

# RIOT LITE™ SAFETY & SECURITY LAMINATE

## RiotLite™ Product Features & Benefits:

- Optically clear, 12-27mil thick film for application to interior glass surfaces.
- Stackable protection up to 41 mils.
- Provides shatter resistance, protecting from broken glass hazards caused by glass breakage and other impact events.
- Exhibits strong adhesion to glass and shock absorbing properties.
- Protective hard coat provides scratch resistance and cleanable/durable surface.
- Protect from the harmful effects of UV light and reduce fading of interior furnishings.
- Easily cleaned with typical window cleaning solutions.
- RL 27 system can meet ASTM F3561 when installed on 1/4" tempered glass with aluminum frames and caulk anchor.

## RiotLite™ Product Performance & Technical Data

Film Properties	Single Pane 1/4" Clear Glass	12 mil Safety	14 mil Safety*	16 mil Safety	21 mil Safety	24 mil Safety	27 mil Safety
Solar Heat Gain Coefficient	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Visible Light Transmitted	89%	87%	87%	86%	85%	85%	85%
Visible Light Reflected Interior	9%	8%	8%	8%	8%	8%	8%
Visible Light Reflected Exterior	8%	8%	8%	8%	8%	8%	8%
U Value	1.03	1.03	1.03	1.03	1.03	1.03	1.03
UV Block	38%	99%	99%	99%	99%	99%	99%
Total Solar Energy Rejected	19%	19%	19%	19%	19%	19%	19%
Glare Reduction	NA	1%	1%	1%	1%	1%	1%

Product Solar Performance Data. \*14 mil. Safety stackable only

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A LIMITED LIABILITY COMPANY

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## RiotLite™ Specifications – Safety & Security Window Film:

Product	Tensile Strength	Break Strength	Puncture Strength	Elongation	Peel Strength
<b>12 Mil clear</b>	32,700 PSI Avg. MD/TD	370 lb/in (PLI)	>243 lb	>100%	>5 lb/in (PLI)
<b>14 Mil clear*</b>	32,000 PSI Avg. MD/TD	385 lb/in (PLI)	>235 lb	>200%	>5 lb/in (PLI)
<b>16 Mil clear</b>	32,000 PSI Avg. MD/TD	440 lb/in (PLI)	>275 lb	>200%	>5 lb/in (PLI)
<b>21 Mil clear</b>	32,000 PSI Avg. MD/TD	585 lb/in (PLI)	>300 lb	>200%	>5 lb/in (PLI)
<b>24 Mil clear</b>	32,000 PSI Avg. MD/TD	650 lb/in (PLI)	>335 lb	>200%	>5 lb/in (PLI)
<b>27 Mil clear</b>	32,000 PSI Avg. MD/TD	700 lb/in (PLI)	>355 lb	>200%	>5 lb/in (PLI)

Product Physical Properties. \*14 mil. Safety stackable only

### 1.0 Scope

This specification is for an optically clear or tinted glass shatter resistant and abrasion resistant window film which, when applied to the interior surface, will help hold broken glass together and reduce the ultra-violet light that would normally enter through the window. This is a basic safety and security window film that may be useful as an increased measure of protection against low force impact situations, general glass fragment retention, spontaneous glass breakage, and limited safety glazing situations.

### 2.0 Applicable Documents

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only.

The 1985 American Society for Heating, Refrigeration, and Air Conditioning Engineers (ASHRE) Handbook of Fundamentals.

#### The American Society for Testing and Materials (ASTM):

- ASTM E-308 Standard Recommended Practice for Spectrophotometry and Description of Color in CIE 1931 System
- ASTM E-903 Standard Methods of Test for Solar Absorbance, Reflectance and Transmittance of Materials Using Integrating Spheres
- ASTM D-882 Standard Test Method for Tensile Properties of Thin Plastic Sheeting
- ASTM D-1044 Standard Method of Test for Resistance of Transparent Plastics to Surface Abrasion Windows 4.1 A computer Tool for Analyzing window thermal performance, Lawrence Berkley Laboratory
- ASTM F3561-22 Standard Test Method for Forced-Entry-Resistance of Fenestration Systems After Simulated Active Shooter Attack

### 3.0 Requirements of the Film

3.1 Film Material: The film material shall consist of an optically clear polyester film with a durable abrasion resistant coating over one surface, and a UV stabilized pressure sensitive adhesive on the other.

3.2 Product Physical Properties (nominal) See Table 2.

3.3 Solar Performance Properties: Film applied to 1/4" thick clear glass (see Table 1.)

3.4 Adhesive System: The film shall be supplied with a pressure sensitive weatherable acrylic adhesive applied uniformly over the surface opposite the abrasion resistant coated surface. The adhesive shall be essentially optically flat and shall meet the following criteria:

- a) Viewing the film from a distance of 10 feet at angles up to 45 degrees from either side of the glass, the film itself shall not appear distorted.



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#### **4.0 Requirements of the Manufacturer**

4.1 The manufacturer will ensure proper quality control during production, shipping and inventory, clearly identify and label each film core with the product designation and lot number.

4.2 Materials shall be manufactured by:

Impact Security, LLC  
4939 Lower Roswell Road  
Marietta, Ga. 30068

#### **5.0 Application**

5.1 Examination: Examine glass surfaces to receive new film and verify that they are free from defects and imperfections, which will affect the final appearance. Correct all such deficiencies before starting the film application process.

##### **5.2 Preparation**

- a) The window and window framing will be cleaned thoroughly with a neutral cleaning solution. The inside surface of the window glass shall be scraped with a stainless-steel razor blade with a clean, sharp edge to ensure the removal of any foreign contaminants without damage to the glass surface.
- b) To minimize waste, the film will need to be cut to specification utilizing a sharp razor blade neatly and square at a uniform distance of 1/16" (1.6 mm) of the window-sealing device.
- c) Film shall be wet applied using clean water and slip solution to facilitate positioning of the film onto the glass.
- d) To ensure efficient removal of excess water from the underside of the film and to maximize bonding of the pressure sensitive adhesive, a stiff polyurethane squeegee will be utilized.
- e) Upon completion, the film may have a dimpled appearance from residual moisture. Said moisture shall, under reasonable weather conditions, dry flat with no moisture dimples within a period of 90 days when viewed under normal viewing conditions.

#### **6.0 Cleaning**

The film may be washed using common window cleaning solutions. Metallized constructions shall be cleaned with window cleaning solutions that are free of ammonia products. Abrasive type cleaning agents and bristle brushes, which could scratch the film, must not be used.



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