



HanitaTek
Window Films

Exterior Films Excellence

(part 1 in a 3 part series)



Why would anyone put window film on the exterior of a building? In most cases when an interior film will work, “regular” interior film is preferred over exterior films. Interior films cost less, last longer, and are able to be installed in the controlled conditions inside the building, rather than being exposed to the elements outdoors.

There are times, however, when an interior film just won't do. More and more often, advanced windows with low-e coatings, triple pane glazing, or darker tinted glass are used in construction to improve the energy efficiency of the building. With these advanced windows, however, interior solar control films can create excessive thermal stress on the windows, resulting in a higher risk of breakage. In these situations, an exterior film will reject the solar energy before it gets to the glazing unit, which results in all the advantages of enhanced solar control without the worry and risk of thermal shock glass breakage or seal failure. An exterior film can be used in situations where there would not be a warranty with interior film.

Other situations that call for exterior films include applications on laminated glass (in secure facilities or in hurricane prone areas), or in situations involving limited access to the building interior. Finally, an Anti-Graffiti film applied outdoors should really be an exterior film, if you want it to last a long time without cracking and/or turning yellow.

So why not just use interior films installed outdoors? What makes exterior films different? The answer lies in the huge difference in solar exposure. For interior films, the majority of the sun's UV radiation is absorbed in the mounting adhesive of the film – the first layer of film to be hit with sunlight. By absorbing the UV, that layer protects the rest of the film – those layers can be constructed using standard polyester materials.

In exterior film, however, the sun's energy hits the scratch-resistant coating first, then the internal layers of the film. And last of all, it hits the mounting adhesive. All layers of an exterior film, therefore, have to be able to withstand the punishment of sunlight including UV radiation. For this reason, each layer must be constructed of UV resistant materials, and this makes all of the component materials more expensive. But it also gives these plastic materials much longer lifetimes in the sun as compared to the standard materials used to make interior films.

Highlights:

- Exterior films avoid thermal shock on high performance windows
- Exterior films use more durable components than interior films
- Part 2 will address lifetimes and warranties
- Part 3 will detail Hanita Coatings' XtraZone films – industry-leading line of second-generation exterior window films



Parts 2 and 3 of this series will address film lifetimes, warranties, and Hanita Coatings' wide range of XtraZone exterior window films. Stay tuned!