



TRANSITIONAL WINDOW FILM

TRANSITIONAL WINDOW FILM IS A REVOLUTIONARY NEW WINDOW TINTING FILM THAT REACTS TO SUNLIGHT

- **Up to 99.5% protection from UV radiation, a leading cause of skin cancer**
- **Up to 95% infrared protection**
- **Reduce glare**
- **Works every time**
- **Zero maintenance**
- **5 year manufacturer's and installation warranty**

The film is fitted to the inside of a glass window. When exposed to harmful UV radiation, the photochromic chemical reaction takes effect, darkening the tint of the window, reducing the amount of UV radiation, heat and visible light penetrating the glass.

All of this happens automatically, every time it is exposed to the harmful sun's rays. This offers effective and reliable protection, free from mechanical failure, requiring zero input from the user.

TRANSITIONAL TINT FILM BENEFITS

COMFORT

The transitional tint reduces glare when needed, without fully blocking out the view. The advantage is when the tinting is not required, on a dull day or during the night, the tinting produced by the film is minimal, enabling a clear view through the window. When the sun's rays intensify during a sunny day, the tinting effect works to reduce the glare and heat projected through the window.

COST EFFECTIVENESS

As the transitional window film reduces the level of heat projection, the cost of air conditioning is greatly reduced, resulting in a net-cost saving.

The film can also be used to help control hot/cold spots in buildings with reduced infrastructure and associated costs.

SAFETY

FROM THE SUN

UV-B causes sunburn, and prolonged exposure over many years has been linked to skin cancer, cataracts and other eye disorders. The increased total solar energy rejection (TSER) means that windows will project less infrared heat, reducing heat exhaustion from people inside, improving living comfort and working conditions.

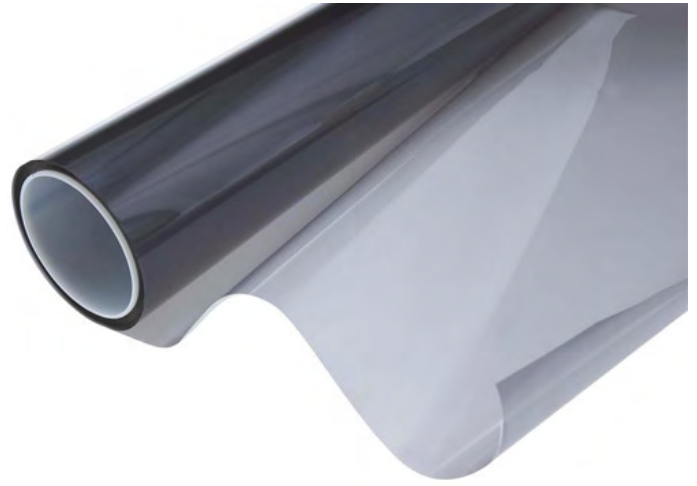
FROM SHATTERED GLASS

Every year, hundreds or thousands of people are hurt, injured or killed by shards of flying or falling glass. An added advantage of the Transitional Window Film is that it also acts like a blast film, improving safety from shards of broken glass. This helps to protect people and belongings near to glass by helping to prevent shards from flying away from the window and retaining the glass together. This is especially useful if a flying object strikes the glass, causing it to shatter.

It should be noted that Transitional Window Film is not a specific blast film and should not be relied upon for protection in high risk areas, such as places prone to hurricanes or earthquakes.

CONVENIENCE

A significant advantage of the film is how convenient it is. The photochromic process is automatic, requiring no input from a person or electrical system. With zero effort from a homeowner, worker, or member of the public, they will all be protected from the sun's harmful rays. If a homeowner is leaving for a long trip and is concerned about the sun's fading effect, they need not worry if their windows have transitional tint.



PROTECTION FROM FADING DUE TO SUN BLEACHING

The transitional tint helps protect fabric and wood furnishings, carpets, art and window displays from the effects of sun bleaching. There are four standard factors for fading colours including:

- UV light: 40%
- Visible light: 25%
- Heat: 25%
- Misc: 10% (including indoor artificial lighting, humidity, chemical vapours in the air and poor dye anchorage)

The sun bleaching effect is caused by the visible light, UV light and heat emitted by the sun causing and exacerbating a chemical reaction within the pigment. These three elements account for 90% of the effect of sun bleaching, all of which can be reduced and controlled using transitional tint. This provides a lower cost and very low maintenance method of managing the effects of fading from sun bleaching.

The cost of repair and replacement for items and structures affected by fading is also greatly reduced.



TECHNICAL INFORMATION

HOW GLASS AND SUNLIGHT INTERACT

When sunlight strikes glass, three things happen:

1. Some energy passes through (89%)
2. Some energy is reflected away, also known as 'rejection' (6%)
3. Some energy is absorbed into the glass (5%)

Some of these values can change depending on the type of glass.

When the transitional window film is applied, it increases the amount of energy rejected, thus increasing the amount of energy absorbed into the glass. The result of this is greatly decreased UltraViolet (UV) and InfraRed (IR) light penetrating into the room.



PRODUCT DETAILS

TWF R70

- Thickness: 0.076mm
- UV rejection: 99.5%
- IR rejection: 92%
- Visible light transmission (VLT): 75 – 45
- Shading coefficient: 0.30
- Total solar energy rejection (TSER): 63%



TWF R70+

- Thickness: 0.05mm
- UV rejection: 99.5%
- IR rejection: 85%
- Visible light transmission (VLT): 75 – 30
- Shading coefficient: 0.54
- Total Solar Energy Rejection (TSER): 61%



TWF R75

- Thickness 0.076mm
- UV Rejection 99.5%
- IR Rejection 95%
- Visible light transmission (VLT): 75 – 25
- Shading coefficient: 0.48
- Total solar energy rejection (TSER): 57%



HOW IT WORKS

Our Photochromic film uses a precious metal magnetron sputtering technique & a nano ceramic particle coating technology. For IR blocking, this is achieved by silver reflective. This will result in a slight temperature rise of the glass by 3-5 degrees.

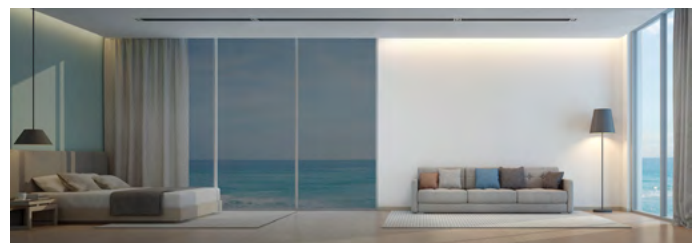
When exposed to UV light, Photochromic film molecules change to create a darkening, tinting effect

The molecules to change their shapes/structure to absorb light when they are exposed to UV radiation.

The Transitional Window Film darkens to a tint that blocks out about 85% of the harmful UV radiation within 10 minutes

When fully tinted, the transitional window film blocks out up to 99.5% of the UV radiation

When the UV light goes away, the molecules in the film return to their original state and the tint diminishes



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Website: transitionalwindowfilm.co.uk
Email: info@transitionalwindowfilm.co.uk
Telephone: 0330 133 1154
Address: 48 Papist Way
Cholsey
Oxfordshire
OX10 9QJ