



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



**PRODUCT NAME:** SG5™ (PATENT PENDING)

**PRODUCT DESCRIPTION:** SG5™ is a laminated glass product consisting of outer layers of glass with a custom security, heat strengthened, chemically bonded core. The patent pending SG5™ core reacts to physical abuse like metal and will bend, but will not tear or rip like other security products. SG5™ is designed to replace glass used in openings that would normally be glazed with ¼" or 5/16" glass.

**CONSTRUCTION:** Proprietary

**MAXIMUM DIMENSIONS:** 48" x 96" (Up to 50 sq. ft.)

**NOMINAL THICKNESS:** Designed to replace tempered and laminated glass with thicknesses ranging from ¼" to 3/8".

**WEIGHT (SQ/FT):** 4.6 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 12 minutes.  
ASTM F1233 Class 1.4 (Tested to 5 minutes of class 1.5 until failure)

Product	Ballistic Impact 5 shots with a .762 round	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.
SG5™	Pass <sup>2</sup>	Pass	Pass	Pass	Pass	Pass-6 mins.	12 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