



April 4, 2019

Legacy Safety & SECURITY
4917 Main CT
Davenport, IA 52806
Attn: Robert Hausman

Dear Mr. Hausman:

In accordance with your instructions, Oregon Ballistic Laboratories conducted stab testing on two samples.

The samples were tested in accordance with NIJ-0115.00 (abbreviated) in an indoor lab. Two laser break screens, in conjunction with one time-based frequency counter, were used to measure impact velocity and calculate strike energy. Penetrations were determined by examination of NIJ foam.

Samples will be maintained at Oregon Ballistic Laboratories for 30 days and then discarded, unless other instructions are received. If you have any further questions or concerns, please contact us.

Sincerely,

A handwritten signature in black ink, appearing to read 'Brandon Bertsch', is written in a cursive style.

Brandon Bertsch
Oregon Ballistic Laboratories



OREGON BALLISTIC LABORATORIES

STAB RESISTANCE TEST

Customer:	Legacy Safety and Security
OBL ID#:	21369
Date Rcv'd:	4/1/2019
Test Date:	4/3/2019
Purchase Order:	

TEST SAMPLE	
Sample No.:	N/A
Model No.:	N/A
Lot No.:	N/A
Plies:	N/A
Description:	Level 1 Soft Armor Panel
Size (in.):	16 x 16
Weight (lb.):	2.34
Thickness:	
Avg. Thk. (in.):	

RANGE SET-UP	
Velocity measurement:	Frequency counter (HP 5315A)
Witness Material:	NIJ Foam
Armor Condition:	New
Ball Drop Bounces (in.):	15.5 & 15.5
Tester:	Joe Cowan
Recorder:	Joe Cowan
Temperature:	68.9
Rel. Humidity:	54.3
Bar. Pressure:	29.75

STANDARDS / PROCEDURES
NIJ-STD-0115.00 Level 1 Blade

IMPACT NO.	THREAT	TIP SHARPNESS (HRC)	LEVEL	ENERGY LEVEL	Drop Mass (kg.)	ANGLE OF INCIDENCE (DEGREES)	DROP HEIGHT (M)	TIME ms (10-3)	IMPACT VELOCITY (M/S)	STRIKE ENERGY (J)	DEPTH OF PENETRATION (MM)	NOTES
1	P1	-	1	E1	1.920	0°	1.294	8.136	5.00	23.95	-	
2	P1	-	1	E2	1.920	0°	1.970	6.583	6.17	36.58	6.22	
3	S1	-	1	E1	1.920	0°	1.300	7.455	5.45	28.53	-	
4	S1	-	1	E2	1.920	0°	1.968	6.581	6.18	36.61	-	
5	P1	-	1	E1	1.920	45°	1.296	8.098	5.02	24.18	-	
6	S1	-	1	E1	1.920	45°	1.299	8.082	5.03	24.27	-	

REMARKS:
Spike weight = 1.910kg
Blade weight = 1.920kg

TEST RESULTS:
Test sample satisfied the requirements given.

This report pertains only to the samples tested and must not be used to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government.



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RANGE SET-UP	
Velocity measurement:	Frequency counter (HP 5315A)
Witness Material:	NIJ Foam
Armor Condition:	New
Ball Drop Bounces (in.):	15.5 & 15.5
Tester:	Jesse Crisanti
Recorder:	Jesse Crisanti
Temperature:	68.9
Rel. Humidity:	54.3
Bar. Pressure:	29.75

STANDARDS / PROCEDURES	
NIJ-STD-0115.00 Level 1 Spike	

IMPACT NO.	THREAT	TIP SHARPNESS (HRC)	LEVEL	ENERGY LEVEL	Drop Mass (kg.)	ANGLE OF INCIDENCE (DEGREES)	DROP HEIGHT (M)	TIME ms (10-3)	IMPACT VELOCITY (M/S)	STRIKE ENERGY (J)	DEPTH OF PENETRATION (MM)	NOTES
1	Spike	-	1	E1	1.910	0°	1.298	8.086	5.03	24.12	-	
2	Spike	-	1	E2	1.910	0°	1.938	6.656	6.11	35.60	-	
3	Spike	-	1	E1	1.910	45°	1.300	8.117	5.01	23.94	-	

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OREGON BALLISTIC LABORATORIES

STAB RESISTANCE TEST

Customer: Legacy Safety and Security
OBL ID#: 21370
Date Rcv'd: 4/1/2019
Test Date: 4/4/2019
Purchase Order:

TEST SAMPLE
Sample No.: N/A
Model No.: N/A
Lot No.: N/A
Plies: N/A
Description: Level 2 Soft Armor Panel
Size (in.): 16 x 16
Weight (lb.): 2.66
Thickness:
Avg. Thk. (in):

RANGE SET-UP
Velocity measurement: Frequency counter (HP 5315A)
Witness Material: NIJ Foam
Armor Condition: New
Ball Drop Bounces (in.): 15.5 & 15.5
Tester: Joe Cowan
Recorder: Joe Cowan
Temperature: 68.9
Rel. Humidity: 54.3
Bar. Pressure: 29.75

STANDARDS / PROCEDURES
NIJ-STD-0115.00 Level 2 Blade

Table with 13 columns: IMPACT NO., THREAT, TIP SHARPNESS (HRC), LEVEL, ENERGY LEVEL, Drop Mass (kg.), ANGLE OF INCIDENCE (DEGREES), DROP HEIGHT (M), TIME ms (10-3), IMPACT VELOCITY (M/S), STRIKE ENERGY (J), DEPTH OF PENETRATION (MM), NOTES. Contains 6 rows of test data.

REMARKS:
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Blade weight = 1.920kg

TEST RESULTS:
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RANGE SET-UP	
Velocity measurement:	Frequency counter (HP 5315A)
Witness Material:	NIJ Foam
Armor Condition:	New
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Recorder:	Jesse Crisanti
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STANDARDS / PROCEDURES
NIJ-STD-0115.00 Level 2 Spike

IMPACT NO.	THREAT	TIP SHARPNESS (HRC)	LEVEL	ENERGY LEVEL	Drop Mass (kg.)	ANGLE OF INCIDENCE (DEGREES)	DROP HEIGHT (M)	TIME ms (10-3)	IMPACT VELOCITY (M/S)	STRIKE ENERGY (J)	DEPTH OF PENETRATION (MM)	NOTES
1	Spike	-	2	E1	1.910	0°	1.800	6.875	5.91	33.37	-	
2	Spike	-	2	E2	1.910	0°	2.680	5.587	7.27	50.53	-	
3	Spike	-	2	E1	1.910	45°	2.680	5.665	7.17	49.15	-	

REMARKS:
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Blade weight = 1.920kg

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