

Enhancing the safety of existing glazing



What is Window Film?

Window Film is a highly engineered, optically clear, polyester film composite. It undergoes various treatments to provide safety, security, solar control and decorative enhancements for building and transportation glazing.



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 thieves and vandals.

Window Film can improve the safety of glazing without changing its appearance. It is non-disruptive to install and requires no additional maintenance or operation.

This fact sheet outlines the uses and benefits of Safety Window Film.

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, Safety Window Film ensures that it breaks safely and is held in place. This reduces the severity of immediate injury, and risk of subsequent injury.

Adverse Weather Conditions

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

Substantial damage can be caused by wind-borne debris such as roofs, trees, doors etc colliding with glazing. In addition, if glazing shatters and an opening is created, wind pressure inside a building can cause walls and roofs to collapse.

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

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, they are caused by the glass shards from surrounding windows and doors that are blown out by the shockwave.

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

Safety can be further improved with the use of an edge retention system, which holds the combined glass and film to the window frames. A variety of such systems are available.





Gunfire and Bullet Attacks

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 be equally as dangerous. Glass spall occurs when a projectile causes glass to break into fragments which travel in the same direction as the projectile.

Although the application of Safety Window Film cannot prevent the entry of a high velocity projectile such as a bullet, it can increase safety by holding the glass together, therefore reducing spalling .



Types and Shades

There are many grades of Safety Window Film, with varying levels of performance, thickness, and certification. Most Safety Window Films are clear, however combination Solar-Safety Window Films are available which can also offer solar control benefits.

The correct product will depend on the specific requirements of your project. Always seek professional advice from an EWFA member company.



Performance, 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 safety and security window films are usually tested to the following standards;

Impact

European Standard EN12600
Typically achieved by safety films 100µ+

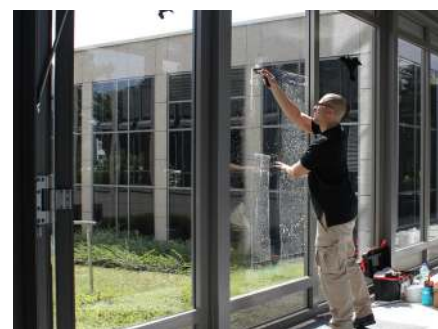
Attack

European Standard EN356
Typically achieved by safety films 175µ+

Blast

International Standard ISO16933
Typically achieved by safety films 200µ+

The standard of film required will depend on the level of protection you wish to receive. Always seek advice from an EWFA member company.



Professional Installation

Safety Window Film is cost effective and non-disruptive to install, and can 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 Safety Window Film are achieved.

More Information

For further information please visit the EWFA website at www.ewfa.org

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