

CASE STUDY: LLumar® protects McDonald's customers from potential terrorist acts



Building

McDonald's

Location

Moscow, Russia

Window Film

SCL SR PS11

Type

Safety and Security



SITUATION

The McDonald's restaurant is situated in the very center of Moscow. It is a popular place where people have lunch or just spend free time with their families and friends. In view of frequent acts of terrorism and vandalism, the management of the restaurant realized it was necessary to take steps to protect their guests and their property.

SOLUTION

The local LLumar dealer proposed installing an 11 mil safety film (SCLSRPS11) with brilliant optical clarity and scratch-resistant coating, because it would provide a clear but powerful barrier of protection. The original glazing combined with this type of film reduces the effects of an explosion because it protects people and property from flying glass shards.

RESULT

Within hours, the installation of LLumar safety film on glass produces a shatter-resistant, non-splintering glazing system, providing immediate protection for people and property. Reinforcing traditional glazing with a retrofit film product is significantly less expensive than glass replacement. The Government of Moscow is in the process of developing a "Safety Glazing" program which employs the installation of SCLSRPS11 on the glazing of hotels, shops and restaurants.

Performance Data

	% Total Solar Transmittance	% Total Solar Reflectance	% Total Solar Absorptance	% Visible Light Transmittance	% Visible Reflectance (exterior)	% Visible Reflectance (interior)	Winter U-value	Shading Coefficient	% Ultraviolet Ray Protection (wavelengths 280-380nm)	Emissivity	Solar Heat Gain Coefficient	% Total Solar Energy Rejected	Light-to-Solar Heat Gain Ratio (LSG)	% Summer Solar Heat Gain Reduction	% Winter Heat Loss Reduction	% Glare Reduction
Clear Glass	83	8	9	90	8	8	1.03	1.00	29	0.84	0.86	14	1.05	0	0	0
Clear Series	Clear safety films can be applied over tinted glass to improve aesthetics, solar performance and glare. These thicker films meet the most stringent standards for burglary resistance, blast mitigation, wind-borne debris, and basic safety glazing.															
SCL SR PS11	78	9	13	85	11	11	1.03	0.93	99	0.84	0.81	19	1.05	7	0	6

Physical Properties

	Film Thickness (inches)	Appearance	Film Structure	Tensile Strength (constructed)	Tensile Strength (average as reported)	Break Strength (peak load)	Break Strength (average load)	Elongation at Break	Peel Strength	Puncture Strength
SCL SR PS11	0.011	Clear	Multi	26,971	32,000	324	309	>100%	>2720(>6)	187

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The solar performance data reported for LLumar architectural window films was captured using the National Fenestration Rating Council's (NFRC) standard guidelines for window film solar performance measurement as measured on single pane, 1/8 inch (3mm), clear glass. All values averaged from routinely accumulated quality control data.

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