



February 17, 2020

RMA Armament, Inc.
1479 Gillespie St. Suite 303
Rock Island, IL 61201
ATTN: Blake Waldrop

Dear Mr. Waldrop:

In accordance with your instructions, Oregon Ballistic Laboratories conducted Ballistic Resistance (V_0) testing on three samples.

The samples were tested in accordance with NIJ-STD-0101.07 (draft) RF1 (abbreviated) (modified) in an indoor range with the muzzle of the test barrel mounted 50 feet away from the target and positioned to produce 0-degree obliquity impacts. Four infrared light screens, in conjunction with time-based frequency counters, were positioned such that projectile velocity was measured 8.25 feet from the target. Penetrations were determined by examination of a 5.5-inch clay block mounted behind the test sample. Results for all testing performed for this purpose are summarized in the following table.

Test Sample			Ballistic Threat				Results			
OBL No.:	Serial No.:	Weight (lbs.)	Projectile	Shots	Velocity (fps)		Penetrations	BFD (mm)		Pass/Fail
					Min.	Max		Min.	Max	
24090	1	2.56	M193	3	3220	3288	0	26.52	32.80	<u>PASS</u>
			M67	1	2379		0	36.75		<u>PASS</u>
24091	2	2.56	M80 Steel	1	2782		0	40.44		<u>PASS</u>
			M193	1	3257		0	-		<u>PASS</u>
24092	3	2.59	Type 56 MSC	4	2326	2395	0	32.40	40.43	<u>PASS</u>

Samples will be maintained at Oregon Ballistic Laboratories for 30 days and then discarded, unless other instructions are received. If you have any further questions or concerns, please contact us.

Sincerely,

Brandon Bertsch
Oregon Ballistic Laboratories



BALLISTIC RESISTANCE TEST - V₀

Customer: RMA Armament
 OBL ID#: 24090
 Date Rcv'd: 2/12/2020
 Test Date: 2/13/2020
 Purchase Order:

TEST SAMPLE
 Sample No.: 1
 Model No.: 1003
 Lot No.: Test Plate
 Plies: N/A
 Description: RF1 HA Plate
 Size (in.): 10 x 12
 Weight (lb.): 2.56
 Thickness:
 Avg. Thk. (in):

RANGE SET-UP
 Range to Target: 25 ft. Range #: 2
 Screen Dist. Vel. 1 (ft.): 5 Temperature: 69.6 °F
 Screen Dist. Vel. 2 (ft.): 5 Bar. Pressure: 30.06 in. Hg
 Screen 4 to target (ft): N/A Rel. Humidity: 43.2 %
 Primary Vel. Location: 8.25 ft. from target Sample Temp. Amb. °F
 Striking Velocity: No Recorder: Jesse Crisanti
 Target to Witness: N/A Gunner: Josh Humphreys
 Witness Panel: N/A
 Backing Material: 5.5" clay block w/ 3/4" plywood backing
 Obliquity: 0 Degrees
 Barrel:
 Pre Test:
 Clay Drops (mm): 27.79 26.55 27.58
 Drop Avg (mm): 27.31
 Clay Temp °F: 95.0
 Clay Box #: 2
 Post Test:
 Clay Drops (mm): 22.03 22.15 22.20
 Drop Avg (mm): 22.13
 Clay Temp °F: 93.2

AMMUNITION
 Projectile: Powder: Reloader 10X

STANDARDS / PROCEDURES
 NIJ-STD-0101.07 (draft) RF1 (abbrev) (mod) Required Velocity: fps ± 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	55.1	27.9	1520	1521	3289	3287	3288	P	0°	32.80	M193 @ 3250fps ± 30fps
2	55.4	27.9	1527	1530	3274	3268	3271	P	0°	26.52	M193 @ 3250fps ± 30fps
3	55.4	27.9	1552	1554	3222	3218	3220	P	0°		M193 @ 3250fps ± 30fps
4	124.0	27.4	2100	2104	2381	2376	2379	P	0°	36.75	M67 @ 2380fps ± 30fps

REMARKS:
 P=Partial Penetration
 C=Complete Penetration
 UH=Unfair Hit

TEST RESULTS:
 Test sample satisfied the ballistic requirements given.

FOOTNOTES:
 Sample was not subjected to Armor Submersion.
 Sample was not subjected to Armor Drop Test.

This report pertains only to the samples tested and must not be used to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government.

Customer: RMA Armament
 OBL ID#: 24091
 Date Rcv'd: 2/12/2020
 Test Date: 2/13/2020
 Purchase Order:

TEST SAMPLE

Sample No.: 2
 Model No.: 1003
 Lot No.: Test Plate
 Plies: N/A
 Description: RF1 HA Plate

Size (in.): 10 x 12
 Weight (lb.): 2.56
 Thickness:
 Avg. Thk. (in):

RANGE SET-UP

Range to Target: 25 ft. Range #: 2
 Screen Dist. Vel. 1 (ft.): 5 Temperature: 69.6 °F
 Screen Dist. Vel. 2 (ft.): 5 Bar. Pressure: 30.06 in. Hg
 Screen 4 to target (ft): N/A Rel. Humidity: 41.7 %
 Primary Vel. Location: 8.25 ft. from target Sample Temp. Amb. °F
 Striking Velocity: No Recorder: Jesse Crisanti
 Target to Witness: N/A Gunner: Josh Humphreys
 Witness Panel: N/A
 Backing Material: 5.5" clay block w/ 3/4" plywood backing
 Obliquity: 0 Degrees
 Barrel:

Pre Test:
 Clay Drops (mm): 27.65 27.49 26.91
 Drop Avg (mm): 27.35
 Clay Temp °F: 93.1
 Clay Box #: 1
 Post Test:
 Clay Drops (mm): 22.04 22.73 22.34
 Drop Avg (mm): 22.37
 Clay Temp °F: 91.2

AMMUNITION

Projectile: Powder:

STANDARDS / PROCEDURES

NIJ-STD-0101.07 (draft) RF1 (abbrev) (mod) Required Velocity: fps ± fps

SHOT NO.	PROJECTILE WT. (gr.)	POWDER WT. (gr.)	TIME 1 μ s (10 ⁻⁶)	TIME 2 μ s (10 ⁻⁶)	VELOCITY 1 ft/s	VELOCITY 2 ft/s	AVERAGE VELOCITY	PENET. P/C	OBLIQUITY	CALIPER BFD	NOTES
1	148.0	39.2	1794	1801	2787	2776	2782	P	0°	40.44	M80 Steel @ 2780fps ± 30fps / BL-C(2)
2	55.2	28.0	1533	1538	3262	3251	3257	P	0°		M193 @ 3250fps ± 30fps / Reloader 10X

REMARKS:

P=Partial Penetration
 C=Complete Penetration
 UH=Unfair Hit

TEST RESULTS:

Test sample satisfied the ballistic requirements given.

FOOTNOTES:

Sample was not subjected to Armor Drop Test.
 Sample was not subjected to Armor Submersion.



BALLISTIC RESISTANCE TEST - V₀

Customer: RMA Armament
 OBL ID#: 24092
 Date Rcv'd: 2/12/2020
 Test Date: 2/13/2020
 Purchase Order:

TEST SAMPLE
 Sample No.: 3
 Model No.: 1003
 Lot No.: Test Plate
 Plies: N/A
 Description: RF1 HA Plate
 Size (in.): 10 x 12
 Weight (lb.): 2.59
 Thickness:
 Avg. Thk. (in):

RANGE SET-UP
 Range to Target: 25 ft. Range #: 2
 Screen Dist. Vel. 1 (ft.): 5 Temperature: 69.4 °F
 Screen Dist. Vel. 2 (ft.): 5 Bar. Pressure: 30.06 in. Hg
 Screen 4 to target (ft): N/A Rel. Humidity: 42.7 %
 Primary Vel. Location: 8.25 ft. from target Sample Temp. Amb. °F
 Striking Velocity: No Recorder: Jesse Crisanti
 Target to Witness: N/A Gunner: Josh Humphreys
 Witness Panel: N/A
 Backing Material: 5.5" clay block w/ 3/4" plywood backing
 Obliquity: 0 Degrees
 Barrel: 7.62x39mm/1:9.45/24" Pre Test:
 Clay Drops (mm): 27.65 27.48 26.91
 Drop Avg (mm): 27.35
 Clay Temp °F: 93.1
 Clay Box #: 1
 Post Test:
 Clay Drops (mm): 22.04 22.73 22.34
 Drop Avg (mm): 22.37
 Clay Temp °F: 91.2

AMMUNITION
 Projectile: 7.62x39mm Type 56 MSC Powder: Reloader 10X

STANDARDS / PROCEDURES
 NIJ-STD-0101.07 (draft) RF1 (abbrev) (mod) Required Velocity: 2380 fps ± 30 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	122.6	27.8	2091	2095	2391	2387	2389	P	0°	32.40	
2	124.0	27.8	2148	2152	2328	2323	2326	UH	0°	40.43	Insufficient Velocity / Partial
3	121.0	27.8	2088	2088	2395	2395	2395	P	0°	36.14	
4	122.8	27.8	2099	2103	2382	2378	2380	P	0°	35.08	

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