



Ballistic Resistance – Test Report

Impact Security

Attention: Ian Bannister

Client: 4939 Lower Roswell Rd.
Bldg. B, Suite 100
Marietta, GA 30068

Report date: 28 June 2017

Job number: 000007349H

Test procedure and supporting documentation: Per Customer Instructions
ANSI/UL-752

Sample receipt, identification information, and disposition: The sample(s) were received on **26 June 2017**. Sample item identification and description details are provided on the attached data record(s). The test sample(s) were inspected prior to testing and no anomalies were discovered. Sample(s) will be returned, discarded, or held, per customer instructions.

Test date(s) and location: Testing commenced on **27 June 2017**, at the H.P. White Laboratory, Inc. facilities located at 3114 Scarboro Road, Street, Maryland. Testing concluded on **27 June 2017**.

Report prepared by: Ashley Gowland, Customer Operations Coordinator

Report reviewed by: Wesley Mason, Manager of Technical Operations - Hard Armor

Revision number and date: NA

Test data transmittal method and storage location: This test report and test data were transmitted via email in a manner compliant with ISO 17025 requirements. Permanent electronic and hardcopy files are maintained in accordance with HPWLI data storage policy on data storage systems, filed by job number.

Disclaimer: Testing was performed on sample(s) provided by the client. H.P. White Laboratory, Inc. holds no responsibility for sample selection methods. This report is based on data obtained from testing only the sample(s) submitted, and should NOT be interpreted as an endorsement by H.P. White Laboratory, Inc. of the continuing quality or performance of any other items of the same, or similar, design. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the Federal Government. This testing was performed by H.P. White Laboratory, Inc. to client specification, and the test results are the property of the client, who holds all rights of reproduction or publication of this report and related test data.

Destination control statement: These items are controlled by the U.S. government and authorized for export only to the country of ultimate destination for use by the ultimate consignee or end-user(s) herein identified. They may not be resold, transferred, or otherwise disposed of, to any other country or to any person other than the authorized ultimate consignee or end-user(s), either in their original form or after being incorporated into other items, without first obtaining approval from the U.S. government or as otherwise authorized by U.S. law and regulations.

Test Procedures

Ballistic Testing: All testing was conducted on an indoor range at ambient conditions, in accordance with your instructions and the modified provisions of ANSI/UL-752, Level 7. Testing was conducted using caliber 5.56x45mm, M193, Ball, 55 grain ammunition. The test sample(s) were positioned 15.0 feet from the muzzle of the barrel to produce zero (0°) degree obliquity impacts. Photoelectric infrared screens were located at 5.0 feet and 10.0 feet which, in conjunction with electronic chronographs, were used to compute bullet velocities at 7.5 feet forward of the muzzle. Penetrations were determined by visual examination of the 1/8-inch-thick corrugated cardboard witness plate, placed 18.0 inches behind and parallel to the test sample(s). Table I provides a summary of information on the attached data record(s).

Table I: Ballistic Resistance, Summary of Results

Test Sample			Set-Up			Results	
Sample No.	Thickness (in.) (a)	Weight (lbs.)	Caliber	Obliquity	Shots (b)	Velocity (fps) Max/Min	Penetrations
SAMPLE-5	NA	41.51	5.56, M193	0°	11	3360/3135	1

(a) Average of thickness measurements
(b) See individual data record(s) for specific footnotes/remarks

Report prepared by:



Ashley Gowland
Customer Operations Coordinator

Report reviewed by:



Wesley Mason
Manager of Technical Operations - Hard Armor



TEST PANEL

Manufacturer : WINDOW FRAME DEPOT

Sample No. : SAMPLE- 5

Size : 16 x 16 x 4.5 in frame in.

Weight : 41.51 lbs.

Date Rec'd. : 6/26/17

Thicknesses : NA

Hardness : NA

Via :

Avg. Thick. : NA

Plies/Laminates : NA

Returned :

Description : FABRICATED BALLISTIC GLAZING ASSEMBLY

SET-UP

Shot Spacing : 4 ON 4.5" SQUARE, 1 IN CENTER

Primary Vel. Screens : 5.0 ft., 10.0 ft.

Range No. : 7

Witness Panel : 1/8" CORRUGATED CARDBOARD

Primary Vel. Location : 7.5 ft. From Muzzle

Temp. : 72 F

Obliquity : 0 deg.

Residual Vel. Screens : NA

BP : 30 in. Hg

Backing Material : NA

Residual Vel. Location : NA

RH : 60%

Conditioning : Ambient (+72 F)

Range to Target : 15.0 ft.

Barrel No./Gun : R7/ .223

Target to Wit. : 18.0 in.

Gunner : CHES

Recorder : BONSALL

AMMUNITION

(1) : 5.56x45mm, M193, Ball, 55 gr.

Lot No. : HPW-0078

(2) :

Lot No. :

(3) :

Lot No. :

(4) :

Lot No. :

APPLICABLE STANDARDS OR PROCEDURES

(1) : Bullet Resistant Equipment, ANSI/UL 752-2005

(2) : Indoor, Non-Metallic, Protection Level 7 (5.56mm M193, 3080-3388 fps.)

(3) :

Shot No.	Ammo.	Time 1 (usec)	Velocity 1 (ft/s)	Time 2 (usec)	Velocity 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	1595	3135	1595	3135	3135	None	
2	1	1584	3157	1584	3157	3157	None	
3	1	1591	3143	1591	3143	3143	None	
4	1	1594	3137	1594	3137	3137	None	
5	1	1554	3218	1554	3218	3218	None	
6	1	1549	3228	1549	3228	3228	None	(a)
7	1	1509	3313	1509	3313	3313	None	(a)
8	1	1527	3274	1527	3274	3274	None	(a)
9	1	1536	3255	1536	3255	3255	None	(a)
10	1	1520	3289	1520	3289	3289	None	(a,b)
11	1	1488	3360	1488	3360	3360	Bullet/Spall	(a,b)

REMARKS :	FOOTNOTES : (a) IMPACTED WITH GELATIN BLOCK BEHIND SAMPLE. (b) SHOTS 10 & 11 IMPACTED ON SHOT 5 LOCATION (c) DEPTH OF GEL PENETRATION = 5.5"
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