

PRODUCT NAME:	CHILDGARD®-2118 Security Glazing
PRODUCT DESCRIPTION:	CHILDGARD®-2118 security glazing is laminated safety glass constructed using a unique arrangement of proprietary transparent materials. CHILDGARD® security glazing is designed to withstand extensive physical attack in a forced entry scenario, ultimately resisting entry until law enforcement or additional help arrives. CHILDGARD® security glazing has been fully tested to ASTM F1233-08 security glazing standards, one of the most recognized protocols in the detention industry and complies with standard safety glazing codes for all interior and exterior applications.
PERFORMANCE TESTING:	Forced Entry: ASTM F1233-08 Class 1.4 to 17 minutes 5-aa1 to 16 minutes Ballistic: .38 Special handgun, 3 shots in an 8" circle, 158 grain lead, 20 feet. Spall with no penetration per HP White-TP-0500.03.
CONSTRUCTION:	Proprietary Construction
THICKNESS:	9/16" (.527" Nominal)
THICKNESS TOLERANCE:	.479" / .573"
WEIGHT:	4.95 Lbs. / Square Foot
MAXIMUM SIZE:	60" x 96"
OPTIONS:	Tinted glass, transparent mirror, reflective glass, wire glass, Low-E glass, insulated units (The use of some options may alter product thickness)
TECHNICAL DATA:	U-Value: .84 SHGC: .73 Light Transmission: .82
APPLICABLE STANDARDS:	ANSI Z97.1: ASTM C 1349 CPSC 16 CFR 1201 (Category I and II): ASTM C 1422 ASTM C 1036: ASTM C 1048
SINGLE RESPONSIBILITY:	GSG products are covered by our Single Responsibility® Program that ensures one firm has handled and is accountable for all phases of manufacturing.
INSTALLATION:	All glass should be installed in accordance with the guidelines set forth in the current edition of the Glass Association of North America (GANA) Glazing and Sealant Manuals. GSG recommends that CHILDGARD® 2118 security glazing be installed into frames with a fixed interior stop. If installed into frames with removable interior stops it is recommended that stops be secured with mechanical fasteners 5-6" OC so that stops cannot be dislodged during impact. GSG recommends no less than ½" bite on all edges. In addition, CHILDGARD®-2118 security glazing should be wet glazed on the protected side of the glazing with a high quality structural silicone to promote glazing retention during attack. Product testing has incorporated Dow 995 structural sealant applied to the interior glazing leg. Care must be taken as to not interfere with weep holes during wet glazing operations to ensure the continued performance of the glazing.

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Test Sequence	Test Implements	Impacts	Sequence Time (seconds)	Class Achieved	Notes
1	Ball Peen Hammer	10	22	1.0	One technician delivered 10 impacts with a Ball Peen Hammer, no penetration or openings were created.
2	Ball Peen Hammer	10	24	1.1	A second technician delivered 10 additional impacts with a Ball Peen Hammer, no penetration or openings were created.
3	1 ½" Diameter Pipe / 12-lb Sledge	25	174	1.2	One technician held the pipe while one technician swung a 12-lb sledge hammer. The pipe was held at different angles to evaluate the resistance of the sample to both puncture and gouging.
4	Extinguisher, CO2	NA	60	1.3	Extinguisher fully discharged for 60-seconds. This step is designed to freeze the materials, mimicking cold weather and making the components more brittle for subsequent attack. Other products in the market avoid this step.
5	Sledge Hammer	25	44	1.4	Immediately after discharging the extinguisher in Test Sequence 4, 25 impacts were delivered to the sample utilizing a Sledge Hammer.
6	Propane Flame Torch		300-s	1.5	The propane torch was used IAW ASTM F1233-08, Section A1.5.2. The flame was continuously applied and was held such that the blue tip of the torch flame was no further than 1-in from the surface of the sample. The flame was initially held at the location of the hole that allowed the 1/8-in contraband rod to pass through at the completion of Sequence 5. The sample material began to melt and the torch flame was used to enlarge the opening. At the conclusion of this sequence, a fine mist of water was used to extinguish the still-burning material. The Forced Entry Shape was able to pass through the hole created during this sequence.

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Class Achieved: ASTM F1233 Class 1.4

Test Duration: 17 Minutes