



ULTRAVIOLET SCREENING FOR LAMINATED GLASS

Damage to interior fabrics and furnishings is caused by a number of factors. These include ultraviolet (UV) radiation, visible light radiation, oxygen, moisture, elevated temperatures and air pollutants. Some of these factors are more damaging than others, and not all of them can be eliminated. However, minimizing the effects of the major causes of deterioration can substantially slow the process.

Because of its high energy level, ultraviolet (UV) radiation — radiation below 380 nanometers (nm) wavelength — is a very significant contributor to material deterioration and color fading when compared to other causes. For example, UV radiation at 350 nm has a damage potential 50 times greater than that of visible light at 500 nm.

Laminated architectural glass made with clear or tinted *Saflex* interlayer is essentially opaque to UV radiation. Compared to ordinary glass in fabric fading tests, laminated glass with *Saflex* interlayer has been shown to significantly reduce the fading rate of colorants in fabrics. In addition, the use of tinted *Saflex* interlayer may further reduce damage potential by partially filtering visible light radiation and reducing solar heat gain.

The UV radiation protection of *Saflex* also is stable with time. All clear and tinted *Saflex* interlayers have been shown to provide their original levels of UV radiation screening after tests equivalent to more than five years of exposure in the Arizona desert sun.

While blocking UV radiation helps protect carpets, art works and interior furnishings, it has no adverse effects on plant health. This is because the photoreceptors in plants absorb in the regions around the visible light wavelengths of 450 nm, 660 nm and 730 nm, which *Saflex* does not significantly block. In fact, laminated glass with *Saflex* interlayer can help protect plant leaves, flower color and reproductive development against potentially damaging UV radiation. Today, *Saflex* is safely used in many greenhouses and in major botanical gardens.