

NATIONAL TECHNICAL SYSTEMS

NIJ 0106.01 HELMET:

BALLISTIC PENETRATION TEST

Date Received 10/15/18
Via: USPS
Returned Via: UPS

Record No.: HHV18001-2
Test Date: 10/16/18
Customer: Hard Head Veterans

Test Conditions

Temperature: 72.5 °F
Humidity: 42 %
Test Standard: Modified / Abbreviated NIJ Standard 0106.01 for Ballistic Helmet
December 1981
Test Method: IAW Paragraph 5.2 Ballistic Penetration Test
Test Ammunition: IAW NIJ Standard 0101.06, July 2008
Threat Level IIIA
Conditioning Dry

Range 2

Muzzle to Screen 1 5.94 ft.
Screen 1 - 2: 5.00 ft.
Screen 2 - Target: 6.20 ft.
Midpoint to Target 8.70 ft.
Target to Witness: 0.25 ft.
Headform Size 7 1/4
Witness Plate: 2024-T3 Alum.
Barrel Length: 8 in.

Sample Tested Descriptor	Test / Ammunition Descriptor					Chronograph		Test Results
	Shot No.	Impact Location	Degree Obliquity	Caliber	Bullet Weight (gr.) / Type	TIME sx-5	VELOCITY ft/s	Penetration
Manufacturer: Hard Head Veterans	1	Front	0°	.44 Mag.	240 / JHP	350.6	1426	No Penetration
Type: HHV ATE BALLISTIC	2	Back	0°	.44 Mag.	240 / JHP	355.9	1405	No Penetration
Color / Size: Black / L / XL	3	Left	0°	.44 Mag.	240 / JHP	354.2	1412	No Penetration
Sample No.: Helmet #2	4	Right	0°	.44 Mag.	240 / JHP	347.0	1441	No Penetration
Weight (lbs.): 3.179								
Style: High Cut								
DoM: N/A								
Conditioning Ambient								

This test report may not be used to claim product certification, approval, or endorsement by NVLAP, NIST, NIJ or any agency of the Federal Government. This report contains data that are not covered by the NVLAP accreditation. This test was performed in accordance with the specification requirements listed in addition to any customer testing modifications or requests. The test results properly reflect the ballistic performance of the listed sample. This test report shall not be reproduced except in full without written approval of National Technical Systems.

REMARKS / NOTES:

- Helmet tested as received from customer with 3-Hole NVG Shroud, side rails, pads, suspension / retention system and chinstrap
- Penetration Test Headforms used are IAW the dimensions and sizes per Section 5.1.5 and Figure

Conditioning

- Helmet tested at ambient conditions 68 - 82 °F (20 - 28 °C) and 30% - 70% RH

Test Ammunition / Velocity Information

- Test round and velocity IAW NIJ Standard 0101.06, Level IIIA
- Test Round: Speer (4453 or 4736), .44 Magnum 240 gr. Jacketed Hollow Point (JHP)
Test Velocity: 1430 +/- 30 ft/s (New Armor Velocity)

Impact Locations:

Sagittal Penetration Test Headform

Shot No. 1 (Front): (Center of NVG Shroud / 50mm from edge): Impact \leq 9cm (3.5") above the basic plane and \leq 5cm (2.0") from the mid-sagittal plane
Shot No. 2: Back (90mm from edge): Impact within the area diametrically opposite the front impact area (Shot

Coronal Penetration Test Headform

Shot No. 3: Left Side (20mm above side rail): Impact \leq 5cm (2.0") above the basic plane and \leq 7.5cm (3.0") from the coronal plane
Shot No. 4: Right Side (20mm above side rail): Impact \leq 5cm (2.0") above the basic plane and \leq 7.5cm (3.0") from the coronal plane

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NATIONAL TECHNICAL SYSTEMS

NIJ 0106.01 HELMET:

BALLISTIC PENETRATION TEST

Date Received 10/15/18
Via: UPS
Returned Via: UPS

Record No.: HHV18001-4
Test Date: 10/16/18
Customer: Hard Head Veterans

Test Conditions

Temperature: 72.5 °F
Humidity: 42 %
Test Standard: Modified / Abbreviated NIJ Standard 0106.01 for Ballistic Helme:
December 1981
Test Method: IAW Paragraph 5.2 Ballistic Penetration Tes
Test Ammunition: IAW NIJ Standard 0101.06, July 2008
Threat Level: IIIA
Conditioning: Dry

Range 2

Muzzle to Screen 1 5.77 ft.
Screen 1 - 2: 5.00 ft.
Screen 2 - Target: 6.20 ft.
Midpoint to Target 8.70 ft.
Target to Witness: 0.25 ft.
Headform Size 7 1/4
Witness Plate: 2024-T3 Alum.
Barrel Length: 10 in.

Sample Tested Descriptor	Test / Ammunition Descriptor					Chronograph		Test Results
Manufacturer: Hard Head Veterans	Shot No.	Impact Location	Degree Obliquity	Caliber	Bullet Weight (gr.) / Type	TIME sx-5	VELOCITY ft/s	Penetration
Type: HHV ATE BALLISTIC	1	Front	0°	.357 Sig	125 / TMJ	344.1	1453	No Penetration
Color / Size: Black / L / XL	2	Back	0°	.357 Sig	125 / TMJ	343.3	1456	No Penetration
Sample No.: Helmet #3	3	Left	0°	.357 Sig	125 / TMJ	339.5	1473	No Penetration
Weight (lbs.): 3.00	4	Right	0°	.357 Sig	125 / TMJ	334.6	1494	No Penetration
Style: High Cut								
DoM: N/A								
Conditioning: Ambient								

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REMARKS / NOTES:

- *Helmet was blunt impact tested previously per customer request (See Report No. HHV18001-3)
- **3-Hole NVG Shroud and side rails were removed prior blunt impact testing and remained off for .357 Sig RTP tes
- Helmet tested with pads, suspension / retention system and chinstrap
- Penetration Test Headforms used are IAW the dimensions and sizes per Section 5.1.5 and Figure

Conditioning

- Helmet tested at ambient conditions 68 - 82 °F (20 - 28 °C) and 30% - 70% RH

Test Ammunition / Velocity Information

- Test round and velocity IAW NIJ Standard 0101.06, Level IIIA
- Test Round: Speer (4362), .357 Sig 125 gr. TMJ
- Test Velocity: 1470 +/- 30 ft/s (New Armor Velocity)

Impact Locations:

Sagittal Penetration Test Headform

- Shot No. 1 (Front): (50mm from edge): Impact \leq 9cm (3.5") above the basic plane and \leq 5cm (2.0") from the mid-sagittal plane
Shot No. 2: Back (90mm from edge): Impact within the area diametrically opposite the front impact area (Shot

Coronal Penetration Test Headform

- Shot No. 3: Left Side (65mm from edge): Impact \leq 5cm (2.0") above the basic plane and \leq 7.5cm (3.0") from the coronal plane
Shot No. 4: Right Side (65mm from edge): Impact \leq 5cm (2.0") above the basic plane and \leq 7.5cm (3.0") from the coronal plane

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