OREGON BALLISTIC LABORATORIES

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ISO/IEC 17025:2017 Accredited Laboratory
NVLAP Code: 200826-0
A2LA Certificate No.: 7169.01

October 10, 2024

Riot Glass
17941 Brookshire Lane
Huntington Beach, CA 93647
ATTN: Brad Campbell

Dear Mr. Campbell:

In accordance with your instructions, Oregon Ballistic Laboratories conducted Ballistic and Impact testing on three samples.
The samples were tested in accordance with ASTM F3561-22 in an indoor range with the muzzle of the test barrel mounted 20 feet from the target and positioned to produce 0-degree obliquity impacts. A doppler radar system was placed such that projectile velocity was measured 10 feet from the target. Penetrations were determined by examination of the sample. The sample was then tested for forced-entry. Forced-entry failures were determined by the use of a 6-in diameter sphere passing through the sample. Results for all testing performed for this purpose are summarized in the following table.

Model: Gen II AP2-DC-AP375BR								
Test Sample			Ballistic Threat				Results	
OBL No.:	Sample No.:	Dimensions(in.)	Projectile	Shots	Velocity (fps)		Penetrations	Resistance Level
					Min.	Max.		
38119	2-1	36x84	M193	10	3344	3378	10	***8***
38120	2-2	36x84	M193	10	3336	3382	10	***8***
38121	2-3	36x84	M193	10	3337	3390	10	***8***

*Data shown in the table represents fair impacts only.

The Model Achieved a Level 8 Forced-entry Resistance Rating

This report pertains only to the samples tested and may not be modified or edited in any way. This report may not be used to claim product certification, approval, or endorsement by NVLAP, NIST, or any federal government agency. Samples will be maintained at Oregon Ballistic Laboratories for 30 days and discarded unless other instructions are received. If you have any further questions or concerns, don't hesitate to contact us.

Reviewed by,

Digitally signed by Darius Nuttbrock
Date: 2024.11.07 06:36:36-08'00'

Darius Nuttbrock
Ballistic Test Director
Oregon Ballistic Laboratories
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Prepared by,

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OREGON BALLISTIC LABORATORIES

BALLISTIC RESISTANCE TEST - V_0

Customer: Riot Glass
OBL ID#: 38119
Date Rcv'd: 10/7/2024
Test Date: 10/8/2024
Purchase Order:

TEST SAMPLE
Sample No.: 2-1
Model No.: Gen II AP2-DC-AP375BR
Lot No.: N/A
Plies: N/A
Description: Gen II AP2-DC-AP375BR - Frames And Infills

Size (in.): 36 x 84
Weight (lb.): N/A
Thickness: N/A
Avg. Thk. (in):

RANGE SET-UP
Range to Target: 20 ft.
Screen Dist. Vel. 1 (ft.): 5
Screen Dist. Vel. 2 (ft.): 4
Screen 4 to target (ft): N/A
Primary Vel. Location: 8.25 ft. from target
Striking Velocity: No
Target to Witness: N/A
Witness Panel: N/A
Backing Material: N/A
Obliquity: 0 Degrees
Barrel: 5.56mm NATO/1:7/30"

Range #: 4
Temperature: 67.1 °F
Bar. Pressure: 29.83 in. Hg
Rel. Humidity: 63.0 %
Sample Temp. Amb. °F
Recorder: Jerhemi Stone
Gunner: Chris Moe

CLAY CALIBRATION NOT REQUIRED
Pre Test:
Clay Drops (mm):
Drop Avg (mm):
Clay Temp °F:
Clay Box #:
Post Test:
Clay Drops (mm):
Drop Avg (mm):
Clay Temp °F:

AMMUNITION
Projectile: 5.56mm M193 Ball
Powder: IMR 4227

STANDARDS / PROCEDURES
ASTM F3561-22
Required Velocity: 3370 fps ± 33 fps

SHOT NO.	PROJECTILE WT. (gr.)	POWDER WT. (gr.)	TIME 1 µs (10^{-6})	TIME 2 µs (10^{-6})	VELOCITY 1 ft/s	VELOCITY 2 ft/s	AVERAGE VELOCITY	PENET. P/C	OBLIQUITY	CALIPER BFD	NOTES
1	55.3	21.1	1487	1189	3362	3364	3363	C	0°		
2	55.3	21.1	1481	1185	3376	3376	3376	C	0°		
3	54.8	21.1	1486	1189	3365	3364	3365	C	0°		
4	55.4	21.1	1483	1187	3372	3370	3371	C	0°		
5	54.7	21.1	1495	1196	3344	3344	3344	C	0°		
6	55.2	21.1	1482	1186	3374	3373	3374	C	0°		
7	55.1	21.1	1494	1195	3347	3347	3347	C	0°		
8	55.3	21.1	1485	1188	3367	3367	3367	C	0°		
9	55.2	21.1	1481	1184	3376	3378	3377	C	0°		
10	55.5	21.1	1480	1184	3378	3378	3378	C	0°		

REMARKS:
P=Partial Penetration
C=Complete Penetration
UH=Unfair Hit
Projectile Yaw Check: <5° for all velocity shots

TEST RESULTS:
Test sample satisfied the requirements given.

FOOTNOTES:

Impact Number	Resistance Level	Pass / Fail	Description of Occurance
1	1	PASS	No visible damage.
2	1	PASS	No visible damage.
3	2	PASS	No visible damage.
4	2	PASS	No visible damage.
5	3	PASS	No visible damage.
6	3	PASS	No visible damage.
7	4	PASS	No visible damage.
8	4	PASS	No visible damage.
9	5	PASS	Trim piece coming loose.
10	5	PASS	Trim piece fell off sample frame.
11	6	PASS	Sample popped out of the frame on the side.
12	6	PASS	Sample popped back into place.
13	7	PASS	No change.
14	7	PASS	No change.
15	8	PASS	Sample popped out and back into the frame.
16	8	PASS	No change.

OREGON BALLISTIC LABORATORIES

BALLISTIC RESISTANCE TEST - V_0

Customer: Riot Glass
OBL ID#: 38120
Date Rcv'd: 10/7/2024
Test Date: 10/8/2024
Purchase Order:

TEST SAMPLE
Sample No.: 2-2
Model No.: Gen II AP2-DC-AP375BR
Lot No.: N/A
Plies: N/A
Description: Gen II AP2-DC-AP375BR - Frames And Infills

Size (in.): 36 x 84
Weight (lb.): N/A
Thickness: N/A
Avg. Thk. (in):

RANGE SET-UP
Range to Target: 20 ft.
Screen Dist. Vel. 1 (ft.): 5
Screen Dist. Vel. 2 (ft.): 4
Screen 4 to target (ft): N/A
Primary Vel. Location: 8.25 ft. from target
Striking Velocity: No
Target to Witness: N/A
Witness Panel: N/A
Backing Material: N/A
Obliquity: 0 Degrees
Barrel: 5.56mm NATO/1:7/30"

Range #: 4
Temperature: 67.1 °F
Bar. Pressure: 29.83 in. Hg
Rel. Humidity: 63.0 %
Sample Temp. Amb. °F
Recorder: Jerhemi Stone
Gunner: Chris Moe

CLAY CALIBRATION NOT REQUIRED
Pre Test:
Clay Drops (mm):
Drop Avg (mm):
Clay Temp °F:
Clay Box #:
Post Test:
Clay Drops (mm):
Drop Avg (mm):
Clay Temp °F:

AMMUNITION
Projectile: 5.56mm M193 Ball
Powder: IMR 4227

STANDARDS / PROCEDURES
ASTM F3561-22
Required Velocity: 3370 fps ± 33 fps

SHOT NO.	PROJECTILE WT. (gr.)	POWDER WT. (gr.)	TIME 1 µs (10^{-6})	TIME 2 µs (10^{-6})	VELOCITY 1 ft/s	VELOCITY 2 ft/s	AVERAGE VELOCITY	PENET. P/C	OBLIQUITY	CALIPER BFD	NOTES
1	55.3	21.1	1487	1189	3362	3364	**3363**	C	0°		
2	55.3	21.1	1481	1185	3376	3376	**3376**	C	0°		
3	54.8	21.1	1486	1189	3365	3364	**3365**	C	0°		
4	55.4	21.1	1483	1187	3372	3370	**3371**	C	0°		
5	54.7	21.1	1495	1196	3344	3344	**3344**	C	0°		
6	55.2	21.1	1482	1186	3374	3373	**3374**	C	0°		
7	55.1	21.1	1494	1195	3347	3347	**3347**	C	0°		
8	55.3	21.1	1485	1188	3367	3367	**3367**	C	0°		
9	55.2	21.1	1481	1184	3376	3378	**3377**	C	0°		
10	55.5	21.1	1480	1184	3378	3378	**3378**	C	0°		

REMARKS:
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FOOTNOTES:

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2	1	PASS	No visible damage.
3	2	PASS	No visible damage.
4	2	PASS	No visible damage.
5	3	PASS	No visible damage.
6	3	PASS	No visible damage.
7	4	PASS	No visible damage.
8	4	PASS	No visible damage.
9	5	PASS	No visible damage.
10	5	PASS	No visible damage.
11	6	PASS	No visible damage.
12	6	PASS	No visible damage.
13	7	PASS	No visible damage.
14	7	PASS	Sample popped out of the frame on the side and then back in place.
15	8	PASS	No change.
16	8	PASS	No change.

OREGON BALLISTIC LABORATORIES

BALLISTIC RESISTANCE TEST - V_0

Customer: Riot Glass
OBL ID#: 38121
Date Rcv'd: 10/7/2024
Test Date: 10/8/2024
Purchase Order:

TEST SAMPLE
Sample No.: 2-3
Model No.: Gen II AP2-DC-AP375BR
Lot No.: N/A
Plies: N/A
Description: Gen II AP2-DC-AP375BR - Frames And Infills

Size (in.): 36 x 84
Weight (lb.): N/A
Thickness: N/A
Avg. Thk. (in):

RANGE SET-UP
Range to Target: 20 ft.
Screen Dist. Vel. 1 (ft.): 5
Screen Dist. Vel. 2 (ft.): 4
Screen 4 to target (ft): N/A
Primary Vel. Location: 8.25 ft. from target
Striking Velocity: No
Target to Witness: N/A
Witness Panel: N/A
Backing Material: N/A
Obliquity: 0 Degrees
Barrel: 5.56mm NATO/1:7/30"

Range #: 4
Temperature: 67.1 °F
Bar. Pressure: 29.83 in. Hg
Rel. Humidity: 63.0 %
Sample Temp. Amb. °F
Recorder: Jerhemi Stone
Gunner: Chris Moe

CLAY CALIBRATION NOT REQUIRED
Pre Test:
Clay Drops (mm):
Drop Avg (mm):
Clay Temp °F:
Clay Box #:
Post Test:
Clay Drops (mm):
Drop Avg (mm):
Clay Temp °F:

AMMUNITION
Projectile: 5.56mm M193 Ball
Powder: IMR 4227

STANDARDS / PROCEDURES
ASTM F3561-22
Required Velocity: 3370 fps ± 33 fps

SHOT NO.	PROJECTILE WT. (gr.)	POWDER WT. (gr.)	TIME 1 µs (10^{-6})	TIME 2 µs (10^{-6})	VELOCITY 1 ft/s	VELOCITY 2 ft/s	AVERAGE VELOCITY	PENET. P/C	OBLIQUITY	CALIPER BFD	NOTES
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3	55.1	21.2	1493	1194	3349	3350	3350	C	0°		
4	55.3	21.2	1494	1195	3347	3347	3347	C	0°		
5	55.3	21.2	1493	1194	3349	3350	3350	C	0°		
6	55.5	21.2	1485	1188	3367	3367	3367	C	0°		
7	55.3	21.2	1480	1184	3378	3378	3378	C	0°		
8	55.1	21.2	1478	1182	3383	3384	3384	C	0°		
9	55.3	21.2	1475	1180	3390	3390	3390	C	0°		
10	55.4	21.2	1498	1199	3338	3336	3337	C	0°		

REMARKS:
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TEST RESULTS:
Test sample satisfied the requirements given.

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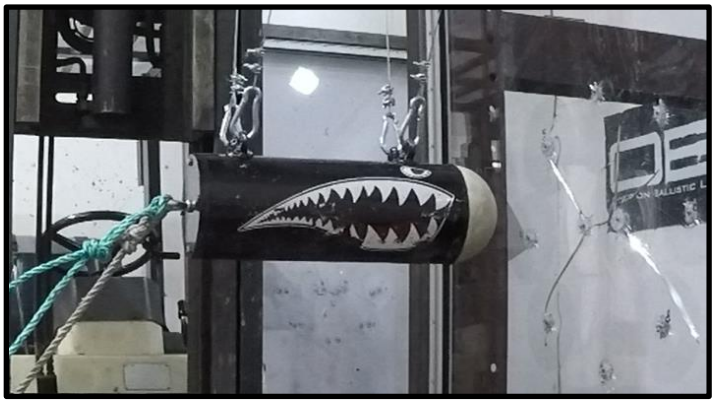
5	3	PASS	No visible damage.
6	3	PASS	No visible damage.
7	4	PASS	No visible damage.
8	4	PASS	No visible damage.
9	5	PASS	No visible damage.
10	5	PASS	No visible damage.
11	6	PASS	No visible damage.
12	6	PASS	No visible damage.
13	7	PASS	No visible damage.
14	7	PASS	No visible damage.
15	8	PASS	No visible damage.
16	8	PASS	No visible damage.



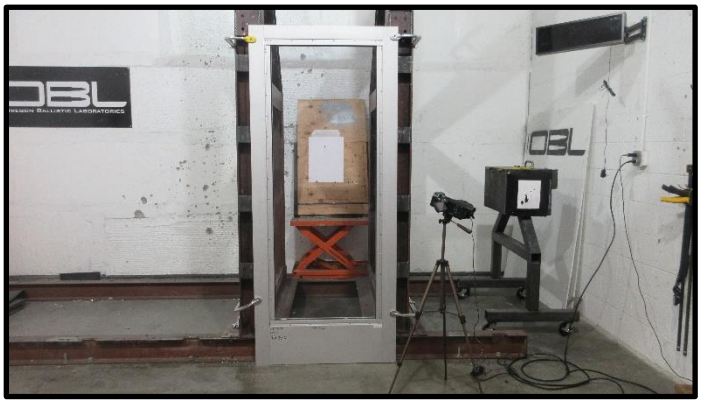
ASTM F3561 Impactor

OBL #38119 – Pre Test

OBL #38119 – Post Test

OBL #38120 – Pre Test

OBL #38120 – Post Test



OBL #38121 – Pre Test

OBL #38121 – Post Test