OREGON BALLISTIC LABORATORIES

July 24, 2018

PDL2 Ltd T/A Bladerunner

In accordance with your instructions, Oregon Ballistic Laboratories conducted stab testing on two samples.
The samples were tested in accordance with NIJ-0115.00 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 and polyart paper.

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,

Brandon Bertsch
Oregon Ballistic Laboratories

OREGON BALLISTIC LABORATORIES

STAB RESISTANCE TEST

Customer:	PDL2 Ltd T/A Bladerunner
OBL ID#:	19607
Test Date:	7/24/2018
Purchase Order:	

TEST SAMPLE

Sample No.:	10222	**Size (in.):**	15 x 15
Model No.:	KR1+SP1	**Weight (lb.):**	1.91
Lot No.:	N/A	**Thickness:**	
Plies:	N/A	**Avg. Thk. (in):**	
Description:	Level 1 Soft Armor Panel		

RANGE SET-UP

Velocity measurement:	Frequency counter (HP 5315A)	**Tester:**	Joe Cowan
Witness Material:	NIJ Foam	**Recorder:**	Darius Nuttbrock
Armor Condition:	New	**Temperature:**	68.9
Ball Drop Bounces (in.):	15.5 & 15.5	**Rel. Humidity:**	49.4
		Bar. Pressure:	30.10

STANDARDS / PROCEDURES

NIJ-0115.00 Level 1 Blade / 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	P1	-	1	E1	1.920	0°	1.476	8.109	5.01	24.11	<1	
2	P1	-	1	E2	1.920	0°	2.145	6.692	6.07	35.41	8.77	
3	S1	-	1	E1	1.920	0°	1.478	8.177	4.97	23.71	-	
4	S1	-	1	E2	1.920	0°	2.223	6.622	6.14	36.16	-	
5	Spike	-	1	E1	1.910	0°	1.478	8.042	5.05	24.39	-	
6	P1	-	1	E1	1.920	45°	1.502	8.189	4.96	23.64	<1	
7	S1	-	1	E1	1.920	45°	1.501	8.148	4.99	23.88	-	
8	Spike	-	1	E1	1.910	45°	1.505	7.920	5.13	25.15	-	

REMARKS:

Spike weight = 1.910kg
Blade weight = 1.920kg

TEST RESULTS:

Test sample satisfied the requirements given.

OREGON BALLISTIC LABORATORIES

STAB RESISTANCE TEST

Customer:	**PDL2 Ltd T/A Bladerunner**
OBL ID#:	**19608**
Test Date:	**7/24/2018**
Purchase Order:	

TEST SAMPLE

Sample No.:	**10222**	**Size (in.):**	**15 x 15**
Model No.:	**KR1+SP1**	**Weight (lb.):**	**1.91**
Lot No.:	**N/A**	**Thickness:**	
Plies:	**N/A**	**Avg. Thk. (in):**	
Description:	**Level 1 Soft Armor Panel**		

RANGE SET-UP

Velocity measurement:	**Frequency counter (HP 5315A)**	**Tester:**	**Joe Cowan**
Witness Material:	**NIJ Foam**	**Recorder:**	**Darius Nuttbrock**
Armor Condition:	**New**	**Temperature:**	**68.9**
Ball Drop Bounces (in.):	**15.5 & 15.5**	**Rel. Humidity:**	**49.4**
		Bar. Pressure:	**30.10**

STANDARDS / PROCEDURES

NIJ-0115.00 Level 1 Blade / 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	P1	-	1	E1	1.920	0°	1.479	8.129	5.00	23.99	-	
2	P1	-	1	E2	1.920	0°	2.146	5.866	6.93	46.08	17.67	
3	S1	-	1	E1	1.920	0°	1.483	8.214	4.95	23.50	-	
4	S1	-	1	E2	1.920	0°	2.199	6.638	6.12	35.98	-	
5	Spike	-	1	E1	1.910	0°	1.508	7.989	5.09	24.71	-	
6	P1	-	1	E1	1.920	45°	1.504	7.459	5.45	28.50	<1	
7	S1	-	1	E1	1.920	45°	1.503	8.106	5.01	24.13	-	
8	Spike	-	1	E1	1.910	45°	1.501	8.145	4.99	23.78	-	

REMARKS:

Spike weight = 1.910kg

Blade weight = 1.920kg

TEST RESULTS:

Test sample satisfied the requirements given.

NVLAP LAB CODE 200826-0 NIJ CERTIFIED LABORATORY

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