



Energy

EnviroShield Performance™ ITO



# Increasing solar control without sacrificing daylight transmission

Creating an environment rich in natural light whilst dealing with the broader issues of energy efficiency has long been the challenge of building designers. With the development of building code changes encouraging energy efficient design and growing consumer awareness, this challenge has never been greater.

Traditionally large areas of glass are desirable in building facades but can negatively affect a building's solar and thermal performance; outcomes not favourable to 'green' construction.

The introduction of performance interlayers providing energy efficient glass products has enabled Viridian™ to counter these concerns, allowing the freedom to create visually appealing structures with maximum visible daylight and low-energy consumption. There are various products that deal with the issues of minimising energy; few however, are as versatile as Viridian

## EnviroShield Performance.™

There are two product groups that fall within the EnviroShield Performance range. These performance interlayers are **ITO** and **XIR® 71**.

### ITO

Viridian **EnviroShield Performance™ ITO** increases solar control without sacrificing daylight transmission and is the highest performance single glazed offering from Viridian.

The combination of transparency, daylight transmission, low reflectivity and high performance solar control are qualities that make EnviroShield Performance ITO uniquely suited to Australasian environmental and design requirements. The coating technology combines high levels of solar control and thermal insulation in a laminated glass, without heavy tinting or reflective mirror-like coatings that reduce natural light.

EnviroShield Performance ITO adds a solar control interlayer to the laminate that has been specifically engineered for Australian conditions. It is a world first and a unique product offering that assists with the demands of modern building design. The attributes of EnviroShield Performance ITO are greater solar control with minimal reduction in daylight transmission. EnviroShield Performance ITO Clear offers the highest light transmission solar control product in the Viridian range. It eliminates 50% of solar heat gain. This product has been developed for designers who want the appearance of clear glass with medium performance solar control in applications such as retail entrances.

### Features and benefits

- ◆ High daylight transmission up to 75%.
- ◆ Solar control – up to 70% of solar heat transmission is eliminated.
- ◆ Thermal insulation – a 30% improvement in U Value over standard glass. This is beneficial in both hot and cold climates.
- ◆ 99% UV eliminated for excellent fading protection.
- ◆ Noise reduction – thicker glass and interlayer combinations are available to achieve high noise reductions.
- ◆ Safety – EnviroShield Performance ITO is a Grade A laminated safety glass (AS/NZS2208) and can be used in areas where human safety is paramount, such as overhead glazing.
- ◆ Self cleaning – can be combined with Renew™ self cleaning glass.
- ◆ Security – thicker interlayers are available for increased resistance to physical attack.
- ◆ Warranty, refer to page 122.

### Performance comparison chart

EnviroShield Performance			
Product*	Insulation	Solar	Daylight
ITO Clear 74	3.6	0.54	75
ITO Green 67	3.6	0.45	69
ITO Neutral 54	3.6	0.44	56
ITO Grey 33	3.6	0.35	35
ITO SuperGreen 45	3.6	0.34	46
ITO SuperBlue 40	3.6	0.31	34

For comprehensive performance comparison data refer to page 129.

### Applications

- ◆ Large facades
- ◆ Sporting facilities
- ◆ Atriums
- ◆ Libraries
- ◆ Skylights
- ◆ Museums
- ◆ Shop fronts

### Maximum size

- ◆ 3660 x 2440mm

### How to specify

- ◆ **Select glass name**  
Viridian EnviroShield Performance™ ITO
- ◆ **Select thickness – process**  
8.76mm to 17.52mm
- ◆ **Select colour**  
Refer to performance comparison chart

Note: Thermal assessment may be required for EnviroShield Performance.

# Incorporating a performance interlayer to further enhance solar control

Maximum daylight with minimum energy consumption, Viridian **EnviroShield Performance™ XIR® 71** is a highly specialised glass product. This film is encapsulated in a laminated glass creating a colour neutral, energy efficient product with exceptional solar control properties. XIR rates in the top end for solar control glass products and has the key benefits of an exceptionally high light-transmission of 73% whilst offering superior reduction in solar heat gain (0.50 solar heat gain coefficient). This is comparable and in many cases superior, to the higher end heavily tinted or reflective solar control products. The real beauty of Viridian EnviroShield Performance™ XIR® is that it is colour neutral whilst offering outstanding protection against solar heat gain.

This allows architects the freedom to use large expanses of glass and light without compromising cooling loads and visual clarity. EnviroShield Performance XIR is ideally used in all types of glass facades, either structural or non structural, glass roofs, showrooms, atriums, sporting facilities, and basically anywhere where solar control is required without sacrificing natural daylight.

The universal appeal of XIR remains its maximum performance in a colour neutral product. It can however be further enhanced when combined with other products from the Viridian™ range, such as EVantage or SolTech.

Solar control can be improved and the additional benefit of reducing heat loss is made possible by combining the XIR film with high performance body tints and Low E pyrolytic coated glasses. In addition, the broader aspects of design, colour, structural integrity and noise attenuation can be addressed. Combined with our unique oversize manufacturing capabilities, these provide endless solutions for high end designer projects. EnviroShield Performance combined with Viridian's superior expertise and manufacturing capabilities can help you achieve a solution as individual as your design.



## Energy

### EnviroShield Performance™ XIR®



#### Benefits

- ◆ Improved daylight, with 73% light transmission
- ◆ Increased comfort, with lower heating costs – 0.47 Solar Heat Gain Coefficient
- ◆ Improved transparency on both interior and exterior surfaces. This is not possible when using a coated glass product
- ◆ Available in cut to size only
- ◆ Maximum width – 1980mm
- ◆ Black edge sealant is applied to all edges
- ◆ Available as a laminate, toughened laminate and a laminate in an IGU
- ◆ Outside noise reduced

#### How to specify

- ◆ **Select glass name**  
Viridian EnviroShield Performance XIR®
- ◆ **Select thickness – process**  
8.76mm to 17.52mm – Laminated  
7.52mm to 21.52mm – Toughened/Laminate
- ◆ **Select your performance**  
Refer to performance data on page 124. For other performance levels, contact Viridian.

Note: Solvent manufactures' directions and warnings must be followed at all times and care should be taken to avoid contact with glazing sealants or other materials that may be affected by such. In no case should razor blades, scrapers, scourers or other metallic or abrasive objects be used on the product surface.

Not suitable for exposed edges.

