

Safety and Security Film



The dark side of glass

Windows and glass materials sit at the heart of modern architecture and car design, but glass does have a flipside - the risks associated with breakage. Safety and security film can mitigate the dangers posed by glass like injury, property damage or ease of ingress for thieves.



How it works

Security and safety film is a tough, clear polyester film less than 1mm thick with a safety-strength adhesive. The combination of film + adhesive helps hold glass together when broken, so the shards remain stuck to the film instead of projecting outwards.

This reduces the chance of injury or damage, and makes it harder for thieves to smash a window to gain entry.

When applied internally, annealed glass with certified safety film can be brought up to meet the safety standard AS 1288 2021 Section 5, *Criteria for Human Impact* (please refer to *WFAANZ Grade A Safety Labels* technical bulletin for further information).

Safety film can be applied to any smooth glass surface, and comes in different colours and thicknesses. The thicker the film, the stronger the substrate it's applied to becomes. Solar control, UV reduction safety film is also available.

Where it goes

Safety film is used on car windows, easily accessible windows, toughened glass materials, high traffic areas, glass balustrades, shower screens, glass in and around doors, shopfronts, where there is risk of someone falling through the glass, or large expanses of glass like sliding doors.

Homes, offices and government buildings around the world also use safety film to help protect against spontaneous glass explosions, bomb blast or extreme weather conditions.

When applying safety film 'at height' or in locations where a falling pane poses a risk, e.g. glass balustrades in apartment buildings or shower screens, care should be taken to anchor the glass to prevent serious accident. Contact WFAANZ for more information about anchoring.

SPONTANEOUS GLASS BREAKAGE

- ☐ **What is it?**
Spontaneous glass breakage (SGB) happens when toughened glass materials like shower screens, balustrades, pool fences, etc. suddenly explode
- ☐ **Why does it happen?**
While SGB events seem random, oftentimes Nickel Sulfide (NiS) inclusion, physical impact or damage to glass edges is at fault

NiS INCLUSION

NiS is an invisible particle that can form inside glass during manufacture.

These particles expand during the lifespan of the glass, and usually never cause a problem.

Toughened glass has about four times the strength of normal glass. Its strength comes from a balance of tensile and compression forces put into the glass during manufacture.

Sometimes the expansion of NiS particles disrupts the balance of these forces inside toughened glass, causing the ENTIRE pane to explode.

Safety film will not prevent SGB, but it can lessen the associated risks.

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