

VISCERA BRANDS LLC GLASS WEAKENING / FORCED-ENTRY RESISTANCE TEST REPORT

SCOPE OF WORK

ASTM F3561 (METHOD A) GLASS WEAKENING AND FORCED ENTRY TESTING ON FIXED WINDOW ASSEMBLIES WITH SINGLE PANE FILM-BACKED GLAZING (INVISICADE CRISIS SHIELD CS-650)

REPORT NUMBER

S0547.02-119-12 R0

TEST DATE

12/05/24

ISSUE DATE

01/17/25

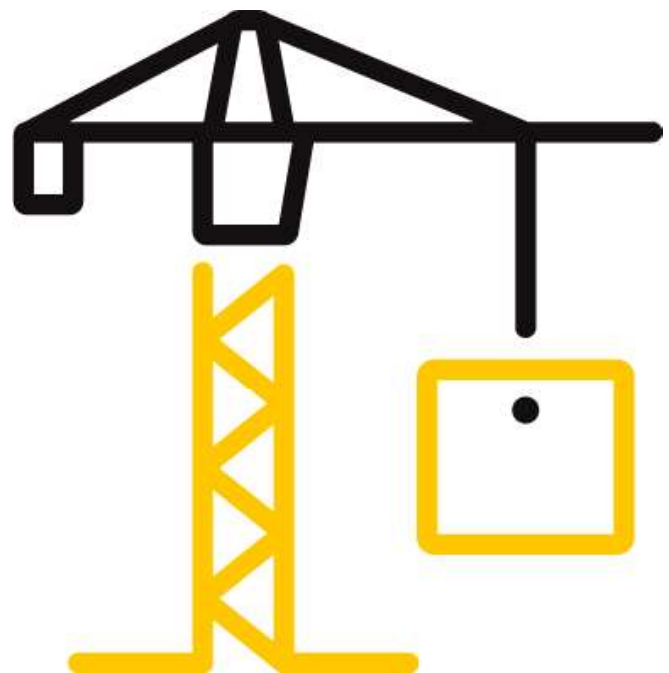
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TEST REPORT FOR VISCERA BRANDS LLC

Report No.: S0547.02-119-12 R0

Date: 01/17/25

REPORT ISSUED TO

VISCERA BRANDS LLC

12810A Century Drive

Stafford, TX 77477

SECTION 1

SCOPE



Architectural Testing, Inc. (an Intertek company) dba Intertek Building & Construction (B&C) was contracted by Viscera Brands LLC to perform forced-entry-resistance after simulated active shooter attack in accordance with ASTM F3561 on fixed window assemblies with single pane film-backed glazing (Invisicade Crisis Shield CS-650). Results obtained are tested values and were secured by using the designated test method. Testing was conducted at Intertek test facility in York, PA.

Intertek B&C in York, PA has demonstrated compliance with ISO/IEC International Standard 17025 and is consequently accredited as a Testing Laboratory (TL-144) by International Accreditation Service, Inc. (IAS). Intertek B&C is accredited to perform all testing reported herein.

This report does not constitute certification of this product nor an opinion or endorsement by this laboratory. Unless differently required, Intertek reports apply the "Simple Acceptance" rule also called "Shared Risk approach," of ILAC-G8:09/2019, Guidelines on Decision Rules and Statements of Conformity.

Intertek B&C will service this report for the entire test record retention period. The test record retention period ends four years after the test date. Test records, such as detailed drawings, datasheets, representative samples of test specimens (where required by Certification or Accreditation bodies), or other pertinent project documentation, will be retained for the entire test record retention period.

For INTERTEK B&C:

COMPLETED BY:	Eric J. Beaudoin	REVIEWED BY:	V. Thomas Mickley, Jr., P.E.
TITLE:	Team Lead - Ballistics	TITLE:	Senior Staff Engineer
SIGNATURE:	 <small>Digitally signed by Eric Beaudoin</small>	SIGNATURE:	 <small>Digitally Signed by: Virgal Thomas Mickley, Jr.</small>
DATE:	01/17/25	DATE:	01/17/25

EJB:vtm/aas

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SECTION 2

SUMMARY OF TEST RESULTS

SPECIMEN NO.	DESIGNATION	FORCED-ENTRY RATING LEVEL	RATING LEVEL ¹
1	3B-1 (Invisicade Crisis Shield CS-650)	1	1
2	3B-2 (Invisicade Crisis Shield CS-650)	1	

¹ Lowest rating achieved on the sample set.

SECTION 3

TEST METHOD

Each test specimen was evaluated in accordance with the following:

ASTM F3561-23, *Standard Test Method for Forced-Entry-Resistance of Fenestration Systems After Simulated Active Shooter Attack*

SECTION 4

MATERIAL SOURCE/INSTALLATION

The test specimens were provided by the client in good condition. Representative samples of the test specimens will be retained by Intertek B&C for a minimum of four years from the test completion date.

Installation: Test specimens arrived installed in wooden bucks.

SECTION 5

LIST OF OFFICIAL OBSERVERS

NAME	COMPANY
Eric J. Beaudoin	Intertek B&C
Shawn E. Beamer	Intertek B&C

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SECTION 6 EQUIPMENT

ASSET NO.	DESCRIPTION	CALIBRATION DUE DATE
INT02233	Fluke IR Thermometer	06/17/25
INT02767	Oehler Model 36 Chronograph	05/17/25
64216	Oehler Model 36 Chronograph	05/17/25
INT03407	Temp/Humidity	05/07/25
65081	Temp/Humidity	03/06/25
INT03779	Laser Measurement	06/25/25
005698	Force Gauge	08/06/25

SECTION 7 TEST SPECIMEN DESCRIPTION

PRODUCT TYPE	Fixed Window Assembly
OVERALL SIZE	36 in wide by 48 in high

SPECIMEN NO.	DESIGNATION	GLAZING TYPE	GLAZING THICKNESS (mm)
1	3B-1 (Invisicade Crisis Shield CS-650)	Tempered - Single Layer	6
2	3B-2 (Invisicade Crisis Shield CS-650)		

SPECIMEN NO.	GLAZING LAYUP
1	Invisicade Crisis Shield CS-650 with 1/2 in DOWSIL 995 silicone structural sealant triangular bead perimeter on occupant side
2	

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SECTION 8**TEST PROCEDURE****Ballistics:**

The sample was rigidly mounted for ballistics resistance testing. The muzzle of the test firearm was set at 25 feet from the sample at zero-degree ($\pm 3^\circ$) obliquity. Ballistic screens were set at 5 feet and at 20 feet from the muzzle of the firearm. Test ammunition was 5.56 mm NATO, 55 grain, copper jacket lead core, which conformed to ASTM F3561, Table 1 requirements with the exception that the velocity of some projectiles was below or exceeded the required velocity (3357-3423 fps). In the instances where the velocity was below the required minimum, weakening of the specimen was still achieved as displayed by penetration of the specimen. Shot locations were per Figure 4 of ASTM F3561 for glazing and panels.

Forced Entry:

Impacts were delivered to the product using an impact ram as specified in ASTM F3561, Section 6.6. The product was rigidly anchored to a supporting test frame and the impacts were delivered to the specimen as per ASTM F3561, Section 16. Two impacts were delivered to the center of the specimen for each drop height beginning at a height of 6 in and increasing in increments of 6 in until failure occurred. The potential energy delivered at each drop height is detailed in the following table:

LEVEL	POTENTIAL ENERGY, J		DROP HEIGHT (H)	
	(J)	(FT-LBF)	(mm)	(FT)
1	68	50	152	0.50
2	136	100	305	1.00
3	203	150	457	1.50
4	271	200	610	2.00
5	339	250	762	2.50
6	407	300	914	3.00
7	475	350	1067	3.50
8	542	400	1219	4.00

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SECTION 9

TEST RESULTS

Test Date: 12/05/25

Ambient Temperature: 65 - 66 °F

The results are tabulated as follows:

Specimen No. 1

Ballistics

SHOT NO.	SHOT LOCATIONS ¹	SPECIMEN TEMP. (°F)	VELOCITY (fps)	RESULTS
1	N	64	3350	Penetrated
2	S		3423	Penetrated
3	W		3367	Penetrated
4	E		3395	Penetrated
5	NW		3322	Penetrated
6	SW		3394	Penetrated
7	NE		3339	Penetrated
8	SE		3367	Penetrated
9	C1		3394	Penetrated
10	C2		3440	Penetrated

¹ Reference ASTM F3561, Fig. 4 for firing pattern shot locations.

Forced Entry

LEVEL	NUMBER OF IMPACTS	SPECIMEN TEMP. (°F)	DROP HEIGHT (ft.)	PASS/FAIL	RESULTS
1	2	65	0.5	Pass	1 st Impact: No change 2 nd Impact: No change
2	2		1.0	Fail	1 st Impact: Hole created at center of specimen 2 nd Impact: The nose cone passed through the glazing to the point where the gasket was visible on the protected side

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Specimen No. 2

Ballistics

SHOT NO.	SHOT LOCATIONS ¹	SPECIMEN TEMP. (°F)	VELOCITY (fps)	RESULTS
1	N	65	3353	Penetrated
2	S		3448	Penetrated
3	W		3303	Penetrated
4	E		3370	Penetrated
5	NW		3315	Penetrated
6	SW		3367	Penetrated
7	NE		3415	Penetrated
8	SE		3308	Penetrated
9	C1		3319	Penetrated
10	C2		3390	Penetrated

¹ Reference ASTM F3561, Fig. 4 for firing pattern shot locations.

Forced Entry

LEVEL	NUMBER OF IMPACTS	SPECIMEN TEMP. (°F)	DROP HEIGHT (ft.)	PASS/FAIL	RESULTS
1	2	65	0.5	Pass	1 st Impact: No change 2 nd Impact: A tear developed at shot location C1, approx. 3 in long
2	2		1.0	Fail	1 st Impact: A large hole was created at impact location 2 nd Impact: The nose cone passed through the glazing to the point where the gasket was visible on the protected side

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SECTION 10 PHOTOGRAPHS



Photo No. 1
Ballistic Range Set-up



Photo No. 2
Specimen No. 1 Pre-Test, Attack Side (Ballistics)

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Photo No. 3

Specimen No. 1 Pre-Test, Protected Side (Ballistics)



Photo No. 4

Specimen No. 1 Post-Test, Attack Side (Ballistics)

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Photo No. 5

Specimen No. 1 Post-Test, Protected Side (Ballistics)



Photo No. 6

Impact Test Set-up

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Photo No. 7

Specimen No. 1 Pre-Test, Attack Side (Forced Entry)



Photo No. 8

Specimen No. 1 Post-Test, Attack Side (Level 2.2) (Forced Entry)

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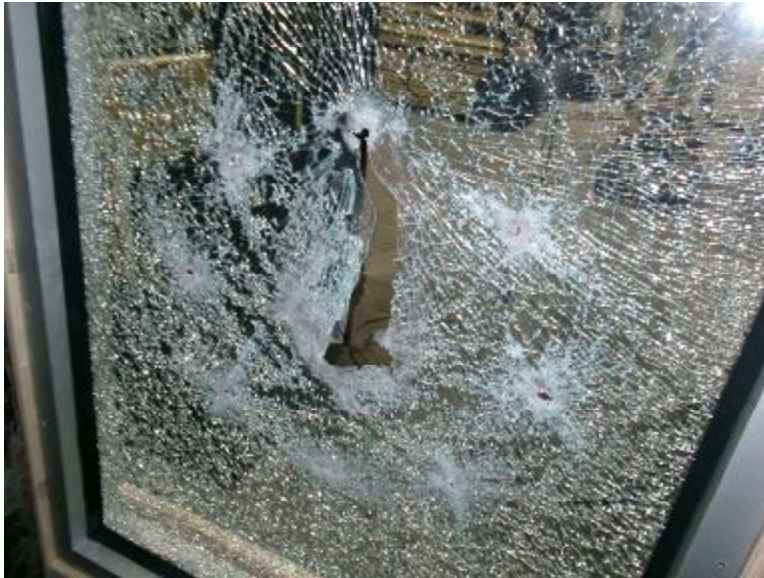


Photo No. 9

Specimen No. 1 Post-Test, Protected Side (Level 2.2) (Forced Entry)



Photo No. 10

Specimen No. 2 Pre-Test, Attack Side (Ballistics)

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Photo No. 11

Specimen No. 2 Pre-Test, Protected Side (Ballistics)



Photo No. 12

Specimen No. 2 Post-Test, Attack Side (Ballistics)

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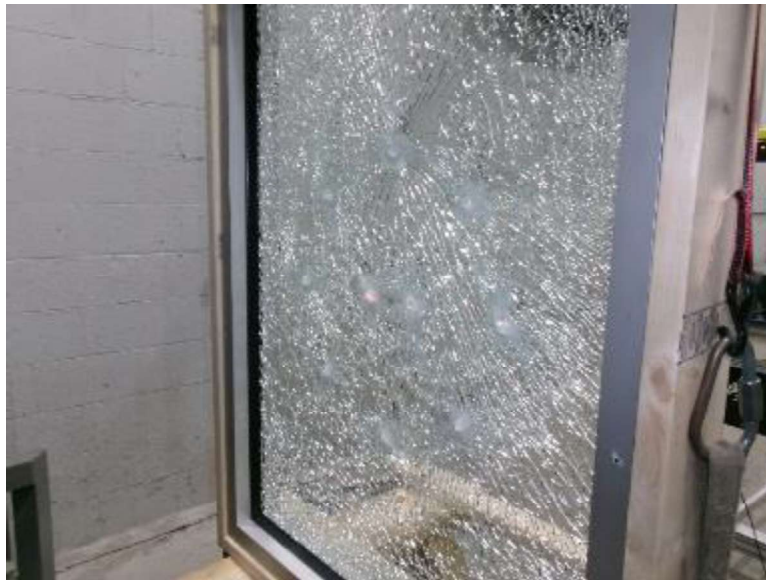


Photo No. 13

Specimen No. 2 Post-Test, Protected Side (Ballistics)



Photo No. 14

Spec No. 2 Pre-Test, Attack Side (Forced Entry)

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Photo No. 15

Specimen No. 2 Post-Test, Attack Side (Level 2.2) (Forced Entry)

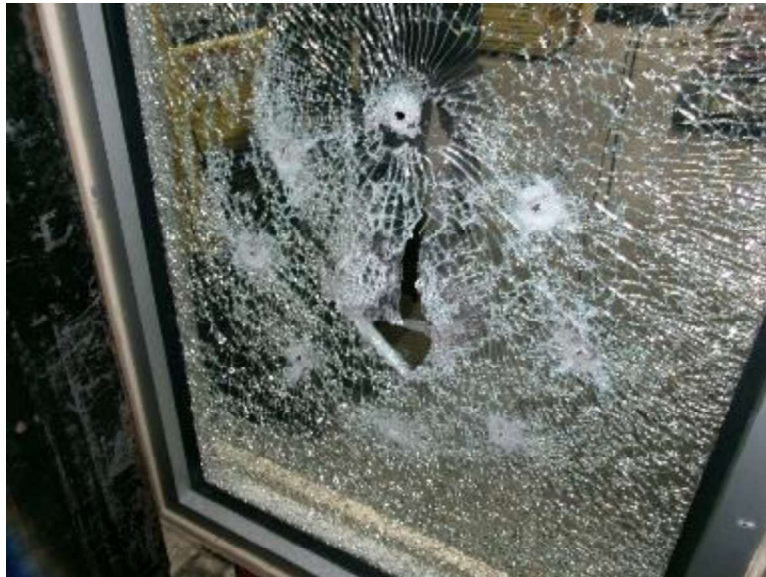


Photo No. 16

Specimen No. 2 Post-Test, Protected Side (Level 2.2) (Forced Entry)



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SECTION 11

REVISION LOG

REVISION #	DATE	PAGES	REVISION
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