



PROTECTIVE XL-700GGF

ProTective XL-700GGF is a protective film specifically engineered to extend the life of Glass surfaces. Millions of dollars are spent annually replacing scratched and damaged surfaces as a result of vandalism.

ProTective XL-700GGF is multi-functional and an ideal cost-saving solution for the Public Transport industry (Trams, Trains and Buses; Bus Shelters; Bus & Train Stations; Ticket Booths) and for Architectural applications (Hospitals and Mental Health Facilities; Schools; Prisons; Shopping Centres, Retail and Convenience Stores).

ProTective XL-700GGF is a Sacrificial Film, after damage has occurred the film can be removed and replaced easily and onsite by a ProGard approved installer, therefore providing a cost-effective alternative to total glazing replacement.

ADVANTAGES

- Deters smash and grab burglaries
- Protects against costly fading (eg. merchandise, fabric)
- Increased safety: Helps hold shattered glass together
- Increased durability: Protects underlying surface
- Easily maintained & removed (eg. Anti-Graffiti applications)

PERFORMANCE ON NON-RESIDENTIAL INSTALLED WINDOWS**

	SHGC w/out film	SHGC with film	VLT w/out film	VLT with film
6mm (1/4in.) clear	0.73	0.90	0.78	0.88
6mm (1/4in.) grey	0.52	0.67	0.39	0.49
6mm (1/4in.) clear 6mm (1/4in.) clear*	0.63	0.79	0.69	0.75
6mm (1/4in.) grey 6mm (1/4in.) clear*	0.41	0.54	0.35	0.43

** As certified by the National Fenestration Rating Council (NFRC) *Duel panel window



PHYSICAL PROPERTIES

Film Thickness	.007"
Structure	Single-Ply
Tensile Strength	25,000 PSI
Break Strength	175 pound per inch (Width)
Adhesive Type	Acrylic Pressure Sensitive
Peel Strength	5 to 6 pounds per inch

PERFORMANCE DATA

Total Solar Energy

Transmitted	83%
Reflected	9%
Absorbed	8%

Visible Light

Transmitted	88%
Reflected Interior	9%
Reflected Exterior	10%

U Value

Emissivity	.87
Ultraviolet Light Rejected	99%
Glare Reduction	2%
Luminous Efficacy	.91
Shading Coefficient	.97
Solar Heat Gain Coefficient	.84
IR Rejection	18%
Total Solar Energy Rejection	15%



PROTECTIVE XL-800BF

TEST DATA

Impact

ANSI Z97.1
CPSC 16 CFR Parc 1201

**Unlimited
Category II**

Hurricane

ASTM E-1886/E-1996
Large Missile Impact

Category B

Wind Storm

Test on 3/16" tempered patio door with silicon wet
glaze attachment to ASTM E-1886/E1996.

=/-100 psf

Blast Mitigation

Attachment System	GSA Performance Cond.
4 Side FrameGard*	2*
2 Side FrameGard	2
4 Side Structural Silicom Bead	3A
Day Light (No attachment)	3B

Subjected to GSA category C blast leads, 4psi 30psi/ms minimum on 1/4" annealed glass. By ABS?EQE Internation and Grendon Design Agency.

* SafetySheild 800 with 4 side FrameGard received a GSA Category 2 when subjected to 9.19 PSI and 64.53 PSI/ms and a Category 3B when subjected to 12.78 PSI and 78.79 PSI/ms blast levels. These loads far surpass the GSA criteria of 4 PSI and 28 PSI/ms

Accelerated Weathering

Miami/Dade Criteria, 4500hours
Xenon Arc Per: ASTM G26-95

Pass

Puncture Strength

ASTM D-4830-88

129lbs.

Tear Strength

ASTM D-1004
ASTM D-2582

**> 18lf.
33.016 Avg**
Tear Force (Newtons)

Surface Burn Characteristics: ASTM E-84

Flame Spread Index
Smoke Developed Index

**A rating
A rating**

Ignition Properties: ASTM-D-1926-96

Flash Ignition Temp
Smoke Developed Index

**760°F
880°F**

PROPERTIES

Optical Properties

Total Solar Energy

Transmitted	83%
Reflected	9%
Absorbed	8%

Visible Light

Transmitted	88%
Reflected	10%
Absorbed	10%
U Factor (winter)	1.10
Ultraviolet Light Rejected	99%
Shading Coefficient	0.97
Solar Heat Gain Coefficient	0.84
Total Solar Energy Rejected	15%

Physical Properties

Structural Component	0.008"
Film Thickness	0.095"
Structure	Multiply Laminate
Tensile Strength	32,000 PSI Avg MD/TD
Break Strength	240lbs/inch (width) Avg
Adhesive Type	Acrylic Pressure Sensitive
Peel Strength	5 to 6 lbs./inch





PROTECTIVE XL-1500BF

TEST DATA

Blast Performance/GSA Criteria

Pressure/Impulse	Performance Conditions
12.78 PSI/78.79 PSI-ms	3A
9.0 PSI/72.8 PSI-ms	3B

Anti-Intrusion/Security Glazing

UI-972/ ULC-332	Certified
EN-356	Category P2A
DIN-52,290	Category A1

Meets or exceeds Anti-Intrusion Safety Glazing Standards in North America and Europe

Puncture & Tear Strength

ASTM D-2582	102.2 Avg
EN-356	Category P2A
DIN-52,290	Category A1

Surface Burn Characteristics: ASTM E-84

Flame Spread Index	A Rating
Smoke Developed Index	A Rating

Ignition Properties: ASTM-D-1926-96

Flash Ignition Temp	760°F
Smoke Developed Index	880°F

PROPERTIES

Optical Properties

Total Solar Energy	
Transmitted	82%
Reflected	10%
Absorbed	8%

Visible Light

Transmitted	88%
Reflected	10%
Absorbed	10%
U Factor (winter)	1.09
Ultraviolet Light Rejected	99%
Shading Coefficient	0.97
Solar Heat Gain Coefficient	0.84
Total Solar Energy Rejected	15%

Physical Properties

Film Thickness	0.015"
Structure	Multiply Laminate
Tensile Strength	32,000 PSI Avg MD/TD
Break Strength	450lbs/inch (width) Avg
Adhesive Type	Acrylic PSA
Peel Strength	5 to 6 lbs./inch

