

NATIONAL TECHNICAL SYSTEMS
NIJ 0106.01 HELMET:
BALLISTIC PENETRATION TEST

Date Received: February 18, 2023
 Via: Fed Ex
 Returned Via: Fed Ex

Record No.: PGD23001-1
 Test Date: March 16, 2023
 Customer: Protection Group Danmark

Test Conditions

Temperature: 21.1 °C
 Humidity: 40 %

Range 2

Muzzle to Screen 1: 1.52 m
 Screen 1 - 2: 1.52 m
 Screen 2 - Target: 1.83 m
 Midpoint to Target: 2.59 m

Test Standard: Modified / Abbreviated NIJ Standard 0106.01 for Ballistic Helmets
 December 1981

Test Method: IAW Paragraph 5.2 Ballistic Penetration Test

Test Ammunition: IAW NIJ Standard 0108.01, September 1985

Threat Level: IIIA
 Conditioning: Wet

Headform Size: 7 1/4
 Witness Plate: 2024-T3 Alum.
 Barrel Length: 25.4 cm

Sample Tested Description		Test / Ammunition Description				Chronograph		Test Results	
Manufacturer:	Protection Group Danmark	Shot No.	Impact Location	Degree Obliquity	Caliber	Bullet Weight (gr.) / Type	TIME se-5	VELOCITY m/s	Penetration
Model No.:	ARCH HIGH CUT	1	Front	0°	.44 Mag.	240 / LSWC GC	353.3	431.4	No Penetration
Size:	L	2	Back	0°			363.2	419.6	No Penetration
Serial No.:	22081817	3	Right	0°			369.8	412.1	No Penetration
Lot No.:	3777	4	Left	0°			351.2	433.9	No Penetration
Weight (kg.):	1.360								
Protection Level:	NIJ IIIA								

Notes:

•Helmet tested as received from customer with retention / suspension system, chinstrap and pads.

Conditioning:

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

Test Ammunition / Velocity Information:

Test Round: .44 Magnum 240 gr. Lead Semi-Wadcutter Gas Checked (LSWCGC)

Test Velocity: 426 +/- 15 m/s (1400 +/- 50 ft/s)

Technician (s): Wilson / Zerger

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BALLISTIC PENETRATION TEST

Date Received: February 18, 2023
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Record No.: PGD23001-2
 Test Date: March 16, 2023
 Customer: Protection Group Denmark

Test Conditions

Temperature: 20.6 °C
 Humidity: 40 %

Range 2

Muzzle to Screen 1: 1.52 m
 Screen 1 - 2: 1.52 m
 Screen 2 - Target: 1.83 m
 Midpoint to Target: 2.59 m

Test Standard: Modified / Abbreviated NIJ Standard 0106.01 for Ballistic Helmets
 December 1981

Headform Size: 7 1/4
 Witness Plate: 2024-T3 Alum.
 Barrel Length: 25.4 cm

Test Method: IAW Paragraph 5.2 Ballistic Penetration Test
 Test Ammunition: IAW NIJ Standard 0108.01, September 1985
 Threat Level: IIIA
 Conditioning: Wet

Sample Tested Description		Test / Ammunition Description				Chronograph		Test Results	
Manufacturer:	Protection Group Denmark	Shot No.	Impact Location	Degree Obliquity	Caliber	Bullet Weight (gr.) / Type	TIME se-5	VELOCITY m/s	Penetration
Model No.:	ARCH HIGH CUT	1	Front	0°	9mm	124 / FMJ	347.1	439.1	No Penetration
Size:	L	2	Back	0°			352.5	432.3	No Penetration
Serial No.:	2208108	3	Right	0°			364.7	417.9	No Penetration
Lot No.:	3777R	4	Left	0°			369.5	412.4	No Penetration
Weight (kg.):	1.381								
Protection Level:	NIJ IIIA								

Notes:
 •Helmet tested as received from customer with retention / suspension system, chinstrap and pads.

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

Test Ammunition / Velocity Information:
 Test Round: Remington (23558), 9mm 124 gr. FMJ RN
 Test Velocity: 426 +/- 15 m/s (1400 +/- 50 ft/s)

Technician (s): Wilson / Zerger

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Date Received: February 18, 2023
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Record No.: PGD23001-3
 Test Date: March 16, 2023
 Customer: Protection Group Danmark

Test Conditions

Temperature: 21.7 °C
 Humidity: 40 %

Range 2

Muzzle to Screen 1: 1.52 m
 Screen 1 - 2: 1.52 m
 Screen 2 - Target: 1.83 m
 Midpoint to Target: 2.59 m

Test Standard: Modified / Abbreviated NIJ Standard 0106.01 for Ballistic Helmets
 December 1981

Test Method: IAW Paragraph 5.2 Ballistic Penetration Test

Test Ammunition: IAW NIJ Standard 0101.06, July 2008

Threat Level: IIIA

Conditioning: Wet

Headform Size: 7 1/4

Witness Plate: 2024-T3 Alum.

Barrel Length: 25.4 cm

Sample Tested Description		Test / Ammunition Description				Chronograph		Test Results	
Manufacturer:	Protection Group Danmark	Shot No.	Impact Location	Degree Obliquity	Caliber	Bullet Weight (gr.) / Type	TIME se-5	VELOCITY m/s	Penetration No Penetration
Model No.:	ARCH HIGH CUT	1	Front	0°	.44 Mag.	240 / JHP	356.5	427.5	No Penetration
Size:	L	2	Back	0°			355.2	429.1	No Penetration
Serial No.:	22081775	3	Right	0°			353.6	431.0	No Penetration
Lot No.:	3777	4	Left	0°			356.3	427.7	No Penetration
Weight (kg.):	1.361								
Protection Level:	NIJ IIIA								

Notes:

•Helmet tested as received from customer with retention / suspension system, chinstrap and pads.

Conditioning:

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

Test Ammunition / Velocity Information:

Test Round: Speer (4453 or 4736), .44 Magnum 240 gr. Jacketed Hollow Point (JHP)

Test Velocity: 436 +/- 10 m/s (1430 +/- 30 ft/s)

Technician (s): Wilson / Zerger

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Date Received: February 18, 2023
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Record No.: PGD23001-4
 Test Date: March 16, 2023
 Customer: Protection Group Denmark

Test Conditions

Temperature: 21.1 °C
 Humidity: 37 %

Range 2

Muzzle to Screen 1: 1.52 m
 Screen 1 - 2: 1.52 m
 Screen 2 - Target: 1.83 m
 Midpoint to Target: 2.59 m

Test Standard: Modified / Abbreviated NIJ Standard 0106.01 for Ballistic Helmets
 December 1981

Test Method: IAW Paragraph 5.2 Ballistic Penetration Test

Test Ammunition: IAW NIJ Standard 0101.06, July 2008

Threat Level: IIIA

Conditioning: Wet

Headform Size: 7 1/4

Witness Plate: 2024-T3 Alum.

Barrel Length: 25.4 cm

Sample Tested Description		Test / Ammunition Description				Chronograph		Test Results	
Manufacturer:	Protection Group Denmark	Shot No.	Impact Location	Degree Obliquity	Caliber	Bullet Weight (gr.) / Type	TIME se-5	VELOCITY m/s	Penetration
Model No.:	ARCH HIGH CUT	1	Front	0°	.357 Sig	125 / TMJ	339.3	449.2	No Penetration
Size:	L	2	Back	0°			340.4	447.7	No Penetration
Serial No.:	22081533	3	Right	0°			339.1	449.4	No Penetration
Lot No.:	3777	4	Left	0°			331.8	459.3	No Penetration
Weight (kg.):	1.353								
Protection Level:	NIJ IIIA								

Notes:

•Helmet tested as received from customer with retention / suspension system, chinstrap and pads.

Conditioning:

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

Test Ammunition / Velocity Information:

Test Round: Speer (4362), .357 Sig 125 gr. TMJ

Test Velocity: 448 +/- 10 m/s (1430 +/- 30 ft/s)

Technician (s): Wilson / Zerger

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