Schools: Learn The Facts



## What is Security Film?

Security Window Film is a highly engineered, polyester film composite. It undergoes various testing and treatments to provide, a high degree of safety. Additional coatings on security films can offer other features such as solar control, glare protection, privacy and decorative enhancements for windows. Unfortunately schools have become targets of violent attackers. Next to employing trained personnel and other conventional security measures, school window film may be considered as one of the best ways to increase the security of any educational institution.

Glazing is a popular component of buildings. However, as its use increases so does the risk of collisions, accidental breakage and personal injury. It is also frequently the most vulnerable part of a building, making it a target for unauthorized intruders, vandals, thieves and terrorists.

Security Window Film may improve the security of windows without changing their appearance. It is non-disruptive to install and requires no additional maintenance or operation.

## Accidental Breakage

Accidental breakage can occur when people or property come into contact with glazing. Whether accidental or deliberate, glass breakage can lead to serious or even fatal injury.

If impact with glazing does occur and the glass breaks, security Window Film works to hold glass together in place, lessening the risk and severity of injury.

## Adverse Weather

Powerful winds, hurricanes, earthquakes and tornadoes can be damaging to people and property.

Security Window Film may add shatter and tear resistance to glazing, helping it to absorb the impact of any debris, and helping the glass to remain intact during adverse weather conditions.

Substantial damage can be caused by wind-borne debris colliding with glazing. In addition, if a window shatters and an opening is created, wind pressure inside a building may cause catastrophic damage. When the glass window remains in the window frame with security film, even if the glass itself has been shattered, the interior is more protected from the elements.

## Blast Mitigation

Glazing is frequently the most vulnerable part of a building and in the event of a bomb attack it can become the most dangerous.

The majority of injuries associated with bomb blasts are not caused by the blast itself, but by the glass shards from surrounding windows and doors that are blown out by the shock wave of the blast itself.

Security Window Film helps to protect people and property by holding the glass together in the event of an attack.

Security can be further improved with the use of an edge retention or 'anchoring' system, which uses either hardware or a construction adhesive or sealant to attach the combined glass and film to the window frames. A variety of such systems are available.



# Security Window Film - IWFA Fact Sheet



## Bullet and Ballistic Attacks

The official position of the IWFA is that window film by itself has not been tested to be bullet-proof. Claims to the contrary should be thoroughly investigated and the IWFA should be contacted whenever such a claim is made.

Whether accidental or deliberate, projectiles such as bullets from gunfire may pass through glazing, and into a building.

The projectile itself can cause harm to occupants, however glass spall can also be as dangerous. Glass spall occurs when a projectile causes glass to break into fragments and travel in the direction of the projectile.

The application of Security Window Film may not prevent the entry of a high velocity projectile such as a bullet, but it may increase security by holding the glass together, to reduce spalling and window failure.

## Multiple Benefits

Security Window Film is cost effective and non-disruptive to install, and may offer a range of additional benefits such as improved thermal comfort, increased privacy and improved appearance. Based on proven energy savings, security films may also have a fast payback period. These films block 99% of the sun's harmful UV rays that contribute to fading of furnishings and cause harm to the skin in the form of cancers, cataracts and wrinkling.



## Testing and Certification

Each Window Film manufacturer extensively tests their products to ascertain individual performance and ensure continued durability. There are many existing standards to which products can be tested, however security window films are usually tested to the following standards;

### *Impact*

ANSI Z97.1-2015, impact testing for any glass with applied security film and the Consumer Product Safety Product Act Regulations under section 1201, or 16CFR CPSC 1201.

### *Blast*

International Standard blast ISO 16933 and ASTM 1642 blast tests determine the blast mitigation capabilities of the glass with film-system.

*The standard of security film required will depend on the level of protection specified. For best results, seek advice from an IWFA member company.*



## Professional Installation

Installer, Distributors and Manufacturers of window films can be found in the Business Locator on the IWFA's website.

Security Window Film is cost effective and non-disruptive to install, and may offer a range of additional benefits such as improved thermal comfort, increased privacy and even improved appearance.

Professional installation is highly recommended to ensure that the full benefits of a Security Window Film are achieved.

## Warning: Be Wary of Claims

Sometimes seemingly reputable companies may make claims that are not backed by recognized, industry standard laboratories or industry recognized research.

For example a video that shows glass with security film installed claims to block the penetration of high velocity bullets may in fact be dependent on the glass the film is installed on, and not the film itself.

The International Window Film Association is a nonprofit resource and can assist regarding questions of the validity of claims for security films and ballistics.

# Security Window Film - Frequently Asked Questions



## The Current Environment

It is important that schools and other organizations understand that windows are often the most vulnerable entry point of any building.

Installing thick impact resistant glass or a flexible polycarbonate system may offer a solution, but the products can be extremely expensive, and, for various reasons, not always feasible. Security window film may provide the best and most cost-effective solution for protecting a building and its occupants.

The average U.S. public school is more than 40 years old. Statistics indicate most have not had a major renovation in 12 years, according to the US Department of Education. This leaves a majority of school leaders looking to improve security within the constraints of the annual budget.

Newly constructed schools may be equipped with attack resistant doors and windows, but existing schools likely need budget-conscious retrofit solutions. And even newer schools may not have been built with a total security approach leaving areas open to attack.

The latest research into violent crimes shows if violent intruders are delayed even briefly, they may move on. The FBI reports nearly 70% of shootings in the last 13 years ended within five minutes, and 60% before first responders arrived, so every second of delay counts.

## Can it Stop Intruders?

Security film may delay entry and slow them down, allowing time for first responders to arrive and occupants to react or escape. Security window film prolongs the amount of time it takes for something or someone to get through the glass. Security window film cannot stop a determined intruder from making entry, but may hinder their effort.

Security films help to hold glass in place during adverse weather conditions, explosions, glass impacts; whether intentional or not; and even bullets that pass through. No window film is going to resist a determined attack, but it may provide the time to react and alert authorities by delaying entry.

## Does it Impact Appearance?

Security window film allows schools to prepare for the worst-case scenarios without significantly changing a building's appearance.

Security window film can be visually clear to create an unseen barrier or can be designed to prevent seeing into a building. They are usually thicker than other standard window films and constructed by laminating multiple layers of thinner films together.

The film may also be anchored to the window frame either by mechanical means or construction sealants, so the glass is essentially tied into the window frame. Security window films have undergone a high degree of professional and independent laboratory testing and manufactured to meet a long list of criteria and industry standards. They are used by many government installations and buildings including the White House.

## Are There Other Benefits?

When designed to save energy, as well, security films may reduce solar heat gain by as much as 80 percent. For energy savings and return on investment, they are proven to be the most cost-effective solution with a payback period in many instances of less than five years. This benefit is likely to offset the capital costs of adding security film to a school. Security films work right away 24 x 7 even when there is not a threat and are considered a passive system not requiring human intervention to activate.

Full window replacements for energy savings are reported to have decades long payback periods, according to research from the Building Technologies Office of the Department of Energy. The study lists window replacement payback periods for different climate zones at anywhere between 32.4 years (Las Vegas) to 151.8 years (Duluth).

Another safety feature that may be overlooked is the UV barrier that security film offers by blocking 99% of the sun's UV rays that pass by unprotected glass and onto the skin, eyes and lead to such ill affects as skin cancers and cataracts. In short, safety window films can be a multi-solution product that answers many needs such as energy savings, UV protection from the sun's harmful rays, glare reduction, improvement of the appearance of a building and in general upgrade window performance to today's standards.



## What About a Warranty?

Most security films are warranted for a period of 10 years to a limited lifetime. In California, window films in general are required to be warranted for a minimum of 15 years if the installation needs to comply with the building code.

If the building has windows that are under a manufacturer warranty, many manufacturers may include a warranty that not only covers the security film that was professionally installed, but also the window itself.

## Is Installation Disruptive?

In general the installation of window films can be completed with minimum disruption to the building's occupants and often in a matter of days, not weeks or months.

Installation time depends of course on scheduling and the size and scope of the project. Correctly installing security window film requires a high degree of skill and should be done by professional installers.

## Can Windows Be Cleaned?

Industry standard security films come with a resilient scratch and abrasion-resistant coating to keep the film looking great for years. Following the curing period, they may be cleaned with normal cleaning solutions, except for the use of abrasive tools or solutions. Check with the supplier of the product for further recommendations on cleaning.

## How to Find an Installer

Installers, Distributors and Manufacturers of security films can be found in the Business Locator at [www.iwfa.com](http://www.iwfa.com)

## What is the IWFA?

The International Window Film Association (IWFA) is a nonprofit organization and a third-party industry source for accurate technical information on window film products and its uses. The IWFA delivers standardized training and educational materials and seminars to industry members, building and energy organizations and the public.

## About the IWFA

The International Window Film Association (IWFA) is a unified industry body of window film dealers, distributors, and manufacturers that facilitates the growth of the window film industry through education, research, advocacy and public awareness.



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## Member Manufacturers

Always seek advice from an IWFA member company, distributor or dealer found in the 'Business Locator' at <https://iwfa.com/business-locator>



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