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Glass and Glazing Federation

ADVICE FOR TRADE AND CONSUMERS

# Window Film

Application and Solutions

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# Window Film is a retrofit layer applied to the internal or external surface of glass, providing a huge range of benefits

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## Improving Energy Efficiency

01

The use of air conditioning in the UK has rocketed 60 per cent in the past 20 years, but air conditioners are not efficient. Using them to cool a building often uses significantly more energy than it does to heat one.

The UK Building Research Establishment has reported that as much as 40 per cent of the load on air conditioners comes from countering heat gain from the sun shining through the window. So how does Window Film work? Put simply, it keeps out the sun, meaning less work for the air conditioner and in turn, lower energy bills and CO<sub>2</sub> emissions. In fact, using the correct film can cut air conditioner load by almost a third, meaning the initial cost can be recouped in saved energy bills over three to five years. And as pressure grows on governments and corporations to meet commitments to meet CO<sub>2</sub> reduction targets, Window Film can help a business move towards a cleaner and greener way of operating.



## A Comfortable Working Environment

02

Studies have shown that variations from 20-23C in workplace temperature have a considerable effect on productivity and quality.

Concentration levels are said to drop by as much as a half if it gets warmer than 24C. If it rises above 25C in factories, staff are more prone to accidents. Further, trade union and staff organizations can bring pressure on managers to address an unduly warm workplace. Window Film helps by reducing solar heat gain, maintaining a more stable and comfortable environment.



## Safer And More Secure

03

Window Film helps employers meet their duty of care to staff, adhere to workplace and health and safety regulations, and addresses security risks.

Applying Window Film increases impact performance in line with Workplace (Health Safety & Welfare) Regulations 1992, specifically Regulation 14, and meets current DDA regulations.

It ensures damaged windows stay in place and can hold dangerous shards together, keeping people safer. It complies with the current European standards such as EN12600 for the classification of safety glazing.

Window Film also has benefits for security. It creates an invisible barrier to your building that can mitigate against damage from a bomb blast or other explosions.

Combined with anchorage and containment systems, it can protect against burglars, slow down intruders and reduce the chances of smash and grab crime. It can also contain glass when used overhead should the glass be in a position to fall.

By adding one-way or obscure films, you can keep your property out of sight from opportunistic criminals.



Window Film complies with numerous security tests to upgrade glass including GSA standards as well as ISO16933, ISO16944 & EN356.

## Protection From The Sun

04

Sunlight can damage fabrics, furnishings and even skin, but Window Film can guard against the sun's harmful effects.

As much as 90 per cent of all fading is caused by solar energy, of which ultra-violet light causes 40 per cent, visible light 25 per cent and solar heat 25 per cent.

Window Film slows down this effect by as much as a half. In other words, it doubles the life of your fabric or furnishing.

And when it comes to people, Guy's and St Thomas' Hospitals in London, says 15 per cent of the population suffer from light sensitive diseases, with more than 90 per cent of all skin cancers caused by the sun exposure.

But many people do not realize they are exposed to the sun while indoors at work or at home. Window Film provides an important layer of protection against the harmful effects of the sun, including the onset of skin cancer and premature aging.

It blocks up to 99.9 per cent of damaging UV rays without blocking out the light, and in doing so protecting skin conditions such as lupus and XP (Xeroderma Pigmentosum).



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## Fewer Accidents

05

Health and Safety legislation stipulates that all commercial buildings with full-height glass must have some form of manifestation on the glass for public and employees' safety.

This is so people can see the glass before walking into it, whether entrance doors or extensive glass areas.

Document M of the Building Regulations, covering access to and the use of commercial buildings, states that manifestation should be at least 50mm wide and positioned at two levels.

The lower level should be between 850mm and 1000mm from finished floor level and the higher between 1400mm and 1600mm.

These stipulations are designed for disabled and able-bodied people's safety in the work place.

The manifestation can be used to provide privacy, safety, decoration or a mixture of all three. Indeed, frosted Window Film has grown from simple strip, circle or square designs to include corporate logos.





## Creating Privacy

06

Window Film can provide privacy in different ways, rendering glazing either one-way, partially or completely opaque.

Frosted, translucent Window Film prevents clear vision in or out, day and night.

Reflective, mirrored Window Film can create one-way vision, assuming the light ratio is correct. Typically this has to be 7:1 to achieve the ideal effect.



## Which Window Film Is Best For Me?

07

The use of GGF Window Film Group members is recommended to ensure the work is of the highest quality and complies with the latest regulations.

With so many different types of glazing installed throughout the UK, it needs an expert to assess the possibilities and provide the best solution.

The GGF Window Film Group works closely with glass and Window Film manufacturers to ensure all of its recommendations and specifications are up to date and comply with current legislation.

Group members are often called upon to share their expertise when test measures are carried out and specifications drawn up.

Using an approved expert will ensure you end up with the correct solution to your particular needs.



# Window Film Frequently Asked Questions

08

## What is Window Film?

Window Film is a base of clear polyester that is either dyed, extruded or metallized. It has a range of benefits including reducing heat and glare from the sun, increasing comfort and security and minimising energy usage.

## Can I install Window Film myself?

Although it is possible for a practical person to install standard Window Film, an experienced technician is recommended. Apart from ensuring an acceptable aesthetic finish, you can benefit from a full warranty, typically 10 years.

## Why use a GGF member?

The use of a GGF member will ensure the installation meets all the stringent industry standards. These cover all aspects from visible appearance through to thermal compatibility to make sure the installation does not cause any detriment to the glazing system.

## Is Window Film suitable for new and existing buildings?

Yes. However, its greatest use is being retrofitted to existing buildings.

## Will Window Film stop my conservatory overheating?

The use of a high-performance Window Film will dramatically reduce overheating, making the conservatory a much more comfortable environment.

## Is Window Film bullet proof?

Window Films is not bullet proof, blast proof or burglar proof. However, it will give a greater level of safety and security when used for these purposes. You should always ask for the appropriate certification when using Window Film for these reasons.

## How is Window Film maintained?

It should be cleaned in a similar way to glass, using a soapy water solution and squeegee. Abrasives of any type should be avoided.

## Do I need planning permission?

No. Planning permission is not normally required to apply Window Film.

## Does Window Film improve both U and G values?

Yes. Window Film will improve both the heat gain and heat loss properties of the glazing system.

# The GGF Window Film Group

09

This brochure has been produced by the GGF Window Film Group which consists of industry experts who represent GGF Member companies.

The Window Film Group holds quarterly meetings to discuss all technical issues relating to window film applications and solutions. For more information on the GGF Window Film Group or to find GGF Member Companies who offer Window Film Application and Solutions then please contact the GGF on:

Telephone: 020 7939 9100  
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Find out more about the Window Film Group on the GGF Website: [www.ggf.org.uk](http://www.ggf.org.uk)

## Contacting the GGF

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