



9 November 2018

Hardcore Defense  
700 S John Rodes Blvd STE D3  
Melborne, FL 32904

Attention: Mr. Brett Cryer

Subject: Hardcore Defense, Armor Protection Ballistic Limit,  $V_{50}$  BL(P) and Ballistic Resistance Test:  
Job No. 21145-004R1, Tested 26 October through 2 November 2018, Purchase Order No.  
181028-1

Dear Mr. Cryer:

Please find enclosed a report documenting the subject test series conducted by NTS-Chesapeake Testing on 26 October through 2 November 2018. This report includes a summary of the test as well as a detailed shot record for each sample tested. This is a revised report adding Sample M193-2 tested 11/2.

If you have any questions related to this test, please call Mr. Craig Thomas at 410-297-8154 or contact him via e-mail at [craig.thomas@nts.com](mailto:craig.thomas@nts.com).

Sincerely,

A handwritten signature in black ink, appearing to read "CS", written over a horizontal line.

Chris Schueler  
General Manager, NTS-Chesapeake Testing

lmd

Enc. a/s

This report shall not be used to claim product certification, approval or endorsement. The results of the testing relate only to the samples submitted for testing. This test report shall not be interpreted as an endorsement by NTS-Chesapeake Testing as to the continued quality or performance of any items of the same or similar design.

The information contained in this report may be subject to the provisions of the Export Administration Act (50 USC 2401 et seq.), the Export Administration Regulations (15 CFR 768-799), or the U.S. Arms Export Control Act (22 USC 2778 et seq.) and the International Traffic in Arms Regulations (22 CFR 120-130). These statutes and regulations impose restrictions on import, export and transfer to foreign entities and persons, whether within the U.S. or abroad, of certain data and articles without approved licenses from the U.S. Department of State and/or the U.S. Department of Commerce.

NTS-Chesapeake Testing is an independent testing facility and has no affiliation with Hardcore Defense.

**HARDCORE DEFENSE PROPRIETARY INFORMATION**

# BALLISTIC RESISTANCE TEST

## NTS-Chesapeake Testing

4603B Compass Point Road  
Belcamp, MD 21017

Client: Hardcore Defense

Job No.: 21145-004-B

Test Date: 10/26/2018

### Test Panel

Description: Steel Plate.

Manufacturer: Hardcore Defense

Sample No.: PS Ball

Size: 12.00 x 12.00 in  
Avg. Thick: 0.172 in  
Thickness: 0.173 in; 0.171 in;  
0.171 in; 0.172 in

Weight: 7.07 lbs  
Plies/Laminates: NA

Date Received: 10/25/2018  
Via: UPS  
Returned: NA

### Setup

Shot Spacing: NIJ-STD-0108.01 Level III  
Witness Panel: 0.02 in 2024-T3 Al  
Backing Material: NA  
Condition: Ambient

Primary Vel. Screens (ft): 6.500, 9.500  
Primary Vel. Location (ft): 8.000  
Range to Target (ft): 50.000  
Target to Witness (in): 6.000

Range No.: 2  
Temp: 71.2 °F  
BP: 29.9 inHg  
RH: 36.4%  
Barrel/Gun: CT-4022  
Gunner: Jesse Fulk  
Recorder: Glenn Snyder

### Ammunition

Projectile	Lot No.	Powder
(1) 7.62 x 39-mm, 123-grain PS Ball	Russian	N 110

### Applicable Standards or Procedures

- (1) NIJ-STD-0108.01 Level III (Modified)
- (2) Customer request

Shot No.	Ammo	Weight (gr)	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Obliq. (°)	Footnotes
1	1	121.8	1251	2398	1254	2392	2395	None	0.0	
2	1	121.9	1229	2441	1232	2435	2438	None	0.0	
3	1	123.4	1244	2412	1246	2408	2410	None	0.0	
4	1	122.7	1244	2412	1244	2412	2412	None	0.0	
5	1	122.0	1237	2425	1237	2425	2425	None	0.0	

Remarks:

Requested velocity: 2375 to 2425 ft/s  
The projectiles were provided by NTS-Chesapeake Testing.

Footnotes:

# BALLISTIC RESISTANCE TEST

## NTS-Chesapeake Testing

4603B Compass Point Road  
Belcamp, MD 21017

Client: Hardcore Defense

Job No.: 21145-004-C

Test Date: 11/2/2018

### Test Panel

Description: Steel Plate.

Manufacturer: Hardcore Defense

Sample No.: M193-2

Size: 12.00 x 12.00 in  
Avg. Thick: 0.163 in  
Thickness: 0.162 in; 0.163 in;  
0.163 in; 0.163 in

Weight: 7.06 lbs  
Plies/Laminates: NA

Date Received: 10/25/2018  
Via: UPS  
Returned: NA

### Setup

Shot Spacing: NIJ-STD-0108.01 Level III  
Witness Panel: 0.02 in 2024-T3 Al  
Backing Material: NA  
Condition: Ambient

Primary Vel. Screens (ft): 6.500, 9.500  
Primary Vel. Location (ft): 8.000  
Range to Target (ft): 50.000  
Target to Witness (in): 6.000

Range No.: 2  
Temp: 67.2 °F  
BP: 29.5 inHg  
RH: 49.3%  
Barrel/Gun: NA  
Gunner: Jesse Fulk  
Recorder: Glenn Snyder

### Ammunition

Projectile	Lot No.	Powder
(1) 5.56 x 45-mm, 55-grain M193 Ball	Military	N 110

### Applicable Standards or Procedures

- (1) NIJ-STD-0108.01 Level III (Modified)
- (2) Customer request

Shot No.	Ammo	Weight (gr)	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Obliq. (°)	Footnotes
1	1	54.6	960	3125	960	3125	3125	None	0.0	
2	1	54.8	968	3099	970	3093	3096	None	0.0	
3	1	54.9	968	3099	971	3090	3094	None	0.0	
4	1	54.9	961	3122	961	3122	3122	None	0.0	
5	1	54.8	961	3122	963	3115	3119	None	0.0	

#### Remarks:

Requested velocity: 3050 to 3150 ft/s

The projectiles were provided by NTS-Chesapeake Testing.

The sample was previously impacted 5 times with 5.56 x 45-mm, 55-grain M193 Ball during Job No.: 21145-004-A.

#### Footnotes:



16 December 2019

Hardcore Defense  
700 S John Rodes Blvd STE D3  
Melborne, FL 32904

Attention: Mr. Brett Cryer

Subject: Hardcore Defense, Armor Protection Ballistic Resistance and Ballistic Limit Test, V<sub>50</sub> BL(P):  
Job No. 21145-011, Tested 12 and 13 December 2019, Purchase Order No. 191211-1

Dear Mr. Cryer:

Please find enclosed a report documenting the subject test series conducted by NTS-Chesapeake Testing on 12 and 13 December 2019.

If you have any questions related to this test, please call Mr. Craig Thomas at 410-297-8154 or contact him via e-mail at [craig.thomas@nts.com](mailto:craig.thomas@nts.com).

Sincerely,

A handwritten signature in black ink, appearing to read "CS", with a long horizontal flourish extending to the right.

Chris Schueler  
General Manager, NTS-Chesapeake Testing

jmt

Enc. a/s

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**HARDCORE DEFENSE PROPRIETARY INFORMATION**

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**Hardcore Defense,  
Armor Protection Ballistic Resistance  
and Ballistic Limit Test, V<sub>50</sub> BL(P)**

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Prepared by:

**Craig A. Thomas  
Justine M. Tambourine**

***NTS-Chesapeake Testing***

*4603B Compass Point Road  
Belcamp, MD 21017*

**16 December 2019**

*Further dissemination only as directed by  
Hardcore Defense, December 2019.*

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**HARDCORE DEFENSE PROPRIETARY INFORMATION**

# BALLISTIC RESISTANCE TEST

## NTS-Chesapeake Testing

4603B Compass Point Road  
Belcamp, MD 21017

Client: Hardcore Defense

Job No.: 21145-011-1

Test Date: 12/13/2019

### Test Panel

Description: Steel.

Manufacturer: Hardcore Defense

Sample No.: M855 V0

Size: 12.00 x 12.00 in  
Avg. Thick: 0.163 in  
Thickness: 0.162 in; 0.163 in;  
0.165 in; 0.161 in

Weight: 6.73 lbs  
Plies/Laminates: NA

Date Received: 12/10/2019  
Via: UPS  
Returned: UPS

### Setup

Shot Spacing: NIJ-STD-0108.01 Level III  
Witness Panel: 0.02 in 2024-T3 Al  
Backing Material: NA  
Condition: Ambient

Primary Vel. Screens (ft): 6.500, 9.500  
Primary Vel. Location (ft): 8.000  
Range to Target (ft): 50.000  
Target to Witness (in): 6.000

Range No.: 3  
Temp: 66.2 °F  
BP: 30.0 inHg  
RH: 44.9%  
Barrel/Gun: 4049  
Gunner: C. Peddicord  
Recorder: Ramon Chavez

### Ammunition

Projectile	Lot No.	Powder
(1) 5.56 x 45-mm, 62-grain M855 ball	Military	N 110

### Applicable Standards or Procedures

- (1) NIJ-STD-0108.01 Level III (Modified)
- (2) Customer request

Shot No.	Ammo	Weight (gr)	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Obliq. (°)	Footnotes
1	1	62.0	961	3122	963	3115	3119	None	0.0	
2	1	62.0	963	3115	966	3106	3110	None	0.0	
3	1	62.0	961	3122	961	3122	3122	None	0.0	
4	1	62.0	971	3090	971	3090	3090	None	0.0	
5	1	62.0	966	3106	966	3106	3106	None	0.0	

**Remarks:**

Requested velocity: 3070-3130 ft/s  
All projectiles were provided by NTS-Chesapeake Testing.

**Footnotes:**