

NATO STANDARD

AQAP-2110

**NATO QUALITY ASSURANCE
REQUIREMENTS FOR DESIGN,
DEVELOPMENT AND PRODUCTION**

**Edition D Version 1
JUNE 2016**



**NORTH ATLANTIC TREATY ORGANIZATION
ALLIED QUALITY ASSURANCE PUBLICATION**

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REPUBLIC OF CROATIA
MINISTRY OF DEFENCE
DIRECTORATE FOR MATERIAL RESOURCES
Trg kralja Petra Krešimira IV br. 1, Zagreb

CERTIFICATE

No: 001 /2018.

conducted certification of Quality Management Systems Supplier

Šestan-Busch d.o.o.
Industrijska zona 3.
40323 Prelog

OIB: 03410818430
MB:1063103

Certification conducted according to the requirements standard AQAP 2110

Scope of certification: Design, development and production antiballistic composite helmets

Certificate is valid from: **18th October 2018.**

1. The Supplier shall to use certificate in order to documenting establish and maintenance conformity of Quality Management System according the standard AQAP 2110.
2. The Supplier shall to use certificate according to scope certification.
3. The Supplier shall immediately notify body certification of any changes related to Quality Management System.

Certification body address: Service for receive and quality control, Sarajevska 7, 10000 Zagreb.

To check this certificate validity please call: +385 1 66 31 812.

Quality Management System is certified for a period of 3 years. Certificate expires on:

18th October 2021.

ASSISTANT MINISTER


Rogan Mikulic

Zagreb, 18th October 2018.



REPUBLIC OF CROATIA
Ministry of Economy,
Entrepreneurship and Crafts

Zagreb, 6 April 2020

Our Ref: KLASA: 303-03/20-01/09

URBROJ: 526-03-02-01-01/1-20-4



Croatian Presidency of the
Council of the European Union

DECLARATION OF ELIGIBILITY

FROM: Ministry of Economy, Entrepreneurship and Craft
Ulica grada Vukovara 78, 10000 Zagreb, Croatia

To: NSPA
11, rue de la Gare
L-8325 Capellen
G.-D. Luxembourg
e-mail: source-file@nspa.nato.int

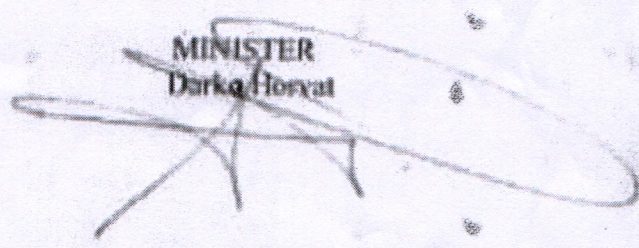
Subject: Request for Registration in source file

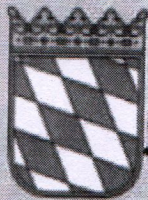
With reference to the above quoted ICB subject, the following Croatian firm; has expressed an interest:

Šestan-Busch d.o.o
Address: Industrijska zona 3, 40323 Prelog, Croatia
Contact Person: Ms. Snježana Mikec
Tel: +385 40 646 330
Fax: +385 40 646 300
E-mail: sestan-busch@ek.t-com.hr
<https://www.sestan-busch.hr>

The Ministry of Economy, Entrepreneurship and Craft certify that the company Šestan-Busch d.o.o., Industrijska zona 3, 40323 Prelog, Croatia has the necessary financial, technical and professional competence to be admitted by the Government of Croatia as bidders were it responsible for awarding a contract of this nature.

MINISTER
Darko Horvat





Mitglied der
VPAM

BESCHUSSAMT MELLRICHSTADT

Prüfzeugnis

Test Certificate

21Z107-01

Inhaber des Dokumentes: SESTAN-BUSCH d.o.o.
Holder of the document Industrijska zona 3
 HR-40323 Prelog

Prüfung der durchschusshemmenden Eigenschaften von Körperschutzmaterial nach:
Test of the bullet resistance of body armour according to:
VPAM Durchschusshemmender Helm mit Visier und Nackenschutz (HVN) 2009, 04.04.2017

Hersteller: SESTAN-BUSCH d.o.o.
Manufacturer

Auftraggeber: SESTAN-BUSCH d.o.o.
Applicant

Prüfgegenstand: Helm
Sample helmet

Probenbezeichnung: BK-ACH
Designation

Prüfdatum: 16. März 2021
Test date

**Detaillierergebnisse siehe
 Prüfbericht Nr.:** 21H107-01
Detailed results see test report No.

Die vorgelegte Probe erfüllte die Anforderungen nach:
The submitted sample met the requirements according to:

VPAM HVN 2009

Klasse 3

Die Prüfergebnisse beziehen sich ausschließlich auf die im zugehörigen Prüfbericht beschriebenen Prüfgegenstände. Dieses Dokument ist nur mit Unterschrift und Dienststempel gültig. Original nur mit Prägung im Staatswappen.
The test results relate only to the tested samples described in the accompanying test report. This document is only valid with signature and official seal. Only the original document has an embossed coat of arms.

Beschussamt Mellrichstadt, 12. April 2021

Beck



Beck

Beschussamt Mellrichstadt (Mellrichstadt Ballistics Agency) - Lohstr. 5 - 97638 Mellrichstadt
 Telefon +49-9776-7050-0 - Telefax +49-9776-5457 - ba-mel.poststelle@mpa.bayern.de - Germany

NATIONAL TECHNICAL SYSTEMS

V50 BALLISTIC LIMIT TEST

Date Received: April 3, 2023
 Via: FedEx
 Returned Via: FedEx

Record No.: SBD23002-9
 Test Date: April 10, 2023
 Customer: Sestan Busch

Sample Tested

Manufacturer: Sestan Busch
 Size: M
 Model: BK-ACH-HC
 Style: Finished Helmet Shell
 Serial No.: C013843
 Weight (kg): 0.940
 Conditioning: Ambient

Threat

Projectile: Fragment Simulating Projectile
 Type: Type 1 (30 +/- 2 HRC / Non-Tumbled)
 Weight: 1.1 g (17 gr.)
 Powder: Bullseye
 Barrel (cm): 60.96
 Obliquity: 0°
 Yaw: < 5°

Range 3

Muzzle to Screen 1: 1.25 m
 Screen 1 - 4: 1.52 m
 Screen 2 - 3: 1.24 m
 Screen 4 - Target: 1.79 m
 Target to Witness: 15 cm
 Midpoint to Target: 2.50 m
 Witness: 2024-T3 Aluminum
 Range Temperature: 21.9 °C
 Range Humidity: 40 %

Test Standard

STANAG 2920 Edition 3,
 NATO STANDARD AEP-2920
 Edition A, Version 2
 September 2016

Shot No.	Powder Charge (gr.)	CHRONOGRAPHS 1-4		CHRONOGRAPHS 2-3		AVERAGE VELOCITY m/s	LOSS VELOCITY m/s	STRIKING VELOCITY m/s	TEST RESULTS		
		TIME sx-5	VELOCITY m/s	TIME sx-5	VELOCITY m/s				Shot Location	Shot Included	Complete Partial
1	5.2	209.1	728.8	170.2	731.5	730.2	38.8	691.3	Crown	Y	P
2	5.4	204.6	744.9	166.5	747.7	746.3	39.5	706.8	Front	Y	P
3	5.8	196.2	776.7	159.9	778.6	777.7	41.0	736.7	Right	N	C
4	5.5	200.9	758.6	163.9	759.6	759.1	40.3	718.8	Back	Y	C
5	5.2	207.2	735.5	168.8	737.6	736.5	39.2	697.4	Left	Y	C
6	5.0	213.7	713.1	173.8	716.3	714.7	38.0	676.7	Crown	N	P
7	5.2	205.0	743.4	166.9	745.9	744.7	39.4	705.3	Front	Y	P
8	5.4	198.2	768.9	161.5	770.9	769.9	40.6	729.3	Right	Y	C

This test was performed in accordance with the specification requirements and the results properly reflect the ballistic performance of the listed sample.

Notes:

V50 VELOCITY 708.1 m/s	HIGH PARTIAL 706.8 m/s	LOW COMPLETE 697.4 m/s	RANGE OF RESULTS 38.0 m/s	RANGE OF MIXED RESULTS 9.5 m/s
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Projectile Used:

.22 Caliber, 1.1g +/- 0.03g (17 gr.) Chisel Nose Fragment Simulating Projectile (FSP) as described in MIL-DTL-46593 launched without a sabot (30 +/- 2 HRC / Non-Tumbled) @ a starting velocity of 700.0 m/s

V50 Calculation:

•V50 based on (3) partial and (3) complete penetrations with a range of results ≤ 40 m/s

Sample Description:

Technician(s): Randolph / Wilson

National Technical Systems, Inc.

7447 W. 33rd St. N. Wichita, KS 67205

Phone 316-832-1600

NATIONAL TECHNICAL SYSTEMS
NIJ 0106.01 HELMET:
BALLISTIC PENETRATION TEST

Date Received: April 3, 2023
 Via: DHL
 Returned Via: DHL

Record No.: SBD23002-3
 Test Date: April 10, 2023
 Customer: Sestan Busch

Test Conditions

Temperature: 20.3 °C
 Humidity: 39 %

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: 25.40 cm

Test Method: IAW Paragraph 5.2 Ballistic Penetration Test
 Test Ammunition: IAW NIJ Standard 0108.01, September 1985
 Threat Level: IIIA
 Conditioning: Ambient
 Submersion: No

Sample Tested Description	Test / Ammunition Description					Chronograph		Test Results
	Shot No.	Impact Location	Degree Obliquity	Caliber	Bullet Weight (gr.) / Type	TIME sx-5	VELOCITY m/s	
Manufacturer: Sestan Busch	1	Front	0°			352.2	432.7	No Penetration
Model No.: BK-ACH-HC	2	Back	0°	9mm	124 / FMJ	353.4	431.2	No Penetration
Size: M	3	Right	0°			356.8	427.1	No Penetration
Serial No.: C013842	4	Left	0°			348.4	437.4	No Penetration
Production Date: 03/2023								
Weight (kg.): 1.314								

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.

Notes:

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

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 / Randolph

NATIONAL TECHNICAL SYSTEMS
NIJ 0106.01 HELMET:
BALLISTIC PENETRATION TEST

Date Received: April 3, 2023
 Via: DHL
 Returned Via: DHL

Record No.: SBD23002-1
 Test Date: April 10, 2023
 Customer: Sestan Busch

Test Conditions

Temperature: 20.4 °C
 Humidity: 42 %

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: Ambient
 Submersion: Yes

Headform Size: 7 1/4
 Witness Plate: 2024-T3 Alum.
 Barrel Length: 25.40 cm

Sample Tested Description	Test / Ammunition Description					Chronograph		Test Results
	Shot No.	Impact Location	Degree Obliquity	Caliber	Bullet Weight (gr.) / Type	TIME sx-5	VELOCITY m/s	Penetration
Manufacturer: Sestan Busch	1	Front	0°			347.4	438.7	No Penetration
Model No.: BK-ACH-HC	2	Back	0°	9mm	124 / FMJ	349.2	436.4	No Penetration
Size: S	3	Right	0°			347.5	438.6	No Penetration
Serial No.: C013841	4	Left	0°			354.9	429.4	No Penetration
Production Date: 03/2023								
Weight (kg.): 1.248								

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

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 / Randolph