

BALLISTIC RESISTANCE TEST

NTS-Belcamp
4603B Compass Point Road
Belcamp, MD 21017

Client: Hardhead Veterans
Project No.: PH00005352
Test Date: 02/20/2023
Page 1 of 1

Test Panel Description: Ballistic helmet with pads and retention system

Manufacturer: Hard Head Veterans LLC

Sample No.: (Multi Threat, V0) Helmet #1

Size: Large
Avg. Thickness: 0.306 in
Thicknesses: 0.311 in, 0.311 in,
0.304 in, 0.299 in

Weight: 2.450 lbs
Plies/Laminates: N/A

Date Received: 02/13/2023
Received Via: UPS Ground
Returned Via: UPS Ground

Setup

Shot Spacing: AR/PD 10-02
Witness Panel: Clay
Backing Material: Clay-filled NIJ-
0106.01 head form
Condition: Ambient

Primary Vel. Screens (ft): 5.000, 5.333,
9.666, 10.000
Primary Vel. Location (ft): 7.500
Range to Target (ft): 15.000
Target to Witness (in): 0.000

Range No.: Range 4
Temp: 68.8 °F
BP: 30.1 inHg
RH: 47 %
Barrel/Gun: WC024521
Gunner: Bernard Carr
Recorder: Joshua Petty

Ammunition

Projectile	Lot No.	Manufacturer	Powder
(1) .45 AUTO, 230-grain FMJ	NA	Federal	Accurate No. 2
(2) .40 S&W, 155-grain FMJ	NA	Federal	Accurate No. 2

Applicable Standards or Procedures

Clay Drop 1 - Drop Time: 11:30 AM; Block No. WC074958; Temp: 96.2 °F, 96.4 °F; Drop Depths: 24.1 mm, 24.7 mm, 24 mm
(1) AR/PD 10-02 Rev A, Change 6 (Modified)
(2) Customer Request

Shot No.	Ammo	Powder/ Seating	Weight (gr)	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Deformation (mm)	Obliq. (°)	Footnotes
1	1	5.5	230.8	5455	917	4728	916	917	None	16.5	0	(a)
2	1	5.3	230.6	5702	877	4940	877	877	None	14.4	0	(b)
3	2	4.4	155.8	5000	1000	4325	1002	1001	None	5.5	0	(c)
4	2	4.6	155.3	4796	1043	4156	1043	1043	None	16.6	0	(d)

Remarks:

Required velocity shots 1-2: 830-860 ft/s.
Required velocity shots 3-4: 985-1015 ft/s.
Head form No.: HB2-1 Head form temp.: 96.8 °F.
Projectile yaw check: 0 yaw on all impacts.

Footnotes:

(a) Front
(b) Left
(c) Back
(d) Right