

Fading

Data Sheet v1

Quick facts

- Fading is caused by a combination of ultraviolet light and heat.
- Over time timber floors, carpets, curtains, blinds, and lounges will fade to some degree.
- Curtains, drapes, blinds, and shutters will only stop UV light when they are closed.
- Replacing fade damaged things – upholstery on lounges, sanding timber floors, etc – is inconvenient and costly.
- Small windows can be equally damaging.
- Elevation matters – north and west facing windows suffer the most sun and therefore are most important to provide protection. UV protecting all rooms may not be necessary.

Fading solutions

- Best solution – Laminated glass: cuts ultraviolet light by 99.9%.
- Good solution – Toned glass: cuts ultraviolet light by between 65% and 85% depending on glass thickness and colour.

Fading basics

Most items contain a dye or pigment to achieve their colour. If kept in direct sunlight the ultraviolet rays will impact on these dyes and pigments causing fading. Due to variations in materials and sunlight exposure and the amount of UV, it is difficult to provide an exact estimate of how long it will take, but as an example a stained timber floor exposed to west facing windows will noticeably change colour within 12 months.

Laminated glass – the best fading solution

Laminated glass is safety glass that has been manufactured by adhering two or more sheets of glass with a flexible interlayer. The interlayer is made from polyvinyl butyral (PVB) and prevents the glass from disintegrating when broken. The interlayer does not impact the transparency of the glass.

The PVB interlayer in laminated glass will block 99.9% of ultraviolet light. This compares to 29% prevented by 3mm clear glass.

The additional benefits of laminated glass are:

- Laminated glass is a safety glass.
- Laminated glass can be a security glass.
- The greater thickness improves acoustic performance.

Beyond clear laminated glass consider:

- Using a toned glass instead of clear to reduce glare.
- Using laminated glass in an IGU to achieve security and insulation.

Toned glass – a good solution for fading

Most toned or coloured glass is created by adding a coloured powder oxide at the start of the glass manufacturing process. Primarily this was designed to reduce solar heat gain and glare, but the oxides also cut some ultraviolet light.

However while toned glass can prevent up to 85% of ultraviolet light, the remaining 15% will continue to damage and fade internal furniture and furnishings. This may extend the life of those items by a few years relative to clear float glass, but the items will still fade at some point in time.



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Stegbar fading solution range

Glass

| Glass thickness | Interlayer thickness | Glass finish | UV transmission % | Increased protection* |
|-----------------|----------------------|-------------------------|-------------------|-----------------------|
| 6.38mm | 0.38mm | Clear | <1 | 2.7 times |
| 6.38mm | 0.38mm | Tone | <1 | 3.5 times |
| 6.38mm | 0.38mm | Tone – high performance | <1 | 8.5 times |
| 4mm | | Tone | 34 | 1.3 times |
| 4mm | | Tone – high performance | 16 | 1.7 times |

*compared to 3mm clear float

Pricing

Windows featuring a Stegbar fading solution will cost more than a basic window glazed with 4mm clear glass.

The percentage below should only be used as a rough guide to the likely premium. This is based on a 1m × 1m single lite window, and will vary depending on size and mandatory glass requirements designated by Australian Standards.

- 4mm tone glass – 5%
- 4mm tone high performance glass – 14%
- 6.38mm clear laminated glass – 15%
- 6.38mm tone laminated glass – 30%
- 6.38mm tone high performance laminated glass – 32%



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