

TEST REPORT

2023CO1942

DATE OF RECEPTION

Date Format: dd/MM/yyyy 25/05/2023

APPLICANT

Protection Group Danmark ApS

DATE TESTS

Starting: 26/05/2023

Ending: 09/06/2023

IDENTIFICATION AND DESCRIPTION OF SAMPLES

Reference by AITEX	Reference by customer	AITEX sample description
2023CO1942-S01	HARD PLATE U-line-Multi-NIJ3-M-SA	Plate

TESTS CARRIED OUT

- BALLISTIC RESISTANCE TEST.

SAPSAN
service

Tests marked with * are not included within the scope of the ENAC accreditation.





SAMPLE/S DESCRIPTION

Reference

2023CO1942-S01



SAPSAN
service



RESULTS

BALLISTIC RESISTANCE TEST

Standard

Perforation and Backface Signature Test (P-BFS) according to point 7.8 from NIJ 0101.06

Standard deviation

On request of the client, the complete test for classification is not carried out. Only one plate is tested with the ammunition corresponding to level III. All the BFS are recorded.

Classification level

Apparatus

Shooting range 13037IE12

Reference

2023CO1942-S01

Sample description

Plate 320 x 245 mm, 2312 g weight and 30.3 mm thick with cover in black colour. It is tested stand alone. AITEX does not know the exact composition of the sample.

Sample conditioned

24 h at (25 ± 10) °C and a relative humidity of 20 % to 50 %

Pretreatment

Hard Armor Conditioning Protocol according to paragraph 6 standard NIJ 0101.06, including the mechanical durability testing (drop test).

Submersion according to paragraph 7.8.2 from the standard NIJ 0101.06.

Handload velocity test

OK

Velocity measurement

The velocity measurement is made using optical barriers and radar. In the tables of results it is shown the speed at the impact point measured by the optical barriers.

Test shot distance

15 m

Strapping arrangement

According to the standard

Requirements

There should be no perforation of the sample and the traumas must not be higher than 44 mm.

Test conditions

20.5°C / 64.3% H.R.

Test date

29/05/2023 - 09/06/2023

Roma #1 Plastiline Calibration

AVERAGE: 19.3 mm (before the test) and temperature 38°C

AVERAGE: 18.1 mm (after the test) and temperature 35°C

>>>

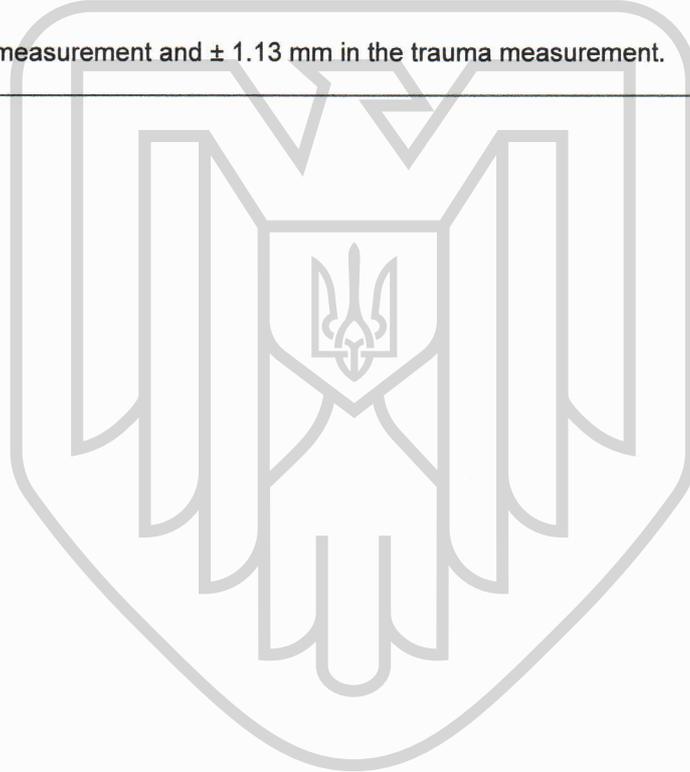
**Results by panel****Caliber 1**

7.62 x 51 mm M80 9.6 g at velocity (847 ± 9.1) m/s

POSITION	ANGLE	VELOCITY	FAIR HIT (Yes/No)	PERFORATION	TRAUMA (mm)
1	0°	845,3	Yes	No	33,8
2	0°	842,6	Yes	No	35,9
3	0°	843,2	Yes	No	38,0
4	0°	858,0	Yes	No	37,6
5	0°	848,9	Yes	No	42,1
6	0°	840,7	Yes	No	39,4

Test uncertainty

± 1.0 m/s in the velocity measurement and ± 1.13 mm in the trauma measurement.



SAPSAN
service



RESULTS

BALLISTIC RESISTANCE TEST

Standard

Perforation and Backface Signature Test (P-BFS) according to point 7.8 from NIJ 0101.06

Standard deviation

On request of the client, the complete test for classification is not carried out. Only one plate is tested with the ammunition 7.62 x 39 mm MSC. All the BFS are recorded.

Classification level

Apparatus

Shooting range 13037IE12

Reference

2023CO1942-S01

Sample description

Plate 320 x 245 mm, 2323 g weight and 30.4 mm thick with cover in black colour. It is tested stand alone. AITEX does not know the exact composition of the sample.

Sample conditioned

24 h at (25 ± 10) °C and a relative humidity of 20 % to 50 %

Pretreatment

Hard Armor Conditioning Protocol according to paragraph 6 standard NIJ 0101.06, including the mechanical durability testing (drop test).

Submersion according to paragraph 7.8.2 from the standard NIJ 0101.06

Handload velocity test

OK

Velocity measurement

The velocity measurement is made using optical barriers and radar. In the tables of results it is shown the speed at the impact point measured by the optical barriers.

Test shot distance

15 m

Strapping arrangement

According to the standard

Requirements

There should be no perforation of the sample and the traumas must not be higher than 44 mm.

Test conditions

20.6°C / 64.5% H.R.

Test date

29/05/2023 - 09/06/2023

Roma #1 Plastiline Calibration

AVERAGE: 19.3 mm (before the test) and temperature 38°C

AVERAGE: 18.1 mm (after the test) and temperature 35°C

>>>



Results by panel

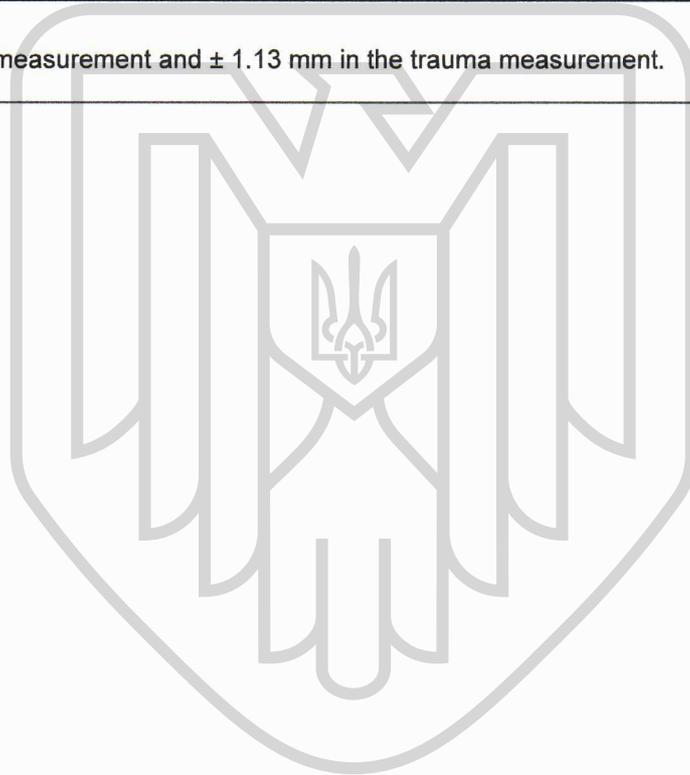
Caliber 2

7.62 x 39 mm MSC 7.9 g at velocity (730 ± 9.1) m/s

POSITION	ANGLE	VELOCITY	FAIR HIT (Yes/No)	PERFORATION	TRAUMA (mm)
1	0°	728,3	Yes	No	23,8
2	0°	728,6	Yes	No	16,8
3	0°	737,0	Yes	No	25,1
4	0°	728,6	Yes	No	26,2
5	0°	732,4	Yes	No	28,7
6	0°	739,6	Yes	No	27,9

Test uncertainty

± 1.0 m/s in the velocity measurement and ± 1.13 mm in the trauma measurement.



SAPSAN
service



RESULTS

BALLISTIC RESISTANCE TEST

Standard

Perforation and Backface Signature Test (P-BFS) according to point 7.8 from NIJ 0101.06

Standard deviation

On request of the client, the complete test for classification is not carried out. Only one plate is tested with the ammunition 5.56 x 45 mm ss109. All the BFS are recorded.

Classification level

Apparatus

Shooting range 13037IE12

Reference

2023CO1942-S01

Sample description

Plate 320 x 245 mm, 2312 g weight and 30.8 mm thick with cover in black colour. It is tested stand alone. AITEX does not know the exact composition of the sample.

Sample conditioned

24 h at (25 ± 10) °C and a relative humidity of 20 % to 50 %

Pretreatment

Hard Armor Conditioning Protocol according to paragraph 6 standard NIJ 0101.06, including the mechanical durability testing (drop test).

Submersion according to paragraph 7.8.2 from the standard NIJ 0101.06

Handload velocity test

OK

Velocity measurement

The velocity measurement is made using optical barriers and radar. In the tables of results it is shown the speed at the impact point measured by the optical barriers.

Test shot distance

15 m

Strapping arrangement

According to the standard

Requirements

There should be no perforation of the sample and the traumas must not be higher than 44 mm.

Test conditions

20.6°C / 63.6% R.H.

Test date

29/05/2023 - 09/06/2023

Roma #1 Plastiline Calibration

AVERAGE: 19.3 mm (before the test) and temperature 38°C

AVERAGE: 18.1 mm (after the test) and temperature 35°C

>>>



Results by panel

Caliber 3

5.56 x 45 mm ss109 4.0 g at velocity (945 ± 9.1) m/s

POSITION	ANGLE	VELOCITY	FAIR HIT (Yes/No)	PERFORATION	TRAUMA (mm)
1	0 °	938,4	Yes	No	15,3
2	0 °	939,4	Yes	No	12,1
3	0 °	1006,5	No	Yes	---
4	0 °	952,7	Yes	No	20,8
5	0 °	959,9	Yes	No	22,2
6	0 °	965,3	Yes	No	21,4
7	0 °	958,0	Yes	No	19,1

Test uncertainty

± 1.0 m/s in the velocity measurement and ± 1.13 mm in the trauma measurement.

Remark

Shot number 3 is no fair hit due its high velocity. So, it is done a seventh shot on the plate to complete the 6 fair hits.

///

SAPSAN
service



Begoña Picó
Head of Public Tenders Division



Date: 12/06/2023 14:09:06

Digitally Signed by: BEGOÑA PICO MONLLOR -

NIF: 21647435L

LIABILITY CLAUSES

- 1.- AITEX is liable only for the results of the methods of analysis used, as expressed in the report and referring exclusively to the materials or samples indicated in the same which are in its possession, the professional and legal liability of the Centre being limited to these. Unless otherwise stated, the samples were freely chosen and sent by the applicant.
- 2.- AITEX shall not be liable in any case of misuse of the test materials nor for undue interpretation or use of this document
- 3.- The Offer and / or Order to which the applicant gives approval through signature and seal, constitutes the Legally Executable Agreement in which AITEX is responsible for safeguarding and guaranteeing the absolute confidentiality of the management of all the information obtained or created during the performance of the contracted activities.
- 4.- In the eventuality of discrepancies between reports, a check to settle the same will be carried out in the head offices of AITEX. Also, the applicants undertake to notify AITEX of any complaint received by them as a result of the report, exempting this Centre from all liability if such is not done, the periods of conservation of the samples being taken into account.
- 5.- AITEX will provide at the request of the person concerned, the treatment of complaints procedure. In the event that you want to make it, direct it to: calidad@aitex.es.
- 6.- AITEX is not responsible for the information provided by customers, which is reflected in the Report, and may affect the validity of the results.
- 7.- AITEX is not responsible for an inadequate state of the sample received that could compromise the validity of the results, expressing such circumstance, in the test reports.
- 8.- AITEX may include in its reports, analyses, results, etc., any other evaluation which it considers necessary, even when it has not been specifically requested.
- 9.- When a Declaration of Conformity is requested, if not indicated otherwise, the decision rule according to ILAC-G8: 2009 will be applied with a security zone of 1U and a Probability of False Acceptance <2.5%.
- 10.- The uncertainties of tests, which are made explicit in the Results Report, have been estimated for a $k = 2$ (95% probability of coverage). If not informed, they are available to the client in AITEX.
11. - The original materials and rests of samples, not subject to test, will be retained in AITEX during the twelve months following the issuance of the report, so that any check or claim which, in his case, wanted to make the applicant, should be exercised within the period indicated.
- 12.- This report may only be sent or delivered by hand to the applicant or to a person duly authorised by the same.
- 13.- The results of the tests and the statement of compliance with the specification in this report refer only to the test sample as it has been analyzed / tested and not the sample / item which has taken the test sample.
- 14.- The client must attend at all times, to the dates of the realization of the tests.
- 15.- According to Resolution EA (33) 31, the test reports must include the unique identification of the sample, and any brand or label of the manufacturer may be added. It is not allowed to re-issue test reports of untested sample names (references), they can only be re-issued for error correction or inclusion of omitted data that were already available at the time of the test. The laboratory can not assume responsibility for declaring that the product with the new trade name / trademark is strictly identical to the one originally tested; This responsibility belongs to the client.
- 16.- This report may not be partially reproduced without the written approval of the issuing laboratory.
- 17.- AITEX laboratories do not carry out sampling, so that the results of the test reports are applicable to the sample as it was received.