



CELEBRATING  
55 YEARS

# nerej

## Clearing up all the old misconceptions about window film

November 21, 2013 - Green Buildings

In some ways, window film is a little bit like a referee in a big game: most people only tend to notice them when they're bad.

Window film has been around since the 1970s. But despite the huge advances in window film innovations, many people still have an image stuck in their minds of the dreaded purplish, bubbling and peeling tint on cars. They may not know all of the amazing ways that the thin layer of polyester film is keeping them comfortable.

Many construction managers, building engineers and architects have gained a greater awareness of window film and its effectiveness at driving down HVAC costs and reducing the effects of glass breakage, glare, harmful exposure to UV rays to the skin, and interior fading of furnishings.

Yet we still need to clear up the false impressions still out there. Here are some of the most common misconceptions about window film:

**It doesn't work:** The energy generated by the sun is absorbed by all it touches, so the greater the glass area of the building, the more potential for excessive radiant heat. Window film can regulate the amount of solar energy passing through the glass, helping to utilize natural light while creating a comfortable environment for tenants. Although it is important to be realistic about the actual savings behind window film, in many cases it can offer a short ROI for facility managers, architects, and other CRE related personnel. The U.S. Department of Energy estimates that one-third of a building's cooling load is from solar heat gain through windows, and nearly 75% of existing windows are not energy efficient. Window film can block up to 75% of solar heat gain through glass. While many variables impact energy savings - including the property's climate zone location and other building envelope materials - energy saving window films can create as much as 15% energy savings annually by reducing the load on the HVAC system and lowering carbon emissions.

**It will destroy your plants:** If the plants in your business are already receiving adequate light, the use of window film will not harm it. Although the film may slow the growth of the plants upon initial application, it will only last for a few days until the plants can adjust to the new setting. In fact, plants that are in constant direct sunlight may begin to thrive as they are less likely to wilt due to the increase in sunlight.

**It will make rooms too dark:** Most window films are designed to block over 99% of harmful UV rays while offering a neutral color that is not too dark and lets in a pleasant amount of light. With today's technology, many window films can block a significant amount of heat while still allowing 60-70% of visible light to enter the building.

**It isn't designed to last long:** Many window film providers offer a warranty of up to 15 years for commercial installations, and some residential and automotive window film applications come with a warranty that lasts as long as you own the house or car. For example, the Safeco Plaza in Seattle has saved hundreds of thousands of dollars over that last 14 years and running after the decision to

install film for nearly 106,000 s/f of window.

It's expensive for what it does: The International Window Film Association found that window film was the most cost-effective energy saving choice when used in retrofit applications on homes and buildings, yielding up to a 70% return on investment for commercial structures. In addition, the installation of window film can qualify for energy efficient home improvement tax credits, and some public utilities offer rebates for the installation of window film. Not only is the film beneficial for the property, it can also help block over 99% of UV radiations that damage furniture, carpets, woodwork, and all occupying tenants.

It's hard to quantify the effectiveness of window films: Using building energy modeling tools, which take into account multiple factors such as the type of building and historical energy consumption data, we can predict with a high degree of confidence how much electricity a home or building will save, along with a projection on how quickly the building owner will recoup their investment. Many films pay for themselves in savings within five years of application.

The days of ugly, peeling window tints are long gone, and today's window films can combine significant heat rejection with a stylish look and increased comfort for building tenants that, like that ref calling a great game, sometimes goes underappreciated.

Andy Hayes is technical services engineer for Madico, Inc. in Woburn, Mass.

New England Real Estate Journal - 17 Accord Park Drive #207, Norwell MA 02061 - (781) 878-4540