### 3M™ Window Film

#### Important

The information provided in this report is believed to be reliable; however, due to the wide variety of intervening factors, 3M does not warrant that the results will necessarily be obtained. All details concerning product specifications and terms of sale are available from 3M.

## Frequently Asked Questions (FAQ)

#### 1. How do 3M Sun Control Window Films work?

3M™ Sun Control Window Films are designed to help reduce the amount of solar heat transmission through window glass by increasing the solar reflection (not necessarily visible reflection) and solar absorption through the glass. Typical colored or dyed films work primarily through increased absorption. The color absorbs the solar energy at the glass, thus reducing the direct transmission into the room. These films offer only marginal performance when compared to reflective films.

Reflective films are films that have been precision coated with metals. These metalized films are designed to increase the solar energy reflection of the glass and some of the absorption. 3M™ Sun Control Window Film reflective films range from

moderate to excellent in solar performance (heat gain reduction).

All 3M<sup>™</sup> Sun Control Window Films are made to be transparent and optically clear. The ultraviolet protection in the adhesive system is there to protect the adhesive, the metals, the polyester film, and the abrasion resistant coating from UV degradation. This UV protection will also help protect what is behind the film (home and office furnishings), too. All 3M<sup>™</sup> Sun Control Window Films are protected with our patented abrasion resistant coating for long term durability and maintained appearance.

# 2. Why do customers have 3M<sup>™</sup> Sun Control Window Film applied to their buildings & Homes?

- Improved tenant comfort
- Lower heating and cooling operating costs
- Lower utility demand costs
- Utility rebates
- Improved aesthetics, uniform appearance
- · Improved safety and security
- Extended A/C equipment life
- Sustainable alternative to adding more A/C equipment

Quite often, our customers will purchase  $3M^{TM}$  Sun Control Window Film window films for tenant comfort and justify the purchase on energy cost savings.

#### 3. What is the typical energy pay back for 3M™ Sun Control Window Films?

Simple pay backs will vary depending upon the amount of sunlit glass exposure, the type of film, the type of glass, cost of fuel, cost of application, and other variables. However, we have often seen pay backs in the 2-5 year period, with some reported to be even less than 6 months.

### 4. How are 3M™ Sun Control Window Film applied?

3M™ Sun Control Window Films are professionally applied by skilled, well-trained authorized 3M Dealer personnel. We have films for both interior and exterior applications, and our 3M Authorized Window Film dealers can help you determine which film would be best for your application. The first step is to prepare the window area for the application, placing drop cloths on the floor protecting flooring. Next, the window glass is cleaned 3 times using simple cleaning solutions (often window cleaner) and razor blade scrapers. Then the film is sprayed with a slip solution (detergent and water) for proper positioning, and applied to the

window glass. Using a professional grade squeegee and following proper techniques, the application is completed by removing excess water, trimming the edges, and a final squeegee technique to dry the edges.

#### 5. How long does it take for 3M™ Sun Control Window Films to dry?

We suggest allowing thirty days for the film to fully dry and cure. During this curing process, it is natural to have small water bubbles and/or a hazing milkiness appearance. These will disappear as the film dries; depending upon the film type and weather conditions, drying may take as much as 30 (or even 45) days, or as little as a few days. Once dried, 3M™ Sun Control Window Films will look great and perform well.

#### 6. Can I install 3M™ Sun Control Window Film myself?

No,  $3M^{TM}$  Sun Control Window Films require professional application. Our authorized  $3M^{TM}$  Sun Control Window Film Dealer/Applicators are thoroughly trained and experienced in performing high quality work. In this way, our customers will enjoy the benefits of  $3M^{TM}$  Sun Control Window Films and have the comfort of the  $3M^{TM}$  Sun Control Window Film warranty.

#### 7. How do I clean my 3M™ Sun Control Window Film?

After thirty (30) days, you may clean 3M™ Sun Control Window Films using normal household cleaning solutions, including ammonia based products like Windex®, and a soft, lint-free cloth or towel. You may also use a squeegee to clean the films. Abrasive products will scratch or damage the film and should never be used.

#### 8. How long does 3M™ Sun Control Window Film last?

3M<sup>™</sup> Sun Control Window Films are durable and made to last for many years. Just how long a particular film will last depends upon the type of film applied, type of glass it is applied to and the particular climate in which it is applied. Most applications last upwards of 15 years and several applications are still performing after 20 years. All applications have a minimum warranty period of 5 years (except exterior applications which are 2 years), and several films carry a 10-15 year commercial warranty, and even a lifetime residential warranty for as long as original purchaser owns the home.

#### 9. How do I remove the old film from my windows?

3M™ Sun Control Window Films are designed to bond the film to the window glass for many years. Yet when it is time to remove the film, removal can be performed by following a relatively simple process.

- First, try to pull the film off by lifting and peeling the film from a corner. If removing the film is difficult, spray the film with a solution of mild dishwashing detergent and water and cover with a plastic film (trash can liners work). Allow to soak for several hours or overnight. Now, try Step 1 again.
- Next, the adhesive residue left on the glass can be sprayed with a sudsy ammonia and water solution and scraped with a four inch razor blade tool. Unfortunately, not all competitive films are designed for removal. They can prove to be particularly difficult to remove and may require more drastic measures.

### 10. What is the warranty for 3M™ Sun Control Window Film?

3M™ Sun Control Window Films are warranted to maintain their solar properties without bubbling, peeling, cracking, or crazing. Many of our films are warranted against discoloration, too (those which do not use dyed polyesters). Should the product prove to be defective, 3M and the authorized 3M™ Sun Control Window Film dealer will replace the film and provide the reapplication labor free of charge. In addition, the 3M™ Sun Control Window Film warranty includes 60 months glass breakage coverage for all qualified applications. Should your glass break due to thermal shock, 3M will replace the glass (maximum \$500.00 per window) and the dealer will replace the film. The length of the warranty is determined by film type and market (residential or commercial). 3M commits to writing the terms of all film warranties in our brochures and consumer publications. For more details, please contact your local authorized 3M dealer/applicator and/or distributor.

#### 11. Do 3M™ Sun Control Window Films cause glass to break?

3M™ Sun Control Window Films will increase the temperature of your sunlit glass, which will in turn; increase the stress on the glass edges. The quality of the glass edge and several other factors (external shading, interior shading, glass history, type of film, size/shape of glass, indoor/outdoor temperature) all contribute to the risk of glass breakage. 3M's forty plus years of experience with applying 3M™ Sun Control Window Films to different types of glass enables us to make proper film/glass recommendations and reduce the potential for glass breakage. In addition, we support these recommendations with our five year glass breakage warranty against thermal shock fracture. Should the glass break within five years of application, 3M will replace the glass (maximum \$500.00 per window), and the dealer will replace the film.

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