

BALLISTIC RESISTANCE TEST

NTS-Chesapeake Testing

4603B Compass Point Road
Belcamp, MD 21017

Client: Hardcore Defense

Job No.: 21145-008-1

Test Date: 2/22/2019

Test Panel

Description: Steel Plate.

Manufacturer: Hardcore Defense

Sample No.: M80 (V0)

Size: 12.00 x 12.00 in
Avg. Thick: 0.217 in
Thickness: 0.218 in; 0.217 in;
0.218 in; 0.216 in

Weight: 8.58 lbs
Plies/Laminates: NA

Date Received: 2/20/2019
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.: 2
Temp: 67.2 °F
BP: 30.2 inHg
RH: 45.3%
Barrel/Gun: CT-6026
Gunner: C. Peddicord
Recorder: Jesse Fulk

Ammunition

Projectile	Lot No.	Powder
(1) 7.62 x 51-mm, 149-grain M80 FMJ	Military	N133

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	148.6	1056	2841	1056	2841	2841	None	0.0	
2	1	148.7	1058	2836	1058	2836	2836	None	0.0	
3	1	148.3	1055	2844	1056	2841	2842	None	0.0	
4	1	148.5	1059	2833	1061	2828	2830	None	0.0	
5	1	148.5	1062	2825	1064	2820	2822	None	0.0	

Remarks:

Requested velocity: 2800 +50 ft/s.

Projectiles provided by Chesapeake Testing.

Footnotes:

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4603B Compass Point Road
Belcamp, MD 21017

Client: Hardcore Defense

Job No.: 21145-009-1

Test Date: 3/5/2019

Test Panel

Description: Steel Plate Pack.

Manufacturer: Hardcore Defense

Sample No.: M193

Size: 12.00 x 12.00 in
Avg. Thick: 0.322 in
Thickness: 0.320 in; 0.319 in;
0.322 in; 0.326 in

Weight: 11.70 lbs
Plies/Laminates: NA

Date Received: 3/4/2019
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.: 4
Temp: 67.6 °F
BP: 29.9 inHg
RH: 36.2%
Barrel/Gun: Test Barrel
Gunner: J.Thomas
Recorder: Bret DeMond

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	54.7	905	3315	907	3308	3311	None	0.0	
2	1	54.9	914	3282	914	3282	3282	None	0.0	
3	1	55.1	900	3333	902	3326	3330	None	0.0	
4	1	54.9	907	3308	907	3308	3308	None	0.0	
5	1	54.8	910	3297	912	3289	3293	None	0.0	

Remarks:

Requested velocity: 3275-3310 ft/s.

Projectiles provided by Chesapeake Testing.

Footnotes:

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NTS-Chesapeake Testing

4603B Compass Point Road
Belcamp, MD 21017

Client: Hardcore Defense

Job No.: 21145-010-1

Test Date: 3/6/2019

Test Panel

Description: Steel Plate Pack.

Manufacturer: Hardcore Defense

Sample No.: M855

Size: 12.00 x 12.00 in
Avg. Thick: 0.322 in
Thickness: 0.320 in; 0.319 in;
0.322 in; 0.326 in

Weight: 11.70 lbs
Plies/Laminates: NA

Date Received: 3/4/2019
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.: 4
Temp: 68.9 °F
BP: 30.0 inHg
RH: 25.4%
Barrel/Gun: NA
Gunner: S. McDowell
Recorder: J. McDowell

Ammunition

Projectile	Lot No.	Powder
(1) 5.56 x 45-mm, 62-grain M855 ball	Military NA	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	62.1	944	3178	941	3188	3183	None	0.0	
2	1	62.1	944	3178	946	3171	3175	None	0.0	
3	1	62.0	949	3161	946	3169	3165	None	0.0	
4	1	62.2	934	3212	934	3212	3212	None	0.0	
5	1	62.3	927	3236	927	3236	3236	None	0.0	

Remarks:

Requested velocity: 3175-3225 ft/s.

Projectiles provided by Chesapeake Testing.

This sample was previously impacted with five, 5.56 x 45-mm, 55-grain M193 Ball projectiles during Job No. 21145-009-1.

Footnotes: