



School Guard Glass' products are manufactured by:  
**LTI Smart Glass, Inc.**  
 14 Federico Drive / Pittsfield, MA 01201 /



**PRODUCT NAME:** SG4™ (PATENT PENDING)

**PRODUCT DESCRIPTION:** SG4™ is a laminated glass product consisting of outer layers of glass with a custom security strengthened substrate core. It is specifically designed to slow down intruders but is not bullet resistant to certain ballistic threats. When shot, it will not shatter like ordinary tempered glass and is far stronger than laminated glass or glass reinforced with security film. SG4™ remains in the frame blocking the intruder from entry.

**CONSTRUCTION:** Proprietary

**STANDARD DIMENSIONS:** Up to 60" x 96"

**MAXIMUM DIMENSIONS:** 72" x 144" (Up to 50 sq. ft.)

**NOMINAL THICKNESS:** Designed to replace tempered and laminated glass with thicknesses ranging from ¼" to ⅜".

**WEIGHT (SQ/FT):** 4.1 lbs.

**WARRANTY:** 10 Years against delamination. Please refer to the warranty information sheet.

**INSTALLATION INSTRUCTIONS:** Notify a School Guard Glass representative and request installation instructions pertaining to the glazing system(s) being used.

**COMPLIANCE:**

- ASTM C1036 - Standard Specification-Flat Glass
- ASTM C1172 - Standard Specification for Laminated Architectural Flat Glass
- ANSI Z97.1 Safety Materials Used in Buildings
- CPSC 16 CFR 1201

**RATINGS:** UL 972  
5-aa1 rated for 6 minutes.

Product	Ballistic Impact	Concentrated Assault		Forced Entry (sequentially tested)			Total Time to Failure
		Brick	Steel Toed Boots	Tools <sup>1</sup> 2 min. test	3lb. Hammer & Bat 3½ min. test	Sledge hammer 6 min. test	
1/4" Tempered	Fail - 1 shot	Fail	Fail	Fail	Fail	Fail	0 seconds
1/4" Tempered w/12 mil. Blast Film	Pass <sup>2</sup>	Fail - 4 impacts	Pass	Fail - 8 seconds	Fail - 2 impacts/2 seconds	N/A	4 seconds
5/16" Annealed Laminated Glass w/ 0.060 SGP® Interlayer by DuPont®	Pass <sup>2</sup>	Fail - 20 impacts	Fail	Fail	Fail	N/A	16 seconds
5/16" Annealed Laminated Glass w/ 0.090 PVB Interlayer	Pass <sup>2</sup>	Pass	Pass	Fail - 40 seconds	Fail	N/A	40 seconds
3/8" Glass Clad Polycarbonate	Pass <sup>2</sup>	Pass	Pass	Fail - 1 min. 12 sec.	Fail	N/A	1 min. 12 sec.
SG4™	Pass <sup>2</sup>	Pass	Pass	Pass	Pass	N/A	6 mins. 10 sec.

**Test failure occurs when a 4" object can pass through the glass or frame material.**

<sup>1</sup> See testing methods for tools list. <sup>2</sup>Bullets penetrate but glass stays in place.

**Independent Testing Completed by H.P. White Laboratory, Inc. 3114 Scarboro Road, Street, MD 21154-1822**