



12 April 2021

Protection Group Danmark ApS
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Randers C, TH 8900 DK

Attention: Mr. Jonas Olesen

Subject: Protection Group Danmark ApS, Armor Protection Ballistic Resistance Test: Job No. 21051-002, Tested 5 April 2021, Purchase Order No. Jonas Olesen

Dear Mr. Olesen

Please find enclosed a report documenting the subject test series conducted by NTS-Chesapeake Testing on 5 April 2021. This report includes a summary of the test as well as a detailed record for each armor sample tested.

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.

Sincerely,

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

Chris Schueler
General Manager, NTS-Chesapeake Testing

cdh

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 (22USC 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 Protection Group Danmark ApS.

1 of 9

PROTECTION GROUP DANMARK APS PROPRIETARY INFORMATION

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POC: Mr. Jonas Olesen
Purchase Order No.: Jonas Olesen
Test Dates: 5 April 2021
Job No.: 21051-002

Protection Group Danmark ApS, Armor Protection Ballistic Resistance Test

Prepared by:

Craig A. Thomas
Colleen Hallock

NTS-Chesapeake Testing

*4603B Compass Point Road
Belcamp, MD 21017*

12 April 2021

***Further dissemination only as directed by
Protection Group Danmark ApS, April 2021.***

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1 Introduction

Protection Group Danmark ApS provided two armor samples to NTS-Chesapeake Testing for ballistic resistance testing on 5 April 2021.

2 Threats and Instrumentation

2.1 Threats*

- .44-mag., 240-grain semi-jacketed hollow point (SJHP) projectiles
- .357-cal., 125-grain SIG full metal jacketed flat nosed (FMJFN) projectiles

*All projectiles were fired from a universal receiver which was fitted with the appropriate barrel and mounted on a NTS-Chesapeake Testing mount.

*The threat projectiles were required to have no greater than 3° total yaw. Projectile yaw was measured to ensure that the test impacts were within this constraint by placing a yaw card at the appropriate gun-to-target range during velocity verification shots.

2.2 Instrumentation

Projectile velocity measurements were obtained using Oehler Research model No. 57 infrared screens with Y.I.S. Cowden Group Chrono-USB chronographs. Calibration data is provided in Attachment A.

3 Details of Test

The objective of this test was to conduct a ballistic resistance test on the armor samples in accordance with NIJ-STD-0106.01 (Modified) and the customer's request. Shot spacing between multiple impacts on each sample was in accordance with the referenced performance standard. Shots against the samples were performed at 0.0° obliquity and ambient range temperature (66 ± 1 °F).

For each shot, the target was clamped to a rigid test fixture. A piece of 0.508 mm thick (0.020 in) type 2024 T3 aluminum was mounted along the shotline, approximately 76 mm \pm 13 mm (3 in \pm 0.5 in) behind the target, to verify complete penetrations. A complete penetration was scored only when the witness material was perforated (i.e., light was visible through the material). All firings were conducted at 16.400 ft from the target. The projectile velocities used for the test were in accordance with NIJ-STD-0101.06 Level IIIA.

4 Summary of Results

The results of the ballistic resistance test are presented in Table 1. The round-by-round ballistic data sheets for all testing performed are provided on the following pages.



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Table 1. Summary of Ballistic Resistance Test

Job No.	Sample No.	Size	Weight (lbs)	Threat	Target Obliq. (deg)	Shot No.	Penetration Data	
							Velocity (ft/s)	Result
21051-002-1	2102141	Medium	3.02	.44-mag., 240-grain SJHP	0.0	1	1421	None
						2	1435	None
						3	1426	None
						4	1420	None
21051-002-2	2102142	Medium	2.99	.357-cal., 125-grain SIG FMJ FN	0.0	1	1457	None
						2	1463	None
						3	1456	None
						4	1452	None

BALLISTIC RESISTANCE TEST

NTS-Chesapeake Testing

4603B Compass Point Road
Belcamp, MD 21017

Client: Protection Group Danmark ApS

Job No.: 31051-002-1

Test Date: 4/5/2021

Test Panel

Description: Helmet. Model: Arch-High-Cut, Lot No.: 3435.

Manufacturer: Protection Group Danmark ApS

Sample No.: 2102141

Size: Medium
Avg. Thick: 0.356 in
Thickness: 0.343 in; 0.340 in;
0.370 in; 0.373 in

Weight: 3.02 lbs
Plies/Laminates: NA

Date Received: 3/29/2021
Via: FedEx
Returned: FedEx

Setup

Shot Spacing: NIJ-STD-0106.01
Witness Panel: 0.02 in 2024-T3 Aluminum
Backing Material: NIJ-0106.01 Head Form
Condition: Ambient

Primary Vel. Screens (ft): 6.500, 9.500
Primary Vel. Location (ft): 8.000
Range to Target (ft): 16.400
Target to Witness (in): 3.000

Range No.: 2
Temp: 66.1 °F
BP: 30.8 inHg
RH: 40.2%
Barrel/Gun: Test Barrel
Gunner: Keivin Guzman
Recorder: Bret DeMond

Ammunition

Projectile	Lot No.	Powder
(1) .44-mag., 240-grain SJHP	Speer B02X	Accurate No. 5

Applicable Standards or Procedures

- (1) NIJ-STD-0106.01 (Modified)
- (2) Ammunition and velocities used from NIJ-STD-0101.06 Level 3A
- (3) 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	240.4	2111	1421	2111	1421	1421	None	0.0	(a)
2	1	240.4	2091	1435	2091	1435	1435	None	0.0	(b)
3	1	240.5	2103	1427	2106	1425	1426	None	0.0	(c)
4	1	240.6	2113	1420	2113	1420	1420	None	0.0	(d)

Remarks:

Required Velocity: 1430 ± 30 ft/s.

Projectile yaw check: 0° yaw on all impacts

Footnotes:

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

BALLISTIC RESISTANCE TEST

NTS-Chesapeake Testing

4603B Compass Point Road
Belcamp, MD 21017

Client: Protection Group Danmark ApS

Job No.: 31051-002-2

Test Date: 4/5/2021

Test Panel

Description: Helmet. Model: Arch-High-Cut, Lot No.: 3435.

Manufacturer: Protection Group Danmark ApS

Sample No.: 2102142

Size: Medium
Avg. Thick: 0.361 in
Thickness: 0.378 in; 0.375 in;
0.344 in; 0.346 in

Weight: 2.99 lbs
Plies/Laminates: NA

Date Received: 3/29/2021
Via: FedEx
Returned: FedEx

Setup

Shot Spacing: NIJ-STD-0106.01
Witness Panel: 0.02 in 2024-T3 Aluminum
Backing Material: NIJ-0106.01 Head Form
Condition: Ambient

Primary Vel. Screens (ft): 6.500, 9.500
Primary Vel. Location (ft): 8.000
Range to Target (ft): 16.400
Target to Witness (in): 3.000

Range No.: 2
Temp: 66.8 °F
BP: 30.8 inHg
RH: 40.1%
Barrel/Gun: Test Barrel
Gunner: Keivin Guzman
Recorder: Bret DeMond

Ammunition

Projectile	Lot No.	Powder
(1) .357-cal., 125-grain SIG FMJ FN	Speer A27R	Accurate No. 2

Applicable Standards or Procedures

- (1) NIJ-STD-0106.01 (Modified)
- (2) Ammunition and velocities used from NIJ-STD-0101.06 Level 3A
- (3) 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	124.8	2059	1457	2059	1457	1457	None	0.0	(a)
2	1	124.9	2050	1463	2052	1462	1463	None	0.0	(b)
3	1	124.9	2062	1455	2059	1457	1456	None	0.0	(c)
4	1	125.0	2064	1453	2067	1451	1452	None	0.0	(d)

Remarks:

Required Velocity: 1470 ± 30 ft/s.

Projectile yaw check: 0° yaw on all impacts

Footnotes:

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



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**ATTACHMENT A
 CALIBRATION DATA**

Job Number:	31051-002				
Customer:	<u>Protection Group Danmark ApS</u>	Date:	<u>04/05/2021</u>		
Range:	<u>2</u>	Range Lead:	<u>Bret DeMond</u>		

Equipment	Serial Number	NTS I.D. #	Cal. Date	Due Date	Range Lead Initials
Chronograph 1	103	WC027146	8/14/2020	8/14/2021	BD
Chronograph 2	113	WC067023	8/14/2020	8/14/2021	BD
Powder Scale	A06233026	WC060532	12/7/2020	12/7/2021	BD
Floor Scale	25459071	WC060652	12/9/2019	12/9/2021	BD
100 ft. Tape Measure	103	WC060412	7/1/2019	7/1/2021	BD
25 ft. Tape Measure	WC074972	WC074972	8/24/2020	8/24/2021	BD
Thermometer	192140234	WC067353	4/27/2019	4/27/2021	BD
BFD Tool	19/090059	WC075101	12/15/2020	12/15/2021	BD
BFD Bridge	12/450046	WC064227	12/9/2020	12/9/2021	BD
Angle Block	840	WC027021	5/19/2020	5/19/2021	BD
Temp/Humidity Monitor	200597950	WC075050	10/06/2020	10/06/2022	BD
Thickness Gauge	152056	WC060409	12/08/2020	12/08/2021	BD



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