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Window film: Answering demands for energy efficiency, safety and security

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Architects and engineers are faced with design demands from building owners and property managers for improved building energy efficiency, safety and security. Although owners and managers once drove those demands, increasingly, tenants, occupants and employees are putting the pressure on. This year, the EPA has challenged not only building owners but also tenants to engage in their "Battle of the Buildings", a competition to reduce energy consumption. Additionally, increased terrorist activity has driven the discussion of improved building safety front and center. Along with all of the above, prospective property buyers and renters are voicing their preferences loud and clear. Property owners and managers who have addressed demands for green building initiatives and improved safety and security are in a better position to increase occupancy and/or sell properties in a challenging market.

Window films have come a long way since 1961 when 3M Co. applied for a patent and subsequently received a patent grant for a metalized solar control window film. There is a plethora of window films on the market today, and with confidence, I can write that there is a specific film for most any application.

An installation of insulating, Low-E window film conserves energy and reduces heat gain and loss through windows all year long - substantially reducing HVAC expense. These films can reduce AC costs by blocking up to 73% of the sun's heat in warmer months and reducing heat loss by up to 30% in colder months. Many meet LEED Energy and Atmosphere Prerequisites and qualify for LEED credits.

High performing safety film (a virtually invisible, low profile measure of security) should have been subjected to rigorous GSA blast testing or other credible, independent glazing standards and blast testing procedures. Safety window films hold glass in place upon impact, reducing the risk of injury or damage in the event of blasts, violent weather or vandalism. Compared to the expense of glass replacement, a safety/security window film retrofit is an affordable option for improved safety.

Reputable window film dealers can provide their products' energy performance ratings according to the National Fenestration Rating Council (NFRC) certification process that enables product comparison. An NFRC label provides valuable units of measure when applying for LEED credits.

Research and development of window film spans over 50 years now. Films have been subjected to a variety of rigorous field testing procedures. Quality window films conform to credible ANSI and CPS glazing standards. Reputable dealers should be able to provide you with reliable, independent test reports for many of their films including reports for UV protection, abrasion resistance, corrosion, EMI (electromagnetic interference) shielding, break and entry, windstorm, blast mitigation, and intensified weathering among others. Your dealer can provide performance results such as UV light rejected, visible light transmitted and rejected, solar heat reduction, glare reduction, shading

coefficients, emissivity and U Values. A knowledgeable window film dealer will be prepared to answer your questions and to help guide you toward the appropriate window film for your specific application.

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