

ENERGY CONSERVATION

By Peter Davey, American Window Film, Inc.
GOING GREEN
REQUIRES LITTLE GREEN

3M Low-E Window Films conserve energy and pay for themselves over time.

uildings consume 39 percent of the energy used in the United States...according to the federal Department of Energy." ("Is Green Building Budding? Experts See a Gathering Momentum For Design Efficiency, Conservation", Washington Post, Sandra Fleishman, April 16, 2005.)

The Green Movement is gathering momentum as architects, engineers, and facilities managers are realizing that utilizing energy conservation products has the additional benefit of substantial reduction in utility expenses. Many green products, like 3M's Low-E (emissivity) window films, actually pay for themselves over time with the energy cost savings they provide.

Advances and improvements to energy conservation characteristics of window film are impressive. As an authorized dealer of 3M™ Window Film, we carry 3M™ Scotchtint™ Plus All Season Films, a series of Low-E window films that can reduce heat loss by up to 23% to 30% and can reduce air conditioning costs by blocking 55% to 73% of the sun's heat. They were designed specifically for energy conservation. Their patented construction enables its metal coating to reflect more of the interior room heat back into the room. Comfort is improved and reductions in drafts and fluctuations in temperature can generate considerable savings on fuel expense. They provide increased performance against cold weather heat loss and warm weather heat gain and are inexpensive compared to window replacement.

Consult with an authorized window film dealer early in your project. With so many window films on the market (each film having its specific technical data for every circumstance), choice becomes a challenge. Adequate time to evaluate both the appearance and the performance of a particular window film will prove to be wise. As a 3M Authorized Dealer, we have access to sophisticated software that projects energy cost savings. For large commercial clients, we're able to provide a comprehensive



Peter J. Davey, President American Window Film, Inc.

energy analysis that includes returnon-investment projections.

Depending upon the type of window - clear, tinted, insulated, single or double pane - and desired effects - energy conservation, security, UV protection or aesthetics – there is an appropriate window film for every application. Requests for window film that will balance performance and aesthetics are frequent. 3M has responded with a high performance amber film that offers substantial summer and winter benefits while maintaining a lower level of reflectivity and good visible light transmission. One of our best window films for heat retention in cold climates, 3M's high performance silver film, offers excellent summer and winter benefits. It features Wavelength-Selective metals that block more of the solar spectrum than conventional metals.

3M Company uses comprehensive testing facilities to assure quality and performance. Test equipment includes a spectrophotometer, used to calculate and monitor film performance, and a weatherometer, a large oven with an intense light source to accelerate the weathering process. Prolonged testing assures long-term film durability, color stability, adhesive performance and resistance to metallic corrosion. Tests performed on 3M films are published by the American Society for Testing and Materials and include: ASTM E-308

Standard Recommended Practice for Spectra-Photometry and Description of Color; ASTM-424 Standard Methods of Test for Solar Energy Transmittance and Reflectance of Sheet Materials; and ASTM G-90 Standard Practice for Performing Accelerated Outdoor Weatherizing for Non-Metallic Materials Using Concentrated Natural Light. 3M Scotchtint™ Window Films meet the requirements for a Class A Interior Finish for Building Materials for both Flame Spread Index and Smoke Developed Values per ASTM E-84.

A \$21 billion diversified technology company and an ISO9002 certified facility, 3M has effectively responded to market demands through advances to solar control films, ultraviolet light control films, low reflectivity, high optical clarity and shatter-resistant window films. They offer up to 99% UV protection and unlike other manufacturers. their UV inhibitors are included directly in their adhesives, ensuring lifelong clarity and long-lasting protection from fading of fabrics and furnishings. 3M is the only manufacturer that produces their own raw materials such as adhesives, polyesters, metals and scratchresistant coatings and their patented micro-layered construction has proven itself in the field.

The Green Movement has focused attention on the depletion of non-renewable energy resources. Agree or disagree on the rate of depletion, one truth remains evident. What we have is it. No more. It just makes good sense to purchase green, especially when little green from our wallets is required. An installation of Low-E window film is cost effective, will help conserve energy and reduce energy expense. Environmentally, we all benefit.

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