

**This is Revision Number: 04**

**Revision Date: 8/3/2009**

**Document Status:**

**Official NIJ-Approved Test Laboratory Compliance Testing Report (CTR)**

This CTR is to be used only with testing associated with NIJ Body Armor Compliance Testing Program (CTP) and should not be distributed to any unauthorized parties.

Do not modify this document. If problems or issues with this CTR are discovered please contact the CTP so they can be resolved.

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**GENERAL INSTRUCTIONS:**

1. These worksheets are intended as a method of recording and documenting ballistic test results from tests performed to the requirements of NIJ Standard-0101.06 for body armor models that will be part of the NIJ body armor conformity testing program.
  2. In general, gray shaded cells are intended to be filled in by the test laboratory. All other cells are automatic calculations and should not be changed. Some shaded cells will fill in automatically; however, these cells may be manually filled in when necessary.
  3. Many of the worksheets have their own instructions at the top of the sheet.
  4. To fully utilize these spreadsheets, the R statistical package and the RExcel statistics connector will need to be installed on the computer where this spreadsheet is used. These packages are not necessary for running a test or inputting data, but the ballistic limit summary ("BL Summary" worksheet) will not be completely calculated unless these packages are properly installed. Detailed instructions for obtaining and installing these packages is provided in the worksheet "Stats Install Instructions".
  5. The laboratory may choose to modify the print header on the data and summary pages to include their name, logo, and applicable accreditation information.
  6. The worksheet "Laboratory and Armor" should be filled in with the details of the test configuration and armor model.
  7. The worksheet "Sample Information" should be filled in with the details of the individual armor samples that will be tested as part of the conformity test.
  8. The worksheet "Handloads" can be used to record handload development data for each of the P-BFS test rounds. This worksheet is optional.
  9. The worksheets "P-BFS..." are intended for recording the test results from each P-BFS sample. These worksheets are initially all identical. Many of the cells that fill in automatically are filled in based on the name of the worksheet. When necessary, these sheets may be deleted and replaced by copying the worksheet "P-BFS Spare" and renaming the new copy. The name of each P-BFS sheet has the following form:  
P-BFS <Condition> T<Threat Number> S<Sample Number>  
Where:  
    <Condition> is either "New" for as manufactured sampled or "Cond" for environmental conditioned samples.  
    <Threat Number> is the test round number from Table 4 in NIJ-0101.06.  
    <Sample Number> is the armor sample number as listed in the "Sample Information" worksheet. This number should always be listed as a two digit number, i.e. "02" instead of "2", in the worksheet name.
  10. The worksheets "BL..." are intended for recording the test results from each ballistic limit sample. These worksheets are initially all identical. Many of the cells that fill in automatically are filled in based on the name of the worksheet. When necessary, these sheets may be deleted and replaced by copying the worksheet "BL Spare" and renaming the new copy. The name of each BL sheet has the following form:  
BL <Condition> T<Threat Number> S<Sample Number>  
Where:  
    <Condition> is either "New" for as manufactured sampled or "Cond" for environmental conditioned samples.  
    <Threat Number> is the test round number from Table 4 in NIJ-0101.06.  
    <Sample Number> is the armor sample number as listed in the "Sample Information" worksheet. This number should always be listed as a two digit number, i.e. "02" instead of "2", in the worksheet name.
  11. The worksheets "P-BFS Summary" and "BL Summary" are automatically generated summaries of the respective test results. No input is required on this sheet, but these sheets will indicate whether the armor model meets the performance requirements of NIJ-0101.06.
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**INSTRUCTIONS FOR INSTALLING R AND THE REXCEL STATISTICS CONNECTOR:**

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**Requirements:**

The ballistic limit summary worksheet in this spreadsheet requires the "R" statistics package and the "Rexcel" statistics connector for calculating the logistic regression, the V50, and the V05 response.

To use this spreadsheets you will need to have the following software installed:

Microsoft Excel (version 2002 or newer).

The R statistical analysis package (version 2.2.1 or newer).

The R(D)com server (version 2.01 or newer).

The RExcel add-in for MS Excel (version 1.50 or newer).

The R statistical package, R(D)com server, and RExcel are all free software licensed under variants of the GNU General Public License (GPL). These packages should accompany this document, or they may be downloaded from the following locations:

R is available from <http://www.r-project.org/>

Specifically, the current version (2.8.1) can be downloaded from:

<http://cran.cnr.berkeley.edu/bin/windows/base/R-2.8.1-win32.exe>

<http://cran.cnr.berkeley.edu/bin/windows/base/README.R-2.8.1>

R(D)Com and Rexcel are available at:

<http://sunsite.univie.ac.at/rcom/download/current/>

Specifically, the current versions can be downloaded from:

[http://sunsite.univie.ac.at/rcom/download/current/RSrv250\\_pl1.exe](http://sunsite.univie.ac.at/rcom/download/current/RSrv250_pl1.exe)

or:

<http://sunsite.univie.ac.at/rcom/download/current/RSrv250S.zip>

(Note that RExcel is included in RSrv250\_pl1.exe)

Additional information about R(D)Com and Rexcel is available from:

<http://sunsite.univie.ac.at/rcom/>

**Installation:**

1. Install Microsoft Excel, if it is not already installed on the computer.
2. Install R by running R-2.7.1-win32.exe (or a newer version). Accept the default installation options.
3. Install the R(D)Com server and RExcel by running RSrv250\_pl1.exe (or a newer version). Again, accept the default installation options.

Test the installation by starting Excel and selecting "RExcel" on the main menu (If the RExcel add-in is properly installed, the RExcel menu item should appear between "Window" and "Help" on the Excel menu bar). Select "Demo Worksheets" and "Interactive Graphics". The demo spreadsheet should load and automatically generate a chart titled "A Test", which can be changed and regenerated by adjusting the sliders in the spreadsheet.

When R and RExcel are properly installed, this spreadsheet will automatically calculate the logistic response curve, V50, and V05 for a set of ballistic limit test data. In addition, the installed versions of R and Excel will appear on both the "Laboratory and Armor" and "BL Summary" worksheets.

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**NATIONAL INSTITUTE OF JUSTICE  
COMPLIANCE TEST REPORT**

**COMPLIANCE TESTING INFORMATION**

**FACILITY DESCRIPTION:**

Test Laboratory: H.P. WHITE LABORATORY Report Number: 11697-22  
 Test Start Date: 10/03/11 Report Date: 10/12/11  
 End Date: 10/07/11

**TESTING CERTIFICATION:**

Laboratory Representative: J.CONTRERAS, M.GOMEZ  
 Witnessed by: MANISH KHANDELWAL Name  
MKU Pvt. Ltd. Representing  
 & witnessed by: THOMAS HOLMES Name  
MKU Pvt. Ltd. Representing

**RANGE INFORMATION:**

Range Length: 17.20 ft. Velocity 1: 5.00 ft.  
 Velocity 2: 5.00 ft.

Velocity Measurement Units: TIME  
 Chronographs will report the time of flight.  
 Data should be entered in  $\mu s$  ( $10^{-6}$  s).

**ARMOR DESCRIPTION:**

Manufacturer: MKU Pvt. Ltd. Test ID: MKU10-001840  
 Date Rec'd: 09/08/11 Style: N/A  
 \*Ballistic Material: ARAMID Model Designation: MKS-1002

Armor Style: VEST  
 NIJ Armor Type: 3A

\*Ballistic Material Choices

<i>Aramid</i>	<i>PBO</i>	<i>Ceramic</i>	<i>Metal</i>
<i>Polyethylene</i>	<i>Hybrid</i>	<i>Composite</i>	<i>Other</i>

Shot-to-Edge Requirements:  
 Threat 1: 2 Inches  
 Threat 2: 3 Inches

Labels meet requirements of section 4.1.5.3: YES (Yes/No)

**ARMOR CONSTRUCTION:**

Front Closure (Y/N): N  
 Removable Carrier (Y/N): Y  
 Number of Layers: 39

**Front Panel**

Description of Stitching: LAYERS 1-20, 21-35, AND 37-39 PERIMETER STITCH.  
 LAYERS 1-35 PERIMETER STITCH.  
 LAYERS 1-20 2.4" DIAMOND QUILT STITCH.  
 LAYERS 21-35 1.6" DIAMOND QUILT STITCH.  
 LAYERS 37-39 1.20" DIAMOND QUILT STITCH.  
 LAYERS 1-20, 21-35 AND 37-39, WITH COTTON STRIP AROUND THE EDGE.

**Rear Panel**

Description of Stitching: LAYERS 1-20, 21-35 AND 37-39 PERIMETER STITCH.  
 LAYERS 1-35 PERIMETER STITCH.  
 LAYERS 1-20, 2.4" DIAMOND QUILT STITCH.  
 LAYERS 21-35, 1.6" DIAMOND QUILT STITCH.  
 LAYERS 37-39, 1.20" DIAMOND QUILT STITCH.  
 LAYERS 1-20, 21-35 AND 37-39, WITH COTTON STRIP AROUND THE EDGE.

Individual Layer Description: LAYERS 1-35 AND 37-39, FLEX WOVEN ARAMID FIBER (22X22).  
 LAYER 36, COATED FLEX WOVEN ARAMID FIBER (22X22).

Individual Layer Description: LAYERS 1-35 AND 37-39, FLEX WOVEN ARAMID FIBER (22X22).  
 LAYER 36, COATED FLEX WOVEN SRAMID FIBER (22X22).

**REMARKS:**

STRAPPING: 2 VERTICAL, 3 HORIZONTAL.  
 CARRIER IS HEAT SEALED.  
 ALL SAMPLES TESTED ON A PLANAR CONFIGURATION.  
 SAMPLES 23 AND 24, WERE TESTED USING NEW ARMOR TEST VELOCITIES. WHEN THEY SHOULD HAVE BEEN TESTED USING THE CONDITIONED ARMOR TEST VELOCITIES.

NATIONAL INSTITUTE OF JUSTICE  
COMPLIANCE TEST REPORT

Sample Information and Description

Armors in "As-New" Condition

		Manufacturer: MKU Pvt. Ltd.				Test ID: MKU10-001840				Model Designation: MKS-1002				Armor Style: VEST				NIJ Type: 3A			
		Penetration-Backface Signature (P-BFS) Test Samples										Spare Samples									
		Sample 1		Sample 2		Sample 3		Sample 4		Sample 5		Sample 6		Sample 7		Sample 8		Sample 9		Sample 10	
SAMPLE DESCRIPTION		Front	Back	Front	Back	Front	Back	Front	Back	Front	Back	Front	Back	Front	Back	Front	Back	Front	Back	Front	Back
Size:		C5	C5	C5	C5	C3	C3	C3	C3	C5	C5	C5	C5	C3	C3	C3	C3	C5	C5	C5	C5
Panel Serial Number:		T 3525 F	T 3521 B	T 3521 F	T 3524 B	T 3519 F	T 3517 B	T 3518 F	T 3518 B	T 3262 F	T 3269 B	T-3254 F	T 3265 B	T 3281 F	T 3280 B	T 3278 F	T 3282 B	T 3271 F	T 3261 B	T 3564 F	T 3272 B
Plate Serial Number:		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Lot Number:		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Gross Weight (lb.):		5.35	6.06	5.43	6.07	3.34	3.83	3.36	3.78	5.35	5.96	5.33	5.95	3.34	3.78	3.31	3.76	5.37	5.98	5.35	5.97
<b>TEST DESCRIPTION</b>																					
Water Submersion:		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes				
Threat Ammunition:		.357 SIG	.357 SIG	.357 SIG	.357 SIG	.357 SIG	.357 SIG	.357 SIG	.357 SIG	.44 Mag	.44 Mag	.44 Mag	.44 Mag	.44 Mag	.44 Mag	.44 Mag	.44 Mag				
Bullet (grain/type):		125/FMJ	125/FMJ	125/FMJ	125/FMJ	125/FMJ	125/FMJ	125/FMJ	125/FMJ	240/SJHP	240/SJHP	240/SJHP	240/SJHP	240/SJHP	240/SJHP	240/SJHP	240/SJHP				
Reference Velocity (ft/s):		1470	1470	1470	1470	1470	1470	1470	1470	1430	1430	1430	1430	1430	1430	1430	1430				
Angle at Location #4:		30	45	45	30	30	45	45	30	30	45	45	30	30	45	45	30				
<b>THREAT DESCRIPTION</b>																					
Bullet Manufacturer:		SPEER	SPEER	SPEER	SPEER	SPEER	SPEER	SPEER	SPEER	SPEER	SPEER	SPEER	SPEER	SPEER	SPEER	SPEER	SPEER				
Bullet Lot/Product Number:		4362	4362	4362	4362	4362	4362	4362	4362	M0817	M0817	M0817	M0817	M0817	M0817	M0817	M0817				
Test Barrel Manufacturer:		H.P.W.L.I.	H.P.W.L.I.	H.P.W.L.I.	H.P.W.L.I.	H.P.W.L.I.	H.P.W.L.I.	H.P.W.L.I.	H.P.W.L.I.	H.P.W.L.I.	H.P.W.L.I.	H.P.W.L.I.	H.P.W.L.I.	H.P.W.L.I.	H.P.W.L.I.	H.P.W.L.I.	H.P.W.L.I.				
Test Barrel Length (in):		10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0				

		Manufacturer: 0				Test ID: MKU10-001840				Model Designation: MKS-1002				Armor Style: 0				NIJ Type: 0			
		Baseline Ballistic Limit - Threat 1										Baseline Ballistic Limit - Threat 2									
		Sample 11		Sample 12		Sample 13		Sample 14		Sample 15		Sample 16		Sample 17		Sample 18		Sample 19		Sample 20	
SAMPLE DESCRIPTION		Front	Back	Front	Back	Front	Back	Front	Back	Front	Back	Front	Back	Front	Back	Front	Back	Front	Back	Front	Back
Size:		C5	C5	C5	C5	C5	C5	C5	C5	C5	C5	C5	C5	C5	C5	C5	C5	C5	C5	C5	C5
Panel Serial Number:		T 3270 F	T 3268 B	T 3273 F	T 3260 B	T 3253 F	T 3257 B	T 3259 F	T 3258 B	T 3268 F	T 3271 B	T 3522 F	T 3522 B	T 3524 F	T 3523 B	T 3526 F	T 3525 B	T 3520 F	T 3520 B	T 3523 F	T 3526 B
Plate Serial Number:		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Lot Number:		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Gross Weight (lb.):		5.35	6.01	5.36	6.01	5.37	5.98	5.37	5.99	5.38	5.99	5.40	6.02	5.40	6.02	5.41	6.04	5.42	5.99	5.37	6.02
<b>TEST DESCRIPTION</b>																					
Water Submersion:		No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Threat Ammunition:		.357 SIG	.357 SIG	.357 SIG	.357 SIG	.357 SIG	.357 SIG	.357 SIG	.357 SIG	.357 SIG	.357 SIG	.44 Mag	.44 Mag	.44 Mag	.44 Mag	.44 Mag	.44 Mag	.44 Mag	.44 Mag	.44 Mag	.44 Mag
Bullet (grain/type):		125/FMJ	125/FMJ	125/FMJ	125/FMJ	125/FMJ	125/FMJ	125/FMJ	125/FMJ	125/FMJ	125/FMJ	240/SJHP	240/SJHP	240/SJHP	240/SJHP	240/SJHP	240/SJHP	240/SJHP	240/SJHP	240/SJHP	240/SJHP
Test Starting Velocity (ft/s):		1470	1470	1470	1470	1470	1470	1470	1470	1470	1470	1430	1430	1430	1430	1430	1430	1430	1430	1430	1430
Shots on Panel:		12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
<b>THREAT DESCRIPTION</b>																					
Bullet Manufacturer:		SPEER	SPEER	SPEER	SPEER	SPEER	SPEER	SPEER	SPEER	SPEER	SPEER	SPEER	SPEER	SPEER	SPEER	SPEER	SPEER	SPEER	SPEER	SPEER	SPEER
Bullet Lot/Product Number:		4362	4362	4362	4362	4362	4362	4362	4362	4362	4362	M0817	M0817	M0817	M0817	M0817	M0817	M0817	M0817	M0817	M0817
Test Barrel Manufacturer:		H.P.W.L.I.	H.P.W.L.I.	H.P.W.L.I.	H.P.W.L.I.	H.P.W.L.I.	H.P.W.L.I.	H.P.W.L.I.	H.P.W.L.I.	H.P.W.L.I.	H.P.W.L.I.	H.P.W.L.I.	H.P.W.L.I.	H.P.W.L.I.	H.P.W.L.I.	H.P.W.L.I.	H.P.W.L.I.	H.P.W.L.I.	H.P.W.L.I.	H.P.W.L.I.	H.P.W.L.I.
Test Barrel Length (in):		10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0

Environmental Conditioned Armors

		Manufacturer: MKU Pvt. Ltd.				Test ID: MKU10-001840				Model Designation: MKS-1002				Armor Style: 0				NIJ Type: 0			
		Penetration-Backface Signature (P-BFS) Test Samples										Ballistic Limit				Spare Samples					
		Sample 21		Sample 22		Sample 23		Sample 24		Sample 25		Sample 26		Sample 27		Sample 28					
SAMPLE DESCRIPTION		Front	Back	Front	Back	Front	Back	Front	Back	Front	Back	Front	Back	Front	Back	Front	Back	Front	Back	Front	Back
Size:		C5	C5	C3	C3	C5	C5	C3	C3	C5	C5	C5	C5	C5	C5	C5	C5				
Panel Serial Number:		T 3266 F	T 3267 B	T 3282 F	T 3279 B	T 3265 F	T 3265 B	T 3279 F	T 3278 B	T 3261 F	T 3254 B	T 3278 F	T 3262 B	T 3256 F	T 3262 B	T 3263 F	T 3274 B				
Plate Serial Number:		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A				
Lot Number:		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1					
Gross Weight (lb.):		5.37	6.06	3.33	3.77	5.37	5.99	3.31	3.77	5.37	6.01	5.36	6.01	5.38	5.99	5.37	5.98				
<b>TEST DESCRIPTION</b>																					
Water Submersion:		No	No	No	No	No	No	No	No	No	No	No	No								
Threat Ammunition:		.357 SIG	.357 SIG	.357 SIG	.357 SIG	.44 Mag	.44 Mag	.44 Mag	.44 Mag	.357 SIG	.357 SIG	.44 Mag	.44 Mag								
Bullet (grain/type):		125/FMJ	125/FMJ	125/FMJ	125/FMJ	240/SJHP	240/SJHP	240/SJHP	240/SJHP	125/FMJ	125/FMJ	240/SJHP	240/SJHP								
Test Velocity (ft/s):		1410	1410	1410	1410	1340	1340	1340	1340	1410	1410	1340	1340								
Angle at Loc #4/ Shots on Panel:		30	45	45	30	30	45	45	30	30	45	45	30								
<b>THREAT DESCRIPTION</b>																					
Bullet Manufacturer:		SPEER	SPEER	SPEER	SPEER	SPEER	SPEER	SPEER	SPEER	SPEER	SPEER	SPEER	SPEER								
Bullet Lot/Product Number:		4362	4362	4362	4362	M0817	M0817	M0817	M0817	4362	4362	M0817	M0817								
Test Barrel Manufacturer:		H.P.W.L.I.	H.P.W.L.I.	H.P.W.L.I.	H.P.W.L.I.	H.P.W.L.I.	H.P.W.L.I.	H.P.W.L.I.	H.P.W.L.I.	H.P.W.L.I.	H.P.W.L.I.	H.P.W.L.I.	H.P.W.L.I.								
Test Barrel Length (in):		10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0								

# NATIONAL INSTITUTE OF JUSTICE COMPLIANCE TEST REPORT

## HANDLOAD VERIFICATION WORKSHEET

This form is not required and may be substituted with appropriate internal laboratory documentation.

Report Number: 11697-22  
NIJ Armor Type: 3A

Report Date: 10/12/11

Range Length: 17.20 ft.

Velocity 1: 5.00 ft.  
Velocity 2: 5.00 ft.

New Armor - Test Round 1							New Armor - Test Round 2						
Ammunition: .357 SIG 125/FMJ			Test Date:				Ammunition: .44 Mag 240/SJHP			Test Date:			
Temp: F			RH: %				Temp: F			RH: %			
Shot No.	Charge (grain)	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Vel. Avg. (ft/s)	Shot No.	Charge (grain)	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Vel. Avg. (ft/s)
1			0		0		1		3491	1432	3486	1434	1433
2			0		0		2			0		0	
3			0		0		3			0		0	
4			0		0		4			0		0	
5			0		0		5			0		0	
6			0		0		6			0		0	
7			0		0		7			0		0	
8			0		0		8			0		0	
9			0		0		9			0		0	
10			0		0		10			0		0	

Mean:

Mean:

Mean:

Mean: 1433

### New Armor - Test Round 1

NIJ Reference Velocity:	1470	ft/s	
Handload (NIJ Reference ± 10 ft/s):	Invalid	ft/s	
Range (NIJ Reference ± 30 ft/s):	1440	1500	ft/s

Velocity Summary:	Min	Max	ft/s
	0	0	

### New Armor - Test Round 2

NIJ Reference Velocity:	1430	ft/s	
Handload (NIJ Reference ± 10 ft/s):	1433	ft/s	
Range (NIJ Reference ± 30 ft/s):	1400	1460	ft/s

Velocity Summary:	Min	Max	ft/s
	1433	1433	

Conditioned Armor - Test Round 1							Conditioned Armor - Test Round 2						
Ammunition: .357 SIG 125/FMJ			Test Date:				Ammunition: .44 Mag 240/SJHP			Test Date:			
Temp: F			RH: %				Temp: F			RH: %			
Shot No.	Charge (grain)	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Vel. Avg. (ft/s)	Shot No.	Charge (grain)	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Vel. Avg. (ft/s)
1			0		0		1			0		0	
2			0		0		2			0		0	
3			0		0		3			0		0	
4			0		0		4			0		0	
5			0		0		5			0		0	
6			0		0		6			0		0	
7			0		0		7			0		0	
8			0		0		8			0		0	
9			0		0		9			0		0	
10			0		0		10			0		0	

Mean:

Mean:

Mean:

Mean:

### Conditioned Armor - Test Round 1

NIJ Reference Velocity:	1410	ft/s	
Handload (NIJ Reference ± 10 ft/s):	Invalid	ft/s	
Range (NIJ Reference ± 30 ft/s):	1380	1440	ft/s

Velocity Summary:	Min	Max	ft/s
	0	0	

### Conditioned Armor - Test Round 2

NIJ Reference Velocity:	1340	ft/s	
Handload (NIJ Reference ± 10 ft/s):	Invalid	ft/s	
Range (NIJ Reference ± 30 ft/s):	1310	1370	ft/s

Velocity Summary:	Min	Max	ft/s
	0	0	

# NATIONAL INSTITUTE OF JUSTICE COMPLIANCE TEST REPORT

## Penetration and BFS Firing Data - New Armor - Threat 1

Report Number: 11697-22      Report Date: 10/12/11      Test Date: 10/03/11

Manufacturer: MKU Pvt. Ltd.      Ammunition: .357 SIG      125/FMJ  
 Test ID: MKU10-001840      Reference Velocity: 1470      ± 30 ft/s  
 NIJ Armor Type: 3A      Water Submersion: Yes

TEST DIMENSIONS:      Range Length: 17.20 ft.      Velocity 1: 5.00 ft.      Lab Technician(s): M.GOMEZ  
                                  Laboratory Range #: 1      Velocity 2: 5.00 ft.      J.CONTRERAS

**Sample 1  
Front Panel**

Panel Serial No: T 3525 F      Plate Serial No: N/A

**PRE-TEST CLAY VALIDATION:**

Block ID: R1B3  
 Time of Day: 10:06 HH:mm  
 Clay Temperature: 98.5 F

Depth of Indent:	Drop Number					Avg.
	1	2	3	4	5	
	20	19	19	19	20	19.4
Requirements: All drops: $19 \pm 3$ mm, Average: $19 \pm 2$ mm						
Pass:						Yes

**TEST CONDITIONS:**

	Start		End			Armor Submersion		Firing Sequence			
	Start	End	Start	End		Start	End	Start	End		
Ambient Temp:	67	65			F	Start:	1:20	HH:mm	Start:	2:00	HH:mm
Rel. Humidity:	51	51	%			End:	1:50	HH:mm	End:	2:10	HH:mm
						Duration:	30	min	Duration:	10	min

FRONT PANEL											
Shot No.	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Vel. Avg. (ft/s)	Angle	Fair (Y/N)	Perforate (Y=1/N=0)	Note	BFS (mm)	Comments
1	3392	1474	3392	1474	1474	0°	Y	0		24	
2	3405	1468	3401	1470	1469	0°	Y	0		24	
3	3387	1476	3383	1478	1477	0°	Y	0		24	
4	3392	1474	3387	1476	1475	30°	Y	0			
5	3414	1465	3410	1466	1465	45°	Y	0			
6	3374	1482	3369	1484	1483	0°	Y	0			
7		0		0							
8		0		0							

**POST-TEST CLAY VALIDATION:**

Block ID:             
 Time of Day:            HH:mm  
 Clay Temperature:            F

Depth of Indent:	Drop Number					Avg.
	1	2	3	4	5	
Requirements: All drops: $19 \pm 3$ mm, Average: $19 \pm 2$ mm						
Pass:						-

**NOTES:**

- |                           |   |                    |
|---------------------------|---|--------------------|
| a - Excessive velocity    | d - Too close to prior impact                 | g - Impact on seam |
| b - Insufficient velocity | e - Excessive total impacts (test terminated) |                    |
| c - Too close to edge     | f - Excessive area impacts (test terminated)  |                    |

# NATIONAL INSTITUTE OF JUSTICE COMPLIANCE TEST REPORT

## Penetration and BFS Firing Data - New Armor - Threat 1

Report Number: 11697-22 Report Date: 10/12/11 Test Date: 10/03/11

Manufacturer: MKU Pvt. Ltd. Ammunition: .357 SIG 125/FMJ  
 Test ID: MKU10-001840 Reference Velocity: 1470 ± 30 ft/s  
 NIJ Armor Type: 3A Water Submersion: Yes

TEST DIMENSIONS: Range Length: 17.20 ft. Velocity 1: 5.00 ft. Lab Technician(s): M.GOMEZ  
 Laboratory Range #: 1 Velocity 2: 5.00 ft. J.CONTRERAS

### Sample 1 Back Panel

Panel Serial No: T 3521 B Plate Serial No: N/A

**PRE-TEST CLAY VALIDATION:**

Block ID: R1B3  
 Time of Day: 2:10 HH:mm  
 Clay Temperature: 97.7 F

Depth of Indent:	Drop Number					Avg.
	1	2	3	4	5	
	20	19	18	19	19	19.0
Requirements: All drops: $19 \pm 3$ mm, Average: $19 \pm 2$ mm						
Pass:						Yes

**TEST CONDITIONS:**

	Start		End			Armor Submersion		Firing Sequence	
	Start	End	Start	End		Start	End	Start	End
Ambient Temp:	68	69					1:40	2:20	
Rel. Humidity:	55	55					2:10	2:30	
							30 min	10 min	

BACK PANEL											
Shot No.	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Vel. Avg. (ft/s)	Angle	Fair (Y/N)	Perforate (Y=1/N=0)	Note	BFS (mm)	Comments
1	3378	1480	3378	1480	1480	0°	Y	0		23	
2	3410	1466	3410	1466	1466	0°	Y	0		23	
3	3405	1468	3405	1468	1468	0°	Y	0		23	
4	3410	1466	3405	1468	1467	45°	Y	0			
5	3414	1465	3410	1466	1465	30°	Y	0			
6	3387	1476	3383	1478	1477	0°	Y	0			
7		0		0							
8		0		0							

**POST-TEST CLAY VALIDATION:**

Block ID: R1B3  
 Time of Day: 2:30 HH:mm  
 Clay Temperature: 96.2 F

Depth of Indent:	Drop Number					Avg.
	1	2	3	4	5	
	19	18	19	19	18	18.6
Requirements: All drops: $19 \pm 3$ mm, Average: $19 \pm 2$ mm						
Pass:						Yes

**NOTES:**

- |                           |   |                    |
|---------------------------|---|--------------------|
| a - Excessive velocity    | d - Too close to prior impact                 | g - Impact on seam |
| b - Insufficient velocity | e - Excessive total impacts (test terminated) |                    |
| c - Too close to edge     | f - Excessive area impacts (test terminated)  |                    |



# NATIONAL INSTITUTE OF JUSTICE COMPLIANCE TEST REPORT

## Perforation and BFS Firing Data - New Armor - Threat 1

Report Number: 11697-22 Report Date: 10/12/11 Test Date: 10/04/11

Manufacturer: MKU Pvt. Ltd. Ammunition: .357 SIG 125/FMJ  
 Test ID: MKU10-001840 Reference Velocity: 1470 ± 30 ft/s  
 NIJ Armor Type: 3A Water Submersion: Yes

TEST DIMENSIONS: Range Length: 17.20 ft. Velocity 1: 5.00 ft. Lab Technician(s): J. CONTRERAS  
 Laboratory Range #: R1 Velocity 2: 5.00 ft. M. GOMEZ

### Sample 2 Front Panel

Panel Serial No: T 3521 F Plate Serial No: N/A

**PRE-TEST CLAY VALIDATION:**

Block ID: R1B1  
 Time of Day: 2:50 HH:mm  
 Clay Temperature: 98.1 F

Depth of Indent:	Drop Number					Avg.
	1	2	3	4	5	
	21	20	20	19	21	20.2
Requirements: All drops: $19 \pm 3$ mm, Average: $19 \pm 2$ mm						
Pass:						Yes

**TEST CONDITIONS:**

	Start	End		Start	End		Start	End	
Ambient Temp:	65	66	F	Armor Submersion Start:	2:20	HH:mm	Firing Sequence Start:	3:00	HH:mm
Rel. Humidity:	52	52	%	Armor Submersion End:	2:50	HH:mm	Firing Sequence End:	3:10	HH:mm
				Duration:	30	min	Duration:	10	min

FRONT PANEL											
Shot No.	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Vel. Avg. (ft/s)	Angle	Fair (Y/N)	Perforate (Y=1/N=0)	Note	BFS (mm)	Comments
1	3374	1482	3374	1482	1482	0°	Y	0		23	
2	3410	1466	3405	1468	1467	0°	Y	0		23	
3	3419	1462	3419	1462	1462	0°	Y	0		24	
4	3419	1462	3414	1465	1463	45°	Y	0			
5	3410	1466	3410	1466	1466	30°	Y	0			
6	3401	1470	3396	1472	1471	0°	Y	0			
7		0		0							
8		0		0							

**POST-TEST CLAY VALIDATION:**

Block ID:             
 Time of Day:            HH:mm  
 Clay Temperature:            F

Depth of Indent:	Drop Number					Avg.
	1	2	3	4	5	
Requirements: All drops: $19 \pm 3$ mm, Average: $19 \pm 2$ mm						
Pass:						-

**NOTES:**

- |                           |   |                    |
|---------------------------|---|--------------------|
| a - Excessive velocity    | d - Too close to prior impact                 | g - Impact on seam |
| b - Insufficient velocity | e - Excessive total impacts (test terminated) |                    |
| c - Too close to edge     | f - Excessive area impacts (test terminated)  |                    |

# NATIONAL INSTITUTE OF JUSTICE COMPLIANCE TEST REPORT

## Perforation and BFS Firing Data - New Armor - Threat 1

Report Number: 11697-22      Report Date: 10/12/11      Test Date: 10/04/11

Manufacturer: MKU Pvt. Ltd.      Ammunition: .357 SIG      125/FMJ  
 Test ID: MKU10-001840      Reference Velocity: 1470      ± 30 ft/s  
 NIJ Armor Type: 3A      Water Submersion: Yes

TEST DIMENSIONS:      Range Length: 17.20 ft.      Velocity 1: 5.00 ft.      Lab Technician(s): J. CONTRERAS  
                                  Laboratory Range #: R1      Velocity 2: 5.00 ft.      M. GOMEZ

### Sample 2 Back Panel

Panel Serial No: T 3524 B      Plate Serial No: N/A

**PRE-TEST CLAY VALIDATION:**

Block ID: R1B1  
 Time of Day: 3:05 HH:mm  
 Clay Temperature: 97.4 F

Depth of Indent:	Drop Number					Avg.
	1	2	3	4	5	
	20	20	20	19	21	20.0
Requirements: All drops: $19 \pm 3$ mm, Average: $19 \pm 2$ mm						
Pass:						Yes

**TEST CONDITIONS:**

	Start		End		F	Armor Submersion		Firing Sequence		HH:mm
	Start	End	Start	End		Start	End	Start	End	
Ambient Temp:	65	65	2:35	3:05	F	2:35	3:05	3:15	3:25	HH:mm
Rel. Humidity:	50	52	30	30	%	30	30	10	10	min

BACK PANEL											
Shot No.	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Vel. Avg. (ft/s)	Angle	Fair (Y/N)	Perforate (Y=1/N=0)	Note	BFS (mm)	Comments
1	3450	1449	3441	1453	1451	0°	Y	0		24	
2	3374	1482	3369	1484	1483	0°	Y	0		24	
3	3369	1484	3365	1486	1485	0°	Y	0		24	
4	3401	1470	3401	1470	1470	30°	Y	0			
5	3378	1480	3374	1482	1481	45°	Y	0			
6	3378	1480	3374	1482	1481	0°	Y	0			
7	0		0								
8	0		0								

**POST-TEST CLAY VALIDATION:**

Block ID: R1B1  
 Time of Day: 3:25 HH:mm  
 Clay Temperature: 96.7 F

Depth of Indent:	Drop Number					Avg.
	1	2	3	4	5	
	18	19	19	19	18	18.6
Requirements: All drops: $19 \pm 3$ mm, Average: $19 \pm 2$ mm						
Pass:						Yes

**NOTES:**

- |                           |   |                    |
|---------------------------|---|--------------------|
| a - Excessive velocity    | d - Too close to prior impact                 | g - Impact on seam |
| b - Insufficient velocity | e - Excessive total impacts (test terminated) |                    |
| c - Too close to edge     | f - Excessive area impacts (test terminated)  |                    |

# NATIONAL INSTITUTE OF JUSTICE COMPLIANCE TEST REPORT

## Perforation and BFS Firing Data - New Armor - Threat 1

Report Number: 11697-22      Report Date: 10/12/11      Test Date: 10/04/11

Manufacturer: MKU Pvt. Ltd.      Ammunition: .357 SIG      125/FMJ  
 Test ID: MKU10-001840      Reference Velocity: 1470      ± 30 ft/s  
 NIJ Armor Type: 3A      Water Submersion: Yes

TEST DIMENSIONS:      Range Length: 17.20 ft.      Velocity 1: 5.00 ft.      Lab Technician(s): J. CONTRERAS  
                                  Laboratory Range #: R1      Velocity 2: 5.00 ft.      M. GOMEZ

**Sample 3  
Front Panel**

Panel Serial No: T 3519 F      Plate Serial No: N/A

PRE-TEST CLAY VALIDATION:

Block ID: R1B1  
 Time of Day: 8:55 HH:mm  
 Clay Temperature: 99.4 F

Depth of Indent:	Drop Number					Avg.
	1	2	3	4	5	
	21	21	20	19	20	20.2
Requirements: All drops: $19 \pm 3$ mm, Average: $19 \pm 2$ mm						
Pass:						Yes

TEST CONDITIONS:

	Start	End		Start	End		Start	End	
Ambient Temp:	66	66	F	Armor Submersion Start:	8:20	HH:mm	Firing Sequence Start:	9:05	HH:mm
Rel. Humidity:	51	51	%	Armor Submersion End:	8:50	HH:mm	Firing Sequence End:	9:15	HH:mm
				Duration:	30	min	Duration:	10	min

FRONT PANEL											
Shot No.	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Vel. Avg. (ft/s)	Angle	Fair (Y/N)	Perforate (Y=1/N=0)	Note	BFS (mm)	Comments
1	3378	1480	3374	1482	1481	0°	Y	0		26	
2	3365	1486	3360	1488	1487	0°	Y	0		26	
3	3392	1474	3392	1474	1474	0°	Y	0		25	
4	3383	1478	3387	1476	1477	30°	Y	0			
5	3378	1480	3369	1484	1482	45°	Y	0			
6	3392	1474	3387	1476	1475	0°	Y	0			
7	0		0								
8	0		0								

POST-TEST CLAY VALIDATION:

Block ID:             
 Time of Day:            HH:mm  
 Clay Temperature:            F

Depth of Indent:	Drop Number					Avg.
	1	2	3	4	5	
Requirements: All drops: $19 \pm 3$ mm, Average: $19 \pm 2$ mm						
Pass:						-

NOTES:

- |                           |   |                    |
|---------------------------|---|--------------------|
| a - Excessive velocity    | d - Too close to prior impact                 | g - Impact on seam |
| b - Insufficient velocity | e - Excessive total impacts (test terminated) |                    |
| c - Too close to edge     | f - Excessive area impacts (test terminated)  |                    |

# NATIONAL INSTITUTE OF JUSTICE COMPLIANCE TEST REPORT

## Perforation and BFS Firing Data - New Armor - Threat 1

Report Number: 11697-22      Report Date: 10/12/11      Test Date: 10/04/11

Manufacturer: MKU Pvt. Ltd.      Ammunition: .357 SIG      125/FMJ  
 Test ID: MKU10-001840      Reference Velocity: 1470      ± 30 ft/s  
 NIJ Armor Type: 3A      Water Submersion: Yes

TEST DIMENSIONS:      Range Length: 17.20 ft.      Velocity 1: 5.00 ft.      Lab Technician(s): J. CONTRERAS  
                                  Laboratory Range #: R1      Velocity 2: 5.00 ft.      M. GOMEZ

**Sample 3  
Back Panel**

Panel Serial No: T 3517 B      Plate Serial No: N/A

**PRE-TEST CLAY VALIDATION:**

Block ID: R1B1  
 Time of Day: 9:15 HH:mm  
 Clay Temperature: 98.5 F

Depth of Indent:	Drop Number					Avg.
	1	2	3	4	5	
	22	18	21	20	21	20.4
Requirements: All drops: $19 \pm 3$ mm, Average: $19 \pm 2$ mm						
Pass:						Yes

**TEST CONDITIONS:**

	Start		End		F	Armor Submersion		Firing Sequence		HH:mm
	66	66	9:10	9:10		Start:	8:40	End:	9:25	
Ambient Temp:	66	66	9:10	9:10	F	Start:	8:40	End:	9:25	HH:mm
Rel. Humidity:	51	51	30	30	%	Duration:	30	Duration:	10	min

BACK PANEL											
Shot No.	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Vel. Avg. (ft/s)	Angle	Fair (Y/N)	Perforate (Y=1/N=0)	Note	BFS (mm)	Comments
1	3392	1474	3387	1476	1475	0°	Y	0		25	
2	3423	1461	3419	1462	1462	0°	Y	0		25	
3	3410	1466	3405	1468	1467	0°	Y	0		25	
4	3410	1466	3401	1470	1468	45°	Y	0			
5	3378	1480	3374	1482	1481	30°	Y	0			
6	3383	1478	3378	1480	1479	0°	Y	0			
7	0		0								
8	0		0								

**POST-TEST CLAY VALIDATION:**

Block ID: R1B1  
 Time of Day: 9:40 HH:mm  
 Clay Temperature: 96.3 F

Depth of Indent:	Drop Number					Avg.
	1	2	3	4	5	
	20	17	19	18	18	18.4
Requirements: All drops: $19 \pm 3$ mm, Average: $19 \pm 2$ mm						
Pass:						Yes

**NOTES:**

- |                           |   |                    |
|---------------------------|---|--------------------|
| a - Excessive velocity    | d - Too close to prior impact                 | g - Impact on seam |
| b - Insufficient velocity | e - Excessive total impacts (test terminated) |                    |
| c - Too close to edge     | f - Excessive area impacts (test terminated)  |                    |

# NATIONAL INSTITUTE OF JUSTICE COMPLIANCE TEST REPORT

## Perforation and BFS Firing Data - New Armor - Threat 1

Report Number: 11697-22      Report Date: 10/12/11      Test Date: 10/04/11

Manufacturer: MKU Pvt. Ltd.      Ammunition: .357 SIG      125/FMJ  
 Test ID: MKU10-001840      Reference Velocity: 1470      ± 30 ft/s  
 NIJ Armor Type: 3A      Water Submersion: Yes

TEST DIMENSIONS:      Range Length: 17.20 ft.      Velocity 1: 5.00 ft.      Lab Technician(s): J. CONTRERAS  
                                  Laboratory Range #: R1      Velocity 2: 5.00 ft.      M. GOMEZ

### Sample 4 Front Panel

Panel Serial No: T 3518 F      Plate Serial No: N/A

**PRE-TEST CLAY VALIDATION:**

Block ID: R1B2  
 Time of Day: 10:00 HH:mm  
 Clay Temperature: 99.1 F

Depth of Indent:	Drop Number					Avg.
	1	2	3	4	5	
	20	19	20	20	21	20.0
Requirements: All drops: $19 \pm 3$ mm, Average: $19 \pm 2$ mm						
Pass:						Yes

**TEST CONDITIONS:**

	Start		End			Armor Submersion		Firing Sequence			
	HH:mm	MM	HH:mm	MM		HH:mm	MM	HH:mm	MM		
Ambient Temp:	66	66			F	Start:	9:40	HH:mm	Start:	10:20	HH:mm
Rel. Humidity:	51	51	%			End:	10:10	HH:mm	End:	10:30	HH:mm
						Duration:	30	min	Duration:	10	min

FRONT PANEL											
Shot No.	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Vel. Avg. (ft/s)	Angle	Fair (Y/N)	Perforate (Y=1/N=0)	Note	BFS (mm)	Comments
1	3387	1476	3387	1476	1476	0°	Y	0		22	
2	3387	1476	3383	1478	1477	0°	Y	0		27	
3	3369	1484	3360	1488	1486	0°	Y	0		23	
4	3414	1465	3410	1466	1465	45°	Y	0			
5	3392	1474	3396	1472	1473	30°	Y	0			
6	3383	1478	3383	1478	1478	0°	Y	0			
7		0		0							
8		0		0							

**POST-TEST CLAY VALIDATION:**

Block ID:             
 Time of Day:            HH:mm  
 Clay Temperature:            F

Depth of Indent:	Drop Number					Avg.
	1	2	3	4	5	
Requirements: All drops: $19 \pm 3$ mm, Average: $19 \pm 2$ mm						
Pass:						-

**NOTES:**

- |                           |   |                    |
|---------------------------|---|--------------------|
| a - Excessive velocity    | d - Too close to prior impact                 | g - Impact on seam |
| b - Insufficient velocity | e - Excessive total impacts (test terminated) |                    |
| c - Too close to edge     | f - Excessive area impacts (test terminated)  |                    |

# NATIONAL INSTITUTE OF JUSTICE COMPLIANCE TEST REPORT

## Perforation and BFS Firing Data - New Armor - Threat 1

Report Number: 11697-22      Report Date: 10/12/11      Test Date: 10/04/11

Manufacturer: MKU Pvt. Ltd.      Ammunition: .357 SIG      125/FMJ  
 Test ID: MKU10-001840      Reference Velocity: 1470      ± 30 ft/s  
 NIJ Armor Type: 3A      Water Submersion: Yes

TEST DIMENSIONS:      Range Length: 17.20 ft.      Velocity 1: 5.00 ft.      Lab Technician(s): J. CONTRERAS  
                                  Laboratory Range #: R1      Velocity 2: 5.00 ft.      M. GOMEZ

**Sample 4  
Back Panel**

Panel Serial No: T 3518 B      Plate Serial No: N/A

PRE-TEST CLAY VALIDATION:

Block ID: R1B2  
 Time of Day: 10:25 HH:mm  
 Clay Temperature: 98.8 F

Depth of Indent:	Drop Number					Avg.
	1	2	3	4	5	
	21	21	21	20	19	20.4
Requirements: All drops: $19 \pm 3$ mm, Average: $19 \pm 2$ mm						
Pass:						Yes

TEST CONDITIONS:

	Start		End		F	Armor Submersion		Firing Sequence		HH:mm
	Start	End	Start	End		Start	End	Start	End	
Ambient Temp:	66	66			F	Start:	10:05	End:	10:45	HH:mm
Rel. Humidity:	55	55	%			End:	10:35	HH:mm	10:55	HH:mm
						Duration:	30	min	Duration:	10
									Duration:	10

BACK PANEL											
Shot No.	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Vel. Avg. (ft/s)	Angle	Fair (Y/N)	Perforate (Y=1/N=0)	Note	BFS (mm)	Comments
1	3401	1470	3405	1468	1469	0°	Y	0		24	
2	3396	1472	3392	1474	1473	0°	Y	0		23	
3	3396	1472	3396	1472	1472	0°	Y	0		23	
4	3396	1472	3392	1474	1473	30°	Y	0			
5	3419	1462	3414	1465	1463	45°	Y	0			
6	3387	1476	3383	1478	1477	0°	Y	0			
7		0		0							
8		0		0							

POST-TEST CLAY VALIDATION:

Block ID: R1B1  
 Time of Day: 11:00 HH:mm  
 Clay Temperature: 96.9 F

Depth of Indent:	Drop Number					Avg.
	1	2	3	4	5	
	20	19	19	18	18	18.8
Requirements: All drops: $19 \pm 3$ mm, Average: $19 \pm 2$ mm						
Pass:						Yes

NOTES:

- |                           |   |                    |
|---------------------------|---|--------------------|
| a - Excessive velocity    | d - Too close to prior impact                 | g - Impact on seam |
| b - Insufficient velocity | e - Excessive total impacts (test terminated) |                    |
| c - Too close to edge     | f - Excessive area impacts (test terminated)  |                    |

# NATIONAL INSTITUTE OF JUSTICE COMPLIANCE TEST REPORT

## Perforation and BFS Firing Data - New Armor - Threat 2

Report Number: 11697-22      Report Date: 10/12/11      Test Date: 10/03/11

Manufacturer: MKU Pvt. Ltd.      Ammunition: .44 Mag      240/SJHP  
 Test ID: MKU10-001840      Reference Velocity: 1430      ± 30 ft/s  
 NIJ Armor Type: 3A      Water Submersion: Yes

TEST DIMENSIONS:      Range Length: 17.20 ft.      Velocity 1: 5.00 ft.      Lab Technician(s): J. CONTRERAS  
                                  Laboratory Range #: R1      Velocity 2: 5.00 ft.      M. GOMEZ

### Sample 5 Front Panel

Panel Serial No: T 3262 F      Plate Serial No: N/A

**PRE-TEST CLAY VALIDATION:**

Block ID: R1B3  
 Time of Day: 1:30 HH:mm  
 Clay Temperature: 99.3 F

Depth of Indent:	Drop Number					Avg.
	1	2	3	4	5	
	20	19	19	21	20	19.8
Requirements: All drops: $19 \pm 3$ mm, Average: $19 \pm 2$ mm						
Pass:						Yes

**TEST CONDITIONS:**

	Start		End			Armor Submersion		Firing Sequence		
	Start	End	Start	End		Start	End	Start	End	
Ambient Temp:	69	69			F	1:00	1:30	1:45	1:55	HH:mm
Rel. Humidity:	55	55			%	30		10		min

FRONT PANEL											
Shot No.	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Vel. Avg. (ft/s)	Angle	Fair (Y/N)	Perforate (Y=1/N=0)	Note	BFS (mm)	Comments
1	3464	1443	3459	1446	1444	0°	Y	0		33	
2	3513	1423	3504	1427	1425	0°	Y	0		36	
3	3527	1418	3522	1420	1419	0°	Y	0		36	
4	3500	1429	3495	1431	1430	30°	Y	0			
5	3522	1420	3518	1421	1420	45°	Y	0			
6	3464	1443	3464	1443	1443	0°	Y	0			
7	0		0								
8	0		0								

**POST-TEST CLAY VALIDATION:**

Block ID:             
 Time of Day:            HH:mm  
 Clay Temperature:            F

Depth of Indent:	Drop Number					Avg.
	1	2	3	4	5	
Requirements: All drops: $19 \pm 3$ mm, Average: $19 \pm 2$ mm						
Pass:						-

**NOTES:**

- |                           |   |                    |
|---------------------------|---|--------------------|
| a - Excessive velocity    | d - Too close to prior impact                 | g - Impact on seam |
| b - Insufficient velocity | e - Excessive total impacts (test terminated) |                    |
| c - Too close to edge     | f - Excessive area impacts (test terminated)  |                    |

# NATIONAL INSTITUTE OF JUSTICE COMPLIANCE TEST REPORT

## Perforation and BFS Firing Data - New Armor - Threat 2

Report Number: 11697-22      Report Date: 10/12/11      Test Date: 10/03/11

Manufacturer: MKU Pvt. Ltd.      Ammunition: .44 Mag 240/SJHP  
 Test ID: MKU10-001840      Reference Velocity: 1430 ± 30 ft/s  
 NIJ Armor Type: 3A      Water Submersion: Yes

TEST DIMENSIONS:      Range Length: 17.20 ft.      Velocity 1: 5.00 ft.      Lab Technician(s): J. CONTRERAS  
                                  Laboratory Range #: R1      Velocity 2: 5.00 ft.      M. GOMEZ

**Sample 5  
Back Panel**

Panel Serial No: T 3269 B      Plate Serial No: N/A

**PRE-TEST CLAY VALIDATION:**

Block ID: R1B3  
 Time of Day: 2:00 HH:mm  
 Clay Temperature: 96.5 F

Depth of Indent:	Drop Number					Avg.
	1	2	3	4	5	
	20	20	21	21	20	20.4
Requirements: All drops: $19 \pm 3$ mm, Average: $19 \pm 2$ mm						
Pass:						Yes

**TEST CONDITIONS:**

	Start		End			Armor Submersion		Firing Sequence			
	Start	End	Start	End		Start	End	Start	End		
Ambient Temp:	69	70			F	Start:	1:30	HH:mm	Start:	2:10	HH:mm
Rel. Humidity:	55	56	%			End:	2:00	HH:mm	End:	2:20	HH:mm
						Duration:	30	min	Duration:	10	min

BACK PANEL											
Shot No.	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Vel. Avg. (ft/s)	Angle	Fair (Y/N)	Perforate (Y=1/N=0)	Note	BFS (mm)	Comments
1	3464	1443	3464	1443	1443	0°	Y	0		32	
2	3446	1451	3441	1453	1452	0°	Y	0		34	
3	3531	1416	3527	1418	1417	0°	Y	0		35	
4	3563	1403	3558	1405	1404	45°	Y	0			
5	3410	1466	3405	1468	1467	30°	Y	0			
6	3405	1468	3401	1470	1469	0°	Y	0			
7		0		0							
8		0		0							

**POST-TEST CLAY VALIDATION:**

Block ID: R1B3  
 Time of Day: 2:25 HH:mm  
 Clay Temperature: 97.0 F

Depth of Indent:	Drop Number					Avg.
	1	2	3	4	5	
	19	19	18	18	18	18.4
Requirements: All drops: $19 \pm 3$ mm, Average: $19 \pm 2$ mm						
Pass:						Yes

**NOTES:**

- |                           |   |                    |
|---------------------------|---|--------------------|
| a - Excessive velocity    | d - Too close to prior impact                 | g - Impact on seam |
| b - Insufficient velocity | e - Excessive total impacts (test terminated) |                    |
| c - Too close to edge     | f - Excessive area impacts (test terminated)  |                    |



# NATIONAL INSTITUTE OF JUSTICE COMPLIANCE TEST REPORT

## Perforation and BFS Firing Data - New Armor - Threat 2

Report Number: 11697-22 Report Date: 10/12/11 Test Date: 10/03/10

Manufacturer: MKU Pvt. Ltd. Ammunition: .44 Mag 240/SJHP  
 Test ID: MKU10-001840 Reference Velocity: 1430 ± 30 ft/s  
 NIJ Armor Type: 3A Water Submersion: Yes

TEST DIMENSIONS: Range Length: 17.20 ft. Velocity 1: 5.00 ft. Lab Technician(s): J. CONTRERAS  
 Laboratory Range #: R1 Velocity 2: 5.00 ft. M. GOMEZ

### Sample 6

#### Front Panel

Panel Serial No: T-3254 F Plate Serial No: N/A

PRE-TEST CLAY VALIDATION:

Block ID: R1B1  
 Time of Day: 2:45 HH:mm  
 Clay Temperature: 98.6 F

Depth of Indent:	Drop Number					Avg.
	1	2	3	4	5	
	21	21	20	20	21	20.6
Requirements: All drops: $19 \pm 3$ mm, Average: $19 \pm 2$ mm						
Pass:						Yes

TEST CONDITIONS:

	Start		End			Armor Submersion		Firing Sequence		
	Start	End	Start	End		Start	End	Start	End	
Ambient Temp:	70	70			F	2:05	2:35	2:50	3:00	HH:mm
Rel. Humidity:	55	55			%	30		10		min

FRONT PANEL											
Shot No.	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Vel. Avg. (ft/s)	Angle	Fair (Y/N)	Perforate (Y=1/N=0)	Note	BFS (mm)	Comments
1	3432	1457	3428	1459	1458	0°	Y	0		34	
2	3473	1440	3468	1442	1441	0°	Y	0		39	
3	3459	1446	3455	1447	1446	0°	Y	0		36	
4	3473	1440	3468	1442	1441	45°	Y	0			
5	3455	1447	3450	1449	1448	30°	Y	0			
6	3441	1453	3432	1457	1455	0°	Y	0			
7		0		0							
8		0		0							

POST-TEST CLAY VALIDATION:

Block ID:             
 Time of Day:            HH:mm  
 Clay Temperature:            F

Depth of Indent:	Drop Number					Avg.
	1	2	3	4	5	
Requirements: All drops: $19 \pm 3$ mm, Average: $19 \pm 2$ mm						
Pass:						-

NOTES:

- |                           |   |                    |
|---------------------------|---|--------------------|
| a - Excessive velocity    | d - Too close to prior impact                 | g - Impact on seam |
| b - Insufficient velocity | e - Excessive total impacts (test terminated) |                    |
| c - Too close to edge     | f - Excessive area impacts (test terminated)  |                    |

# NATIONAL INSTITUTE OF JUSTICE COMPLIANCE TEST REPORT

## Perforation and BFS Firing Data - New Armor - Threat 2

Report Number: 11697-22      Report Date: 10/12/11      Test Date: 10/03/10

Manufacturer: MKU Pvt. Ltd.      Ammunition: .44 Mag 240/SJHP  
 Test ID: MKU10-001840      Reference Velocity: 1430 ± 30 ft/s  
 NIJ Armor Type: 3A      Water Submersion: Yes

TEST DIMENSIONS:      Range Length: 17.20 ft.      Velocity 1: 5.00 ft.      Lab Technician(s): J. CONTRERAS  
                                  Laboratory Range #: R1      Velocity 2: 5.00 ft.      M. GOMEZ

**Sample 6  
Back Panel**

Panel Serial No: T 3265 B      Plate Serial No: N/A

**PRE-TEST CLAY VALIDATION:**

Block ID: R1B1  
 Time of Day: 3:05 HH:mm  
 Clay Temperature: 97.2 F

Depth of Indent:	Drop Number					Avg.
	1	2	3	4	5	
	20	21	21	20	20	20.4
Requirements: All drops: $19 \pm 3$ mm, Average: $19 \pm 2$ mm						
Pass:						Yes

**TEST CONDITIONS:**

	Start		End		F	Armor Submersion		Firing Sequence		HH:mm	
	Start	End	Start	End		Start	End	Start	End		
Ambient Temp:	70	70			F	Start:	2:40	HH:mm	Start:	3:20	HH:mm
Rel. Humidity:	57	57	%			End:	3:10	HH:mm	End:	3:30	HH:mm
						Duration:	30	min	Duration:	10	min

BACK PANEL											
Shot No.	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Vel. Avg. (ft/s)	Angle	Fair (Y/N)	Perforate (Y=1/N=0)	Note	BFS (mm)	Comments
1	3459	1446	3455	1447	1446	0°	Y	0		33	
2	3455	1447	3450	1449	1448	0°	Y	0		35	
3	3419	1462	3410	1466	1464	0°	Y	0		34	
4	3504	1427	3500	1429	1428	30°	Y	0			
5	3500	1429	3495	1431	1430	45°	Y	0			
6	3464	1443	3459	1446	1444	0°	Y	0			
7	0		0								
8	0		0								

**POST-TEST CLAY VALIDATION:**

Block ID: R1B1  
 Time of Day: 3:35 HH:mm  
 Clay Temperature: 96.5 F

Depth of Indent:	Drop Number					Avg.
	1	2	3	4	5	
	21	20	20	20	21	20.4
Requirements: All drops: $19 \pm 3$ mm, Average: $19 \pm 2$ mm						
Pass:						Yes

**NOTES:**

- |                           |   |                    |
|---------------------------|---|--------------------|
| a - Excessive velocity    | d - Too close to prior impact                 | g - Impact on seam |
| b - Insufficient velocity | e - Excessive total impacts (test terminated) |                    |
| c - Too close to edge     | f - Excessive area impacts (test terminated)  |                    |

# NATIONAL INSTITUTE OF JUSTICE COMPLIANCE TEST REPORT

## Penetration and BFS Firing Data - New Armor - Threat 2

Report Number: 11697-22      Report Date: 10/12/11      Test Date: 10/03/11

Manufacturer: MKU Pvt. Ltd.      Ammunition: .44 Mag 240/SJHP  
 Test ID: MKU10-001840      Reference Velocity: 1430 ± 30 ft/s  
 NIJ Armor Type: 3A      Water Submersion: Yes

TEST DIMENSIONS:      Range Length: 17.20 ft.      Velocity 1: 5.00 ft.      Lab Technician(s): M.GOMEZ  
                                  Laboratory Range #: 1      Velocity 2: 5.00 ft.      J.CONTRERAS

**Sample 7**

**Front Panel**

Panel Serial No: T 3281 F      Plate Serial No: N/A

PRE-TEST CLAY VALIDATION:

Block ID: R1B1  
 Time of Day: 10:07 HH:mm  
 Clay Temperature: 98.5 F

Depth of Indent:	Drop Number					Avg.
	1	2	3	4	5	
	20	20	19	19	20	19.6
Requirements: All drops: $19 \pm 3$ mm, Average: $19 \pm 2$ mm						
Pass:						Yes

TEST CONDITIONS:

	Start		End			Armor Submersion		Firing Sequence		
	Start	End	Start	End		Start	End	Start	End	
Ambient Temp:	67	67			F	9:30	10:00	10:10	10:20	HH:mm
Rel. Humidity:	51	51			%	30	30	10	10	min

FRONT PANEL											
Shot No.	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Vel. Avg. (ft/s)	Angle	Fair (Y/N)	Perforate (Y=1/N=0)	Note	BFS (mm)	Comments
1	3527	1418	3522	1420	1419	0°	Y	0		35	
2	3531	1416	3522	1420	1418	0°	Y	0		36	
3	3477	1438	3473	1440	1439	0°	Y	0		36	
4	3500	1429	3500	1429	1429	30°	Y	0			
5	3513	1423	3509	1425	1424	45°	Y	0			
6	3504	1427	3495	1431	1429	0°	Y	0			
7		0		0							
8		0		0							

POST-TEST CLAY VALIDATION:

Block ID:             
 Time of Day:            HH:mm  
 Clay Temperature:            F

Depth of Indent:	Drop Number					Avg.
	1	2	3	4	5	
Requirements: All drops: $19 \pm 3$ mm, Average: $19 \pm 2$ mm						
Pass:						-

NOTES:

- |                           |   |                    |
|---------------------------|---|--------------------|
| a - Excessive velocity    | d - Too close to prior impact                 | g - Impact on seam |
| b - Insufficient velocity | e - Excessive total impacts (test terminated) |                    |
| c - Too close to edge     | f - Excessive area impacts (test terminated)  |                    |

# NATIONAL INSTITUTE OF JUSTICE COMPLIANCE TEST REPORT

## Penetration and BFS Firing Data - New Armor - Threat 2

Report Number: 11697-22      Report Date: 10/12/11      Test Date: 10/03/11

Manufacturer: MKU Pvt. Ltd.      Ammunition: .44 Mag 240/SJHP  
 Test ID: MKU10-001840      Reference Velocity: 1430 ± 30 ft/s  
 NIJ Armor Type: 3A      Water Submersion: Yes

TEST DIMENSIONS:      Range Length: 17.20 ft.      Velocity 1: 5.00 ft.      Lab Technician(s): M.GOMEZ  
                                  Laboratory Range #: 1      Velocity 2: 5.00 ft.      J.CONTRERAS

**Sample 7  
Back Panel**

Panel Serial No: T 3280 B      Plate Serial No: N/A

PRE-TEST CLAY VALIDATION:

Block ID: R1B1  
 Time of Day: 10:25 HH:mm  
 Clay Temperature: 96.8 F

Depth of Indent:	Drop Number					Avg.
	1	2	3	4	5	
	21	19	20	20	21	20.2
Requirements: All drops: $19 \pm 3$ mm, Average: $19 \pm 2$ mm						
Pass:						Yes

TEST CONDITIONS:

	Start		End			Armor Submersion		Firing Sequence	
	Start	End	Start	End		Start	End	Start	End
Ambient Temp:	67	67			F	10:05	10:35	10:45	10:55
Rel. Humidity:	51	51	%			30 min		10 min	

BACK PANEL											
Shot No.	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Vel. Avg. (ft/s)	Angle	Fair (Y/N)	Perforate (Y=1/N=0)	Note	BFS (mm)	Comments
1	3495	1431	3491	1432	1431	0°	Y	0		32	
2	3459	1446	3455	1447	1446	0°	Y	0		35	
3	3549	1409	3545	1410	1410	0°	Y	0		36	
4	3621	1381	3612	1384	1383	45°	Y	0	b		
5	3509	1425	3500	1429	1427	30°	Y	0			
6	3504	1427	3500	1429	1428	0°	Y	0			
7	3482	1436	3477	1438	1437	45°	Y	0			SHOT TO REPLACE SHOT 4
8		0		0							

POST-TEST CLAY VALIDATION:

Block ID: R1B1  
 Time of Day: 10:50 HH:mm  
 Clay Temperature: 95.6 F

Depth of Indent:	Drop Number					Avg.
	1	2	3	4	5	
	18	17	20	17	18	18.0
Requirements: All drops: $19 \pm 3$ mm, Average: $19 \pm 2$ mm						
Pass:						Yes

NOTES:

- |                           |   |                    |
|---------------------------|---|--------------------|
| a - Excessive velocity    | d - Too close to prior impact                 | g - Impact on seam |
| b - Insufficient velocity | e - Excessive total impacts (test terminated) |                    |
| c - Too close to edge     | f - Excessive area impacts (test terminated)  |                    |

# NATIONAL INSTITUTE OF JUSTICE COMPLIANCE TEST REPORT

## Perforation and BFS Firing Data - New Armor - Threat 2

Report Number: 11697-22      Report Date: 10/12/11      Test Date: 10/03/11

Manufacturer: MKU Pvt. Ltd.      Ammunition: .44 Mag 240/SJHP  
 Test ID: MKU10-001840      Reference Velocity: 1430 ± 30 ft/s  
 NIJ Armor Type: 3A      Water Submersion: Yes

TEST DIMENSIONS:      Range Length: 17.20 ft.      Velocity 1: 5.00 ft.      Lab Technician(s): J. CONTRERAS  
                                  Laboratory Range #: R1      Velocity 2: 5.00 ft.      M. GOMEZ

**Sample 8  
Front Panel**

Panel Serial No: T 3278 F      Plate Serial No: N/A

PRE-TEST CLAY VALIDATION:

Block ID: R1B2  
 Time of Day: 11:05 HH:mm  
 Clay Temperature: 99.5 F

Depth of Indent:	Drop Number					Avg.
	1	2	3	4	5	
	21	20	19	21	20	20.2
Requirements: All drops: $19 \pm 3$ mm, Average: $19 \pm 2$ mm						
Pass:						Yes

TEST CONDITIONS:

	Start		End			Armor Submersion		Firing Sequence			
	Start	End	Start	End		Start	End	Start	End		
Ambient Temp:	67	67			F	Start:	10:30	HH:mm	Start:	11:10	HH:mm
Rel. Humidity:	51	51	%			End:	11:00	HH:mm	End:	11:20	HH:mm
						Duration:	30	min	Duration:	10	min

FRONT PANEL											
Shot No.	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Vel. Avg. (ft/s)	Angle	Fair (Y/N)	Perforate (Y=1/N=0)	Note	BFS (mm)	Comments
1	3509	1425	3504	1427	1426	0°	Y	0		37	
2	3477	1438	3473	1440	1439	0°	Y	0		35	
3	3464	1443	3464	1443	1443	0°	Y	0		36	
4	3509	1425	3500	1429	1427	45°	Y	0			
5	3464	1443	3464	1443	1443	30°	Y	0			
6	3482	1436	3473	1440	1438	0°	Y	0			
7		0		0							
8		0		0							

POST-TEST CLAY VALIDATION:

Block ID:             
 Time of Day:            HH:mm  
 Clay Temperature:            F

Depth of Indent:	Drop Number					Avg.
	1	2	3	4	5	
Requirements: All drops: $19 \pm 3$ mm, Average: $19 \pm 2$ mm						
Pass:						-

NOTES:

- |                           |   |                    |
|---------------------------|---|--------------------|
| a - Excessive velocity    | d - Too close to prior impact                 | g - Impact on seam |
| b - Insufficient velocity | e - Excessive total impacts (test terminated) |                    |
| c - Too close to edge     | f - Excessive area impacts (test terminated)  |                    |

# NATIONAL INSTITUTE OF JUSTICE COMPLIANCE TEST REPORT

## Perforation and BFS Firing Data - New Armor - Threat 2

Report Number: 11697-22 Report Date: 10/12/11 Test Date: 10/03/11

Manufacturer: MKU Pvt. Ltd. Ammunition: .44 Mag 240/SJHP  
 Test ID: MKU10-001840 Reference Velocity: 1430 ± 30 ft/s  
 NIJ Armor Type: 3A Water Submersion: Yes

TEST DIMENSIONS: Range Length: 17.20 ft. Velocity 1: 5.00 ft. Lab Technician(s): J. CONTRERAS  
 Laboratory Range #: R1 Velocity 2: 5.00 ft. M. GOMEZ

### Sample 8 Back Panel

Panel Serial No: T 3282 B Plate Serial No: N/A

**PRE-TEST CLAY VALIDATION:**

Block ID: R1B2  
 Time of Day: 11:25 HH:mm  
 Clay Temperature: 99.5 F

Depth of Indent:	Drop Number					Avg.
	1	2	3	4	5	
	21	19	20	20	19	19.8
Requirements: All drops: $19 \pm 3$ mm, Average: $19 \pm 2$ mm						
Pass:						Yes

**TEST CONDITIONS:**

	Start		End		F	Armor Submersion		Firing Sequence		HH:mm
	Start	End	Start	End		Start	End	Start	End	
Ambient Temp:	67	69			F	Start:	10:50	End:	11:30	HH:mm
Rel. Humidity:	51	51	%			End:	11:20	End:	11:40	HH:mm
						Duration:	30	Duration:	10	min

BACK PANEL											
Shot No.	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Vel. Avg. (ft/s)	Angle	Fair (Y/N)	Perforate (Y=1/N=0)	Note	BFS (mm)	Comments
1	3513	1423	3513	1423	1423	0°	Y	0		34	
2	3455	1447	3450	1449	1448	0°	Y	0		36	
3	3441	1453	3432	1457	1455	0°	Y	0		35	
4	3441	1453	3437	1455	1454	30°	Y	0			
5	3482	1436	3477	1438	1437	45°	Y	0			
6	3518	1421	3513	1423	1422	0°	Y	0			
7		0		0							
8		0		0							

**POST-TEST CLAY VALIDATION:**

Block ID: R1B2  
 Time of Day: 11:44 HH:mm  
 Clay Temperature: 97.8 F

Depth of Indent:	Drop Number					Avg.
	1	2	3	4	5	
	20	19	19	20	19	19.4
Requirements: All drops: $19 \pm 3$ mm, Average: $19 \pm 2$ mm						
Pass:						Yes

**NOTES:**

- |                           |   |                    |
|---------------------------|---|--------------------|
| a - Excessive velocity    | d - Too close to prior impact                 | g - Impact on seam |
| b - Insufficient velocity | e - Excessive total impacts (test terminated) |                    |
| c - Too close to edge     | f - Excessive area impacts (test terminated)  |                    |

# NATIONAL INSTITUTE OF JUSTICE COMPLIANCE TEST REPORT

## Ballistic Limit Firing Data - New Armor - Threat 1

**Report Number:** 11697-22      **Report Date:** 10/12/11      **Test Date:** 10/06/11

**Manufacturer:** MKU Pvt. Ltd.      **Ammunition:** .357 SIG 125/FMJ

**Test ID:** MKU10-001840

**NIJ Armor Type:** 3A      **Water Submersion:** No

**TEST DIMENSIONS:**      Range Length: 17.20 ft.      Velocity 1: 5.00 ft.  
 Laboratory Range #: R1      Velocity 2: 5.00 ft.  
 Lab Technician(s): J.CONTRERAS/ GOMEZ

**Sample 11**  
**Front Panel**

**Panel Serial No:** T 3270 F      **Plate Serial No:** N/A

**PRE-TEST CLAY VALIDATION:**

**Block ID:** R1ER5  
**Time of Day:** 10:40 HH:mm  
**Temperature:** 99.7 F

Depth of Indent:	Drop 1	Drop 2	Drop 3	Drop 4	Drop 5	Avg.
	19	19	21	21	20	20.0
Requirements: All drops: 19 ± 3 mm, Average: 19 ± 2 mm						
						<b>Pass: Yes</b>

**TEST CONDITIONS:**

Ambient Temp: 68 F  
 Rel. Humidity: 54 %

**Firing Sequence**

**Start:** 10:45 HH:mm  
**End:** 10:59 HH:mm  
**Duration:** 14 min

**Enter NIJ Armor Types III and IV Sample Number(s) in Remarks Column as Applicable**

BL PANEL 1 - Front										
Shot No.	Charge Weight	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Vel. Avg. (ft/s)	Result		Used (Y/N)	Remarks
							Perf (CP)	Stop (PP)		
1		3414	1465	3414	1465	1465		X	Y	
2		3252	1538	3248	1539	1538		X	Y	
3		2928	1708	2928	1708	1708		X	Y	
4		2798	1787	2798	1787	1787	X		Y	
5		2888	1731	2888	1731	1731		X	Y	
6		2888	1731	2883	1734	1733		X	Y	
7		2766	1808	2762	1810	1809	X		Y	
8		2816	1776	2816	1776	1776	X		Y	
9		2879	1737	2879	1737	1737		X	Y	
10		2820	1773	2820	1773	1773		X	Y	
11		2721	1838	2717	1840	1839	X		Y	
12		2807	1781	2802	1784	1783	X		Y	
13			0		0					
14			0		0					
15			0		0					

**Count:**      12      5      7      12

**Remarks:**

- a - Too close to edge      b - Too close to prior impact      c - Impact on seam

# NATIONAL INSTITUTE OF JUSTICE COMPLIANCE TEST REPORT

## Ballistic Limit Firing Data - New Armor - Threat 1

Report Number: 11697-22 Report Date: 10/12/11 Test Date: 10/06/11

Manufacturer: MKU Pvt. Ltd. Ammunition: .357 SIG 125/FMJ

Test ID: MKU10-001840

NIJ Armor Type: 3A Water Submersion: No

TEST DIMENSIONS: Range Length: 17.20 ft. Velocity 1: 5.00 ft.  
Laboratory Range #: R1 Velocity 2: 5.00 ft.  
Lab Technician(s): J.CONTRERAS/ GOMEZ

**Sample 11  
Back Panel**

Panel Serial No: T 3268 B Plate Serial No: N/A

**PRE-TEST CLAY VALIDATION:**

Block ID: R1ER5  
Time of Day: 11:07 HH:mm  
Temperature: 97.1 F

Depth of Indent:	Drop 1	Drop 2	Drop 3	Drop 4	Drop 5	Avg.
	18	18	19	19	18	18.4
Requirements: All drops: $19 \pm 3$ mm, Average: $19 \pm 2$ mm						
<b>Pass: Yes</b>						

**TEST CONDITIONS:**

Ambient Temp: 66 F  
Rel. Humidity: 55 %

**Firing Sequence**

Start: 11:09 HH:mm  
End: 11:21 HH:mm  
Duration: 12 min

**Enter NIJ Armor Types III and IV Sample Number(s) in Remarks Column as Applicable**

BL PANEL 1 - Front										
Shot No.	Charge Weight	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Vel. Avg. (ft/s)	Result		Used (Y/N)	Remarks
							Perf (CP)	Stop (PP)		
1		3414	1465	3410	1466	1465		X	Y	
2		3054	1637	3054	1637	1637		X	Y	
3		2951	1694	2951	1694	1694		X	Y	
4		2766	1808	2762	1810	1809	X		Y	
5		2838	1762	2838	1762	1762		X	Y	
6		2780	1799	2780	1799	1799		X	Y	
7		2766	1808	2771	1804	1806		X	Y	
8		2712	1844	2712	1844	1844	X		Y	
9		2685	1862	2685	1862	1862		X	Y	
10		2690	1859	2690	1859	1859	X		Y	
11		2667	1875	2663	1878	1876	X		Y	
12		2667	1875	2667	1875	1875	X		Y	
13			0		0					
14			0		0					
15			0		0					

Count:      12            5            7            12

**Remarks:**

- a - Too close to edge                      b - Too close to prior impact                      c - Impact on seam



# NATIONAL INSTITUTE OF JUSTICE COMPLIANCE TEST REPORT

## Ballistic Limit Firing Data - New Armor - Threat 1

**Report Number:** 11697-22      **Report Date:** 10/12/11      **Test Date:** 10/06/11

**Manufacturer:** MKU Pvt. Ltd.      **Ammunition:** .357 SIG 125/FMJ

**Test ID:** MKU10-001840

**NIJ Armor Type:** 3A      **Water Submersion:** No

**TEST DIMENSIONS:**      Range Length: 17.20 ft.      Velocity 1: 5.00 ft.  
 Laboratory Range #: R1      Velocity 2: 5.00 ft.  
 Lab Technician(s): J.CONTRERAS/ GOMEZ

**Sample 12  
Front Panel**

**Panel Serial No:** T 3273 F      **Plate Serial No:** N/A

**PRE-TEST CLAY VALIDATION:**

**Block ID:** R1ER6  
**Time of Day:** 2:05 HH:mm  
**Temperature:** 99.8 F

Depth of Indent:	Drop 1	Drop 2	Drop 3	Drop 4	Drop 5	Avg.
	20	19	21	21	18	19.8
Requirements: All drops: 19 ± 3 mm, Average: 19 ± 2 mm						
<b>Pass: Yes</b>						

**TEST CONDITIONS:**

Ambient Temp: 66 F  
 Rel. Humidity: 54 %

**Firing Sequence**

**Start:** 2:11 HH:mm  
**End:** 2:25 HH:mm  
**Duration:** 14 min

**Enter NIJ Armor Types III and IV Sample Number(s) in Remarks Column as Applicable**

BL PANEL 1 - Front										
Shot No.	Charge Weight	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Vel. Avg. (ft/s)	Result		Used (Y/N)	Remarks
							Perf (CP)	Stop (PP)		
1		3477	1438	3477	1438	1438		X	Y	
2		3203	1561	3198	1563	1562		X	Y	
3		2883	1734	2879	1737	1736	X		Y	
4		2996	1669	2996	1669	1669		X	Y	
5		2964	1687	2960	1689	1688		X	Y	
6		2901	1724	2901	1724	1724		X	Y	
7		2825	1770	2825	1770	1770		X	Y	
8		2649	1888	2645	1890	1889	X		Y	
9		2717	1840	2717	1840	1840	X		Y	
10		2757	1814	2757	1814	1814	X		Y	
11		2793	1790	2789	1793	1791	X		Y	
12		2879	1737	2879	1737	1737	X		Y	
13			0		0					
14			0		0					
15			0		0					

**Count:**      12      6      6      12

**Remarks:**

- a - Too close to edge      b - Too close to prior impact      c - Impact on seam

# NATIONAL INSTITUTE OF JUSTICE COMPLIANCE TEST REPORT

## Ballistic Limit Firing Data - New Armor - Threat 1

**Report Number:** 11697-22      **Report Date:** 10/12/11      **Test Date:** 10/06/11

**Manufacturer:** MKU Pvt. Ltd.      **Ammunition:** .357 SIG 125/FMJ

**Test ID:** MKU10-001840

**NIJ Armor Type:** 3A      **Water Submersion:** No

**TEST DIMENSIONS:**      Range Length: 17.20 ft.      Velocity 1: 5.00 ft.  
 Laboratory Range #: R1      Velocity 2: 5.00 ft.  
 Lab Technician(s): J.CONTRERAS/ GOMEZ

**Sample 12  
Back Panel**

**Panel Serial No:** T 3260 B      **Plate Serial No:** N/A

**PRE-TEST CLAY VALIDATION:**

**Block ID:** R1ER6  
**Time of Day:** 2:30 HH:mm  
**Temperature:** 99.5 F

Depth of Indent:	Drop 1	Drop 2	Drop 3	Drop 4	Drop 5	Avg.
	21	20	20	20	20	20.2
Requirements: All drops: 19 ± 3 mm, Average: 19 ± 2 mm						
<b>Pass: Yes</b>						

**TEST CONDITIONS:**

Ambient Temp: 66 F  
 Rel. Humidity: 55 %

**Firing Sequence**

**Start:** 2:40 HH:mm  
**End:** 2:55 HH:mm  
**Duration:** 15 min

**Enter NIJ Armor Types III and IV Sample Number(s) in Remarks Column as Applicable**

BL PANEL 1 - Front										
Shot No.	Charge Weight	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Vel. Avg. (ft/s)	Result		Used (Y/N)	Remarks
							Perf (CP)	Stop (PP)		
1		3369	1484	3369	1484	1484		X	Y	
2		3131	1597	3126	1599	1598		X	Y	
3		2873	1740	2969	1684	1712		X	Y	
4		2843	1759	2843	1759	1759	X		Y	
5		2978	1679	2978	1679	1679		X	Y	
6		2901	1724	2901	1724	1724		X	Y	
7		2793	1790	2798	1787	1789		X	Y	
8		2703	1850	2703	1850	1850		X	Y	
9		2645	1890	2640	1894	1892	X		Y	
10		2726	1834	2721	1838	1836	X		Y	
11		2690	1859	2685	1862	1860	X		Y	
12		2865	1745	2861	1748	1746		X	Y	
13			0		0					
14			0		0					
15			0		0					

**Count:**      12      4      8      12

**Remarks:**

- a - Too close to edge      b - Too close to prior impact      c - Impact on seam

# NATIONAL INSTITUTE OF JUSTICE COMPLIANCE TEST REPORT

## Ballistic Limit Firing Data - New Armor - Threat 1

**Report Number:** 11697-22      **Report Date:** 10/12/11      **Test Date:** 10/06/11

**Manufacturer:** MKU Pvt. Ltd.      **Ammunition:** .357 SIG 125/FMJ

**Test ID:** MKU10-001840

**NIJ Armor Type:** 3A      **Water Submersion:** No

**TEST DIMENSIONS:**      Range Length: 17.20 ft.      Velocity 1: 5.00 ft.  
 Laboratory Range #: R1      Velocity 2: 5.00 ft.  
 Lab Technician(s): J.CONTRERAS/ GOMEZ

**Sample 13**  
**Front Panel**

**Panel Serial No:** T 3253 F      **Plate Serial No:** N/A

**PRE-TEST CLAY VALIDATION:**

**Block ID:** R1ER4  
**Time of Day:** 3:10 HH:mm  
**Temperature:** 99.5 F

Depth of Indent:	Drop 1	Drop 2	Drop 3	Drop 4	Drop 5	Avg.
	22	18	18	21	21	20.0
Requirements: All drops: 19 ± 3 mm, Average: 19 ± 2 mm						
<b>Pass: Yes</b>						

**TEST CONDITIONS:**

Ambient Temp: 65 F  
 Rel. Humidity: 51 %

**Firing Sequence**

**Start:** 3:15 HH:mm  
**End:** 3:27 HH:mm  
**Duration:** 12 min

**Enter NIJ Armor Types III and IV Sample Number(s) in Remarks Column as Applicable**

BL PANEL 1 - Front										
Shot No.	Charge Weight	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Vel. Avg. (ft/s)	Result		Used (Y/N)	Remarks
							Perf (CP)	Stop (PP)		
1		3459	1446	3455	1447	1446		X	Y	
2		3257	1535	3257	1535	1535		X	Y	
3		2946	1697	2946	1697	1697		X	Y	
4		2784	1796	2784	1796	1796	X		Y	
5		2883	1734	2883	1734	1734		X	Y	
6		2834	1764	2834	1764	1764		X	Y	
7		2762	1810	2762	1810	1810	X		Y	
8		2843	1759	2843	1759	1759		X	Y	
9		2721	1838	2721	1838	1838		X	Y	
10		2663	1878	2663	1878	1878	X		Y	
11		2721	1838	2717	1840	1839	X		Y	
12		2789	1793	2789	1793	1793	X		Y	
13			0		0					
14			0		0					
15			0		0					

**Count:**      12      5      7      12

**Remarks:**

- a - Too close to edge      b - Too close to prior impact      c - Impact on seam

# NATIONAL INSTITUTE OF JUSTICE COMPLIANCE TEST REPORT

## Ballistic Limit Firing Data - New Armor - Threat 1

**Report Number:** 11697-22      **Report Date:** 10/12/11      **Test Date:** 10/06/11

**Manufacturer:** MKU Pvt. Ltd.      **Ammunition:** .357 SIG 125/FMJ

**Test ID:** MKU10-001840

**NIJ Armor Type:** 3A      **Water Submersion:** No

**TEST DIMENSIONS:**      Range Length: 17.20 ft.      Velocity 1: 5.00 ft.  
 Laboratory Range #: R1      Velocity 2: 5.00 ft.  
 Lab Technician(s): J.CONTRERAS/ GOMEZ

**Sample 13  
Back Panel**

**Panel Serial No:** T 3257 B      **Plate Serial No:** N/A

**PRE-TEST CLAY VALIDATION:**

**Block ID:** R1ER4  
**Time of Day:** 3:35 HH:mm  
**Temperature:** 98.1 F

Depth of Indent:	Drop 1	Drop 2	Drop 3	Drop 4	Drop 5	Avg.
	18	18	19	18	18	18.2
Requirements: All drops: 19 ± 3 mm, Average: 19 ± 2 mm						
<b>Pass: Yes</b>						

**TEST CONDITIONS:**

Ambient Temp: 67 F  
 Rel. Humidity: 54 %

**Firing Sequence**

**Start:** 3:40 HH:mm  
**End:** 3:53 HH:mm  
**Duration:** 13 min

**Enter NIJ Armor Types III and IV Sample Number(s) in Remarks Column as Applicable**

BL PANEL 1 - Front										
Shot No.	Charge Weight	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Vel. Avg. (ft/s)	Result		Used (Y/N)	Remarks
							Perf (CP)	Stop (PP)		
1		3351	1492	3347	1494	1493		X	Y	
2		3068	1630	3063	1632	1631		X	Y	
3		2968	1685	2928	1708	1696		X	Y	
4		2730	1832	2726	1834	1833	X		Y	
5		2843	1759	2838	1762	1760		X	Y	
6		2834	1764	2834	1764	1764		X	Y	
7		2708	1846	2708	1846	1846	X		Y	
8		2829	1767	2829	1767	1767	X		Y	
9		2865	1745	2865	1745	1745		X	Y	
10		2901	1724	2901	1724	1724		X	Y	
11		2717	1840	2712	1844	1842	X		Y	
12		2762	1810	2762	1810	1810	X		Y	
13			0		0					
14			0		0					
15			0		0					

**Count:**      12      5      7      12

**Remarks:**

- a - Too close to edge      b - Too close to prior impact      c - Impact on seam

# NATIONAL INSTITUTE OF JUSTICE COMPLIANCE TEST REPORT

## Ballistic Limit Firing Data - New Armor - Threat 1

**Report Number:** 11697-22      **Report Date:** 10/12/11      **Test Date:** 10/07/11

**Manufacturer:** MKU Pvt. Ltd.      **Ammunition:** .357 SIG 125/FMJ

**Test ID:** MKU10-001840

**NIJ Armor Type:** 3A      **Water Submersion:** No

**TEST DIMENSIONS:**      Range Length: 17.20 ft.      Velocity 1: 5.00 ft.  
 Laboratory Range #: R1      Velocity 2: 5.00 ft.  
 Lab Technician(s): J.CONTRERAS/ GOMEZ

**Sample 14**  
**Front Panel**

**Panel Serial No:** T 3259 F      **Plate Serial No:** N/A

**PRE-TEST CLAY VALIDATION:**

**Block ID:** R1ER4  
**Time of Day:** 6:10 HH:mm  
**Temperature:** 99.2 F

Depth of Indent:	Drop 1	Drop 2	Drop 3	Drop 4	Drop 5	Avg.
	20	18	21	19	20	19.6
Requirements: All drops: 19 ± 3 mm, Average: 19 ± 2 mm						
						<b>Pass: Yes</b>

**TEST CONDITIONS:**

Ambient Temp: 65 F  
 Rel. Humidity: 53 %

**Firing Sequence**

**Start:** 6:15 HH:mm  
**End:** 6:30 HH:mm  
**Duration:** 15 min

**Enter NIJ Armor Types III and IV Sample Number(s) in Remarks Column as Applicable**

BL PANEL 1 - Front										
Shot No.	Charge Weight	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Vel. Avg. (ft/s)	Result		Used (Y/N)	Remarks
							Perf (CP)	Stop (PP)		
1		3401	1470	3396	1472	1471		X	Y	
2		3086	1620	3086	1620	1620		X	Y	
3		2964	1687	2964	1687	1687		X	Y	
4		2807	1781	2811	1779	1780		X	Y	
5		2708	1846	2708	1846	1846	X		Y	
6		2780	1799	2780	1799	1799		X	Y	
7		2766	1808	2766	1808	1808	X		Y	
8		2766	1808	2762	1810	1809	X		Y	
9		2928	1708	2924	1710	1709		X	Y	
10		2816	1776	2816	1776	1776		X	Y	
11		2757	1814	2757	1814	1814		X	Y	
12		2707	1847	2708	1846	1847	X		Y	
13			0		0					
14			0		0					
15			0		0					

**Count:**      12      4      8      12

**Remarks:**

- a - Too close to edge      b - Too close to prior impact      c - Impact on seam

# NATIONAL INSTITUTE OF JUSTICE COMPLIANCE TEST REPORT

## Ballistic Limit Firing Data - New Armor - Threat 1

**Report Number:** 11697-22      **Report Date:** 10/12/11      **Test Date:** 10/07/11

**Manufacturer:** MKU Pvt. Ltd.      **Ammunition:** .357 SIG 125/FMJ

**Test ID:** MKU10-001840

**NIJ Armor Type:** 3A      **Water Submersion:** No

**TEST DIMENSIONS:**      Range Length: 17.20 ft.      Velocity 1: 5.00 ft.  
 Laboratory Range #: R1      Velocity 2: 5.00 ft.  
 Lab Technician(s): J.CONTRERAS/ GOMEZ

**Sample 14**  
**Back Panel**

**Panel Serial No:** T 3258 B      **Plate Serial No:** N/A

**PRE-TEST CLAY VALIDATION:**

**Block ID:** R1ER4  
**Time of Day:** 6:35 HH:mm  
**Temperature:** 98.2 F

Depth of Indent:	Drop 1	Drop 2	Drop 3	Drop 4	Drop 5	Avg.
	19	18	20	19	19	19.0
Requirements: All drops: 19 ± 3 mm, Average: 19 ± 2 mm						
<b>Pass: Yes</b>						

**TEST CONDITIONS:**

Ambient Temp: 62 F  
 Rel. Humidity: 53 %

**Firing Sequence**

**Start:** 6:40 HH:mm  
**End:** 6:55 HH:mm  
**Duration:** 15 min

**Enter NIJ Armor Types III and IV Sample Number(s) in Remarks Column as Applicable**

BL PANEL 1 - Front										
Shot No.	Charge Weight	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Vel. Avg. (ft/s)	Result		Used (Y/N)	Remarks
							Perf (CP)	Stop (PP)		
1		3405	1468	3401	1470	1469		X	Y	
2		3122	1602	3122	1602	1602		X	Y	
3		2969	1684	2964	1687	1685		X	Y	
4		2829	1767	2829	1767	1767	X		Y	
5		2906	1721	2906	1721	1721		X	Y	
6		2820	1773	2820	1773	1773	X		Y	
7		2951	1694	2951	1694	1694		X	Y	
8		2843	1759	2838	1762	1760		X	Y	
9		2816	1776	2811	1779	1777		X	Y	
10		2748	1820	2744	1822	1821	X		Y	
11		2811	1779	2811	1779	1779		X	Y	
12		2699	1853	2699	1853	1853	X		Y	
13			0		0					
14			0		0					
15			0		0					

**Count:**      12      4      8      12

**Remarks:**

- a - Too close to edge      b - Too close to prior impact      c - Impact on seam

# NATIONAL INSTITUTE OF JUSTICE COMPLIANCE TEST REPORT

## Ballistic Limit Firing Data - New Armor - Threat 1

**Report Number:** 11697-22      **Report Date:** 10/12/11      **Test Date:** 10/07/11

**Manufacturer:** MKU Pvt. Ltd.      **Ammunition:** .357 SIG 125/FMJ

**Test ID:** MKU10-001840

**NIJ Armor Type:** 3A      **Water Submersion:** No

**TEST DIMENSIONS:**      Range Length: 17.20 ft.      Velocity 1: 5.00 ft.  
 Laboratory Range #: R1      Velocity 2: 5.00 ft.  
 Lab Technician(s): J.CONTRERAS/ GOMEZ

**Sample 15**  
**Front Panel**

**Panel Serial No:** T 3268 F      **Plate Serial No:** N/A

**PRE-TEST CLAY VALIDATION:**

**Block ID:** R1ER5  
**Time of Day:** 7:05 HH:mm  
**Temperature:** 99.9 F

Depth of Indent:	Drop 1	Drop 2	Drop 3	Drop 4	Drop 5	Avg.
	20	20	20	19	21	20.0
Requirements: All drops: 19 ± 3 mm, Average: 19 ± 2 mm						
						<b>Pass: Yes</b>

**TEST CONDITIONS:**

Ambient Temp: 69 F  
 Rel. Humidity: 52 %

**Firing Sequence**

**Start:** 7:10 HH:mm  
**End:** 7:24 HH:mm  
**Duration:** 14 min

**Enter NIJ Armor Types III and IV Sample Number(s) in Remarks Column as Applicable**

BL PANEL 1 - Front										
Shot No.	Charge Weight	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Vel. Avg. (ft/s)	Result		Used (Y/N)	Remarks
							Perf (CP)	Stop (PP)		
1		3365	1486	3360	1488	1487		X	Y	
2		3140	1592	3135	1595	1594		X	Y	
3		2946	1697	2946	1697	1697		X	Y	
4		2838	1762	2834	1764	1763		X	Y	
5		2703	1850	2703	1850	1850	X		Y	
6		2771	1804	2775	1802	1803		X	Y	
7		2708	1846	2703	1850	1848	X		Y	
8		2789	1793	2789	1793	1793		X	Y	
9		2753	1816	2753	1816	1816	X		Y	
10		2834	1764	2834	1764	1764		X	Y	
11		2784	1796	2784	1796	1796		X	Y	
12		2739	1825	2730	1832	1828	X		Y	
13			0		0					
14			0		0					
15			0		0					

**Count:**      12      4      8      12

**Remarks:**

- a - Too close to edge      b - Too close to prior impact      c - Impact on seam

# NATIONAL INSTITUTE OF JUSTICE COMPLIANCE TEST REPORT

## Ballistic Limit Firing Data - New Armor - Threat 1

**Report Number:** 11697-22      **Report Date:** 10/12/11      **Test Date:** 10/07/11

**Manufacturer:** MKU Pvt. Ltd.      **Ammunition:** .357 SIG 125/FMJ

**Test ID:** MKU10-001840

**NIJ Armor Type:** 3A      **Water Submersion:** No

**TEST DIMENSIONS:**      Range Length: 17.20 ft.      Velocity 1: 5.00 ft.  
 Laboratory Range #: R1      Velocity 2: 5.00 ft.  
 Lab Technician(s): J.CONTRERAS/ GOMEZ

**Sample 15  
Back Panel**

**Panel Serial No:** T 3271 B      **Plate Serial No:** N/A

**PRE-TEST CLAY VALIDATION:**

**Block ID:** R1ER5  
**Time of Day:** 7:29 HH:mm  
**Temperature:** 97.9 F

Depth of Indent:	Drop 1	Drop 2	Drop 3	Drop 4	Drop 5	Avg.
	18	18	20	19	19	18.8
Requirements: All drops: 19 ± 3 mm, Average: 19 ± 2 mm						
						<b>Pass: Yes</b>

**TEST CONDITIONS:**

Ambient Temp: 69 F  
 Rel. Humidity: 56 %

**Firing Sequence**

**Start:** 7:34 HH:mm  
**End:** 7:47 HH:mm  
**Duration:** 13 min

**Enter NIJ Armor Types III and IV Sample Number(s) in Remarks Column as Applicable**

BL PANEL 1 - Front										
Shot No.	Charge Weight	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Vel. Avg. (ft/s)	Result		Used (Y/N)	Remarks
							Perf (CP)	Stop (PP)		
1		3477	1438	3473	1440	1439		X	Y	
2		3104	1611	3095	1616	1613		X	Y	
3		2991	1672	2991	1672	1672		X	Y	
4		2771	1804	2771	1804	1804	X		Y	
5		2892	1729	2892	1729	1729		X	Y	
6		2825	1770	2825	1770	1770		X	Y	
7		2784	1796	2784	1796	1796	X		Y	
8		2834	1764	2834	1764	1764	X		Y	
9		2834	1764	2834	1764	1764		X	Y	
10		2829	1767	2834	1764	1766	X		Y	
11		2829	1767	2829	1767	1767		X	Y	
12		2811	1779	2811	1779	1779	X		Y	
13			0		0					
14			0		0					
15			0		0					

**Count:**      12      5      7      12

**Remarks:**

- a - Too close to edge      b - Too close to prior impact      c - Impact on seam



# NATIONAL INSTITUTE OF JUSTICE COMPLIANCE TEST REPORT

## Ballistic Limit Firing Data - New Armor - Threat 2

**Report Number:** 11697-22      **Report Date:** 10/12/11      **Test Date:** 10/05/11

**Manufacturer:** MKU Pvt. Ltd.      **Ammunition:** .44 Mag      240/SJHP

**Test ID:** MKU10-001840

**NIJ Armor Type:** 3A      **Water Submersion:** No

**TEST DIMENSIONS:**      Range Length: 17.20 ft.      Velocity 1: 5.00 ft.  
 Laboratory Range #: R1      Velocity 2: 5.00 ft.  
 Lab Technician(s): J.CONTRERAS/ GOMEZ

**Sample 16**  
**Front Panel**

**Panel Serial No:** T 3522 F      **Plate Serial No:** N/A

**PRE-TEST CLAY VALIDATION:**

**Block ID:** R1ER4  
**Time of Day:** 9:30 HH:mm  
**Temperature:** 99.2 F

Depth of Indent:	Drop 1	Drop 2	Drop 3	Drop 4	Drop 5	Avg.
	17	18	18	18	19	18.0
Requirements: All drops: 19 ± 3 mm, Average: 19 ± 2 mm						
<b>Pass: Yes</b>						

**TEST CONDITIONS:**

Ambient Temp: 65 F  
 Rel. Humidity: 52 %

**Firing Sequence**

**Start:** 9:40 HH:mm  
**End:** 9:55 HH:mm  
**Duration:** 15 min

**Enter NIJ Armor Types III and IV Sample Number(s) in Remarks Column as Applicable**

BL PANEL 1 - Front										
Shot No.	Charge Weight	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Vel. Avg. (ft/s)	Result		Used (Y/N)	Remarks
							Perf (CP)	Stop (PP)		
1		3459	1446	3455	1447	1446		X	Y	
2		3167	1579	3158	1583	1581		X	Y	
3		3005	1664	2996	1669	1666	X		Y	
4		3122	1602	3113	1606	1604	X		Y	
5		3230	1548	3216	1555	1551		X	Y	
6		3180	1572	3171	1577	1575		X	Y	
7		3081	1623	3077	1625	1624	X		Y	
8		3176	1574	3167	1579	1577	X		Y	
9		3234	1546	3239	1544	1545		X	Y	
10		3180	1572	3171	1577	1575	X		Y	
11		3212	1557	3212	1557	1557		X	Y	
12		3194	1565	3194	1565	1565		X	Y	
13			0		0					
14			0		0					
15			0		0					

**Count:**      12      5      7      12

**Remarks:**

- a - Too close to edge      b - Too close to prior impact      c - Impact on seam

# NATIONAL INSTITUTE OF JUSTICE COMPLIANCE TEST REPORT

## Ballistic Limit Firing Data - New Armor - Threat 2

**Report Number:** 11697-22      **Report Date:** 10/12/11      **Test Date:** 10/05/11

**Manufacturer:** MKU Pvt. Ltd.      **Ammunition:** .44 Mag 240/SJHP

**Test ID:** MKU10-001840

**NIJ Armor Type:** 3A      **Water Submersion:** No

**TEST DIMENSIONS:**      Range Length: 17.20 ft.      Velocity 1: 5.00 ft.  
 Laboratory Range #: R1      Velocity 2: 5.00 ft.  
 Lab Technician(s): J.CONTRERAS/ GOMEZ

**Sample 16  
Back Panel**

**Panel Serial No:** T 3522 B      **Plate Serial No:** N/A

**PRE-TEST CLAY VALIDATION:**

**Block ID:** R1ER4  
**Time of Day:** 10:05 HH:mm  
**Temperature:** 97.1 F

Depth of Indent:	Drop 1	Drop 2	Drop 3	Drop 4	Drop 5	Avg.
	17	17	18	18	19	17.8
Requirements: All drops: 19 ± 3 mm, Average: 19 ± 2 mm						
<b>Pass: Yes</b>						

**TEST CONDITIONS:**

Ambient Temp: 66 F  
 Rel. Humidity: 53 %

**Firing Sequence**

**Start:** 10:20 HH:mm  
**End:** 10:35 HH:mm  
**Duration:** 15 min

**Enter NIJ Armor Types III and IV Sample Number(s) in Remarks Column as Applicable**

BL PANEL 1 - Front										
Shot No.	Charge Weight	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Vel. Avg. (ft/s)	Result		Used (Y/N)	Remarks
							Perf (CP)	Stop (PP)		
1		3414	1465	3401	1470	1467		X	Y	
2		3162	1581	3153	1586	1584	X		Y	
3		3404	1469	3492	1432	1450		X	Y	
4		3145	1590	3122	1602	1596	X		Y	
5		3419	1462	3419	1462	1462		X	Y	
6		3176	1574	3171	1577	1576	X		Y	
7		3297	1517	3288	1521	1519		X	Y	
8		3176	1574	3167	1579	1577		X	Y	
9		3248	1539	3239	1544	1542	X		Y	
10		3252	1538	3243	1542	1540		X	Y	
11		3180	1572	3167	1579	1576	X		Y	
12		3270	1529	3257	1535	1532		X	Y	
13			0		0					
14			0		0					
15			0		0					

**Count:**      12      5      7      12

**Remarks:**

- a - Too close to edge      b - Too close to prior impact      c - Impact on seam

# NATIONAL INSTITUTE OF JUSTICE COMPLIANCE TEST REPORT

## Ballistic Limit Firing Data - New Armor - Threat 2

**Report Number:** 11697-22      **Report Date:** 10/12/11      **Test Date:** 10/05/11

**Manufacturer:** MKU Pvt. Ltd.      **Ammunition:** .44 Mag      240/SJHP

**Test ID:** MKU10-001840

**NIJ Armor Type:** 3A      **Water Submersion:** No

**TEST DIMENSIONS:**      Range Length: 17.20 ft.      Velocity 1: 5.00 ft.  
 Laboratory Range #: R1      Velocity 2: 5.00 ft.  
 Lab Technician(s): J.CONTRERAS/ GOMEZ

**Sample 17**  
**Front Panel**

**Panel Serial No:** T 3524 F      **Plate Serial No:** N/A

**PRE-TEST CLAY VALIDATION:**

**Block ID:** R1ER5  
**Time of Day:** 10:45 HH:mm  
**Temperature:** 99.6 F

Depth of Indent:	Drop 1	Drop 2	Drop 3	Drop 4	Drop 5	Avg.
	21	20	20	19	19	19.8
Requirements: All drops: 19 ± 3 mm, Average: 19 ± 2 mm						
						<b>Pass: Yes</b>

**TEST CONDITIONS:**

Ambient Temp: 65 F  
 Rel. Humidity: 54 %

**Firing Sequence**

**Start:** 10:53 HH:mm  
**End:** 11:05 HH:mm  
**Duration:** 12 min

**Enter NIJ Armor Types III and IV Sample Number(s) in Remarks Column as Applicable**

BL PANEL 1 - Front										
Shot No.	Charge Weight	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Vel. Avg. (ft/s)	Result		Used (Y/N)	Remarks
							Perf (CP)	Stop (PP)		
1		3644	1372	3644	1372	1372		X	Y	
2		3306	1512	3306	1512	1512		X	Y	
3		3117	1604	3104	1611	1607	X		Y	
4		3149	1588	3140	1592	1590	X		Y	
5		3396	1472	3392	1474	1473		X	Y	
6		3212	1557	3198	1563	1560		X	Y	
7		3257	1535	3243	1542	1538		X	Y	
8		3203	1561	3207	1559	1560		X	Y	
9		3126	1599	3117	1604	1602		X	Y	
10		3050	1639	3045	1642	1641	X		Y	
11		3149	1588	3140	1592	1590	X		Y	
12		3140	1592	3131	1597	1595	X		Y	
13			0		0					
14			0		0					
15			0		0					

**Count:**      12      5      7      12

**Remarks:**

- a - Too close to edge      b - Too close to prior impact      c - Impact on seam

# NATIONAL INSTITUTE OF JUSTICE COMPLIANCE TEST REPORT

## Ballistic Limit Firing Data - New Armor - Threat 2

**Report Number:** 11697-22      **Report Date:** 10/12/11      **Test Date:** 10/05/11

**Manufacturer:** MKU Pvt. Ltd.      **Ammunition:** .44 Mag 240/SJHP

**Test ID:** MKU10-001840

**NIJ Armor Type:** 3A      **Water Submersion:** No

**TEST DIMENSIONS:**      Range Length: 17.20 ft.      Velocity 1: 5.00 ft.  
 Laboratory Range #: R1      Velocity 2: 5.00 ft.  
 Lab Technician(s): J.CONTRERAS/ GOMEZ

**Sample 17**  
**Back Panel**

**Panel Serial No:** T3523 B      **Plate Serial No:** N/A

**PRE-TEST CLAY VALIDATION:**

**Block ID:** R1BER5  
**Time of Day:** 11:17 HH:mm  
**Temperature:** 98.1 F

Depth of Indent:	Drop 1	Drop 2	Drop 3	Drop 4	Drop 5	Avg.
	20	19	18	20	18	19.0
Requirements: All drops: 19 ± 3 mm, Average: 19 ± 2 mm						
						<b>Pass: Yes</b>

**TEST CONDITIONS:**

Ambient Temp: 65 F  
 Rel. Humidity: 51 %

**Firing Sequence**

**Start:** 11:20 HH:mm  
**End:** 11:34 HH:mm  
**Duration:** 14 min

**Enter NIJ Armor Types III and IV Sample Number(s) in Remarks Column as Applicable**

BL PANEL 1 - Front										
Shot No.	Charge Weight	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Vel. Avg. (ft/s)	Result		Used (Y/N)	Remarks
							Perf (CP)	Stop (PP)		
1		3464	1443	3464	1443	1443		X	Y	
2		3279	1525	3279	1525	1525		X	Y	
3		3108	1609	3104	1611	1610		X	Y	
4		2964	1687	2955	1692	1689	X		Y	
5		3041	1644	3032	1649	1647	X		Y	
6		3126	1599	3117	1604	1602	X		Y	
7		3167	1579	3162	1581	1580		X	Y	
8		3122	1602	3108	1609	1605	X		Y	
9		3207	1559	3203	1561	1560		X	Y	
10		3077	1625	3072	1628	1626	X		Y	
11		3194	1565	3185	1570	1568		X	Y	
12		3126	1599	3117	1604	1602	X		Y	
13			0		0					
14			0		0					
15			0		0					

**Count:**      12      6      6      12

**Remarks:**

- a - Too close to edge      b - Too close to prior impact      c - Impact on seam

# NATIONAL INSTITUTE OF JUSTICE COMPLIANCE TEST REPORT

## Ballistic Limit Firing Data - New Armor - Threat 2

**Report Number:** 11697-22      **Report Date:** 10/12/11      **Test Date:** 10/05/11

**Manufacturer:** MKU Pvt. Ltd.      **Ammunition:** .44 Mag 240/SJHP

**Test ID:** MKU10-001840

**NIJ Armor Type:** 3A      **Water Submersion:** No

**TEST DIMENSIONS:**      Range Length: 17.20 ft.      Velocity 1: 5.00 ft.  
 Laboratory Range #: R1      Velocity 2: 5.00 ft.  
 Lab Technician(s): J.CONTRERAS/ GOMEZ

**Sample 18**  
**Front Panel**

**Panel Serial No:** T 3526 F      **Plate Serial No:** N/A

**PRE-TEST CLAY VALIDATION:**

**Block ID:** R1ER6  
**Time of Day:** 1:40 HH:mm  
**Temperature:** 99.4 F

Depth of Indent:	Drop 1	Drop 2	Drop 3	Drop 4	Drop 5	Avg.
	21	21	19	20	18	19.8
Requirements: All drops: 19 ± 3 mm, Average: 19 ± 2 mm						
						<b>Pass: Yes</b>

**TEST CONDITIONS:**

Ambient Temp: 68 F  
 Rel. Humidity: 52 %

**Firing Sequence**

**Start:** 1:50 HH:mm  
**End:** 2:05 HH:mm  
**Duration:** 15 min

**Enter NIJ Armor Types III and IV Sample Number(s) in Remarks Column as Applicable**

BL PANEL 1 - Front										
Shot No.	Charge Weight	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Vel. Avg. (ft/s)	Result		Used (Y/N)	Remarks
							Perf (CP)	Stop (PP)		
1		3383	1478	3383	1478	1478		X	Y	
2		3234	1546	3225	1550	1548		X	Y	
3		3072	1628	3063	1632	1630		X	Y	
4		2942	1700	2837	1762	1731	X		Y	
5		3059	1635	3054	1637	1636	X		Y	
6		3095	1616	3090	1618	1617		X	Y	
7		3032	1649	3032	1649	1649	X		Y	
8		3099	1613	3090	1618	1616	X		Y	
9		3140	1592	3140	1592	1592		X	Y	
10		3108	1609	3099	1613	1611	X		Y	
11		3167	1579	3158	1583	1581	X		Y	
12		3225	1550	3216	1555	1553		X	Y	
13			0		0					
14			0		0					
15			0		0					

**Count:**      12      6      6      12

**Remarks:**

- a - Too close to edge      b - Too close to prior impact      c - Impact on seam

# NATIONAL INSTITUTE OF JUSTICE COMPLIANCE TEST REPORT

## Ballistic Limit Firing Data - New Armor - Threat 2

**Report Number:** 11697-22      **Report Date:** 10/12/11      **Test Date:** 10/05/11

**Manufacturer:** MKU Pvt. Ltd.      **Ammunition:** .44 Mag 240/SJHP

**Test ID:** MKU10-001840

**NIJ Armor Type:** 3A      **Water Submersion:** No

**TEST DIMENSIONS:**      Range Length: 17.20 ft.      Velocity 1: 5.00 ft.  
 Laboratory Range #: R1      Velocity 2: 5.00 ft.  
 Lab Technician(s): J.CONTRERAS/ GOMEZ

**Sample 18  
Back Panel**

**Panel Serial No:** T 3525 B      **Plate Serial No:** N/A

**PRE-TEST CLAY VALIDATION:**

**Block ID:** R1ER6  
**Time of Day:** 2:25 HH:mm  
**Temperature:** 98.5 F

Depth of Indent:	Drop 1	Drop 2	Drop 3	Drop 4	Drop 5	Avg.
	20	20	19	19	19	19.4
Requirements: All drops: 19 ± 3 mm, Average: 19 ± 2 mm						
						<b>Pass: Yes</b>

**TEST CONDITIONS:**

Ambient Temp: 67 F  
 Rel. Humidity: 55 %

**Firing Sequence**

**Start:** 2:28 HH:mm  
**End:** 2:42 HH:mm  
**Duration:** 14 min

**Enter NIJ Armor Types III and IV Sample Number(s) in Remarks Column as Applicable**

BL PANEL 1 - Front										
Shot No.	Charge Weight	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Vel. Avg. (ft/s)	Result		Used (Y/N)	Remarks
							Perf (CP)	Stop (PP)		
1		3504	1427	3504	1427	1427		X	Y	
2		3510	1425	3509	1425	1425		X	Y	
3		3365	1486	3351	1492	1489		X	Y	
4		3185	1570	3176	1574	1572	X		Y	
5		3306	1512	3306	1512	1512		X	Y	
6		3194	1565	3180	1572	1569	X		Y	
7		3221	1552	3212	1557	1554		X	Y	
8		3189	1568	3180	1572	1570	X		Y	
9		3261	1533	3252	1538	1535		X	Y	
10		3144	1590	3140	1592	1591	X		Y	
11		3261	1533	3248	1539	1536		X	Y	
12		3185	1570	3176	1574	1572	X		Y	
13			0		0					
14			0		0					
15			0		0					

**Count:**      12      5      7      12

**Remarks:**

- a - Too close to edge      b - Too close to prior impact      c - Impact on seam

# NATIONAL INSTITUTE OF JUSTICE COMPLIANCE TEST REPORT

## Ballistic Limit Firing Data - New Armor - Threat 2

**Report Number:** 11697-22      **Report Date:** 10/12/11      **Test Date:** 10/05/11

**Manufacturer:** MKU Pvt. Ltd.      **Ammunition:** .44 Mag 240/SJHP

**Test ID:** MKU10-001840

**NIJ Armor Type:** 3A      **Water Submersion:** No

**TEST DIMENSIONS:**      Range Length: 17.20 ft.      Velocity 1: 5.00 ft.  
 Laboratory Range #: R1      Velocity 2: 5.00 ft.  
 Lab Technician(s): J.CONTRERAS/ GOMEZ

**Sample 19**  
**Front Panel**

**Panel Serial No:** T 3520 F      **Plate Serial No:** N/A

**PRE-TEST CLAY VALIDATION:**

**Block ID:** R1ER4  
**Time of Day:** 3:00 HH:mm  
**Temperature:** 99.3 F

Depth of Indent:	Drop 1	Drop 2	Drop 3	Drop 4	Drop 5	Avg.
	21	20	18	19	21	19.8
Requirements: All drops: 19 ± 3 mm, Average: 19 ± 2 mm						
<b>Pass: Yes</b>						

**TEST CONDITIONS:**

Ambient Temp: 65 F  
 Rel. Humidity: 54 %

**Firing Sequence**

**Start:** 3:09 HH:mm  
**End:** 3:23 HH:mm  
**Duration:** 14 min

**Enter NIJ Armor Types III and IV Sample Number(s) in Remarks Column as Applicable**

BL PANEL 1 - Front										
Shot No.	Charge Weight	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Vel. Avg. (ft/s)	Result		Used (Y/N)	Remarks
							Perf (CP)	Stop (PP)		
1		3410	1466	3410	1466	1466		X	Y	
2		3230	1548	3221	1552	1550		X	Y	
3		3090	1618	3081	1623	1620		X	Y	
4		3009	1662	3000	1667	1664	X		Y	
5		3099	1613	3086	1620	1617		X	Y	
6		3014	1659	3005	1664	1661	X		Y	
7		3068	1630	3063	1632	1631	X		Y	
8		3081	1623	3072	1628	1625	X		Y	
9		3270	1529	3252	1538	1533		X	Y	
10		3194	1565	3180	1572	1569		X	Y	
11		3081	1623	3072	1628	1625	X		Y	
12		3149	1588	3135	1595	1591	X		Y	
13			0		0					
14			0		0					
15			0		0					

**Count:**      12      6      6      12

**Remarks:**

- a - Too close to edge      b - Too close to prior impact      c - Impact on seam

# NATIONAL INSTITUTE OF JUSTICE COMPLIANCE TEST REPORT

## Ballistic Limit Firing Data - New Armor - Threat 2

**Report Number:** 11697-22      **Report Date:** 10/12/11      **Test Date:** 10/05/11

**Manufacturer:** MKU Pvt. Ltd.      **Ammunition:** .44 Mag      240/SJHP

**Test ID:** MKU10-001840

**NIJ Armor Type:** 3A      **Water Submersion:** No

**TEST DIMENSIONS:**      Range Length: 17.20 ft.      Velocity 1: 5.00 ft.  
 Laboratory Range #: R1      Velocity 2: 5.00 ft.  
 Lab Technician(s): J.CONTRERAS/ GOMEZ

**Sample 19**  
**Back Panel**

**Panel Serial No:** T 3520 B      **Plate Serial No:** N/A

**PRE-TEST CLAY VALIDATION:**

**Block ID:** R1ER4  
**Time of Day:** 3:35 HH:mm  
**Temperature:** 97.6 F

Depth of Indent:	Drop 1	Drop 2	Drop 3	Drop 4	Drop 5	Avg.
	20	18	18	19	18	18.6
Requirements: All drops: 19 ± 3 mm, Average: 19 ± 2 mm						
						<b>Pass: Yes</b>

**TEST CONDITIONS:**

Ambient Temp: 68 F  
 Rel. Humidity: 56 %

**Firing Sequence**

**Start:** 3:37 HH:mm  
**End:** 3:52 HH:mm  
**Duration:** 15 min

**Enter NIJ Armor Types III and IV Sample Number(s) in Remarks Column as Applicable**

BL PANEL 1 - Front										
Shot No.	Charge Weight	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Vel. Avg. (ft/s)	Result		Used (Y/N)	Remarks
							Perf (CP)	Stop (PP)		
1		3536	1414	3536	1414	1414		X	Y	
2		3279	1525	3279	1525	1525		X	Y	
3		3099	1613	3090	1618	1616	X		Y	
4		3162	1581	3153	1586	1584	X		Y	
5		3279	1525	3270	1529	1527		X	Y	
6		3212	1557	3207	1559	1558		X	Y	
7		3140	1592	3131	1597	1595	X		Y	
8		3203	1561	3189	1568	1564	X		Y	
9		3221	1552	3212	1557	1554		X	Y	
10		3189	1568	3180	1572	1570		X	Y	
11		3117	1604	3108	1609	1606	X		Y	
12		3167	1579	3158	1583	1581		X	Y	
13			0		0					
14			0		0					
15			0		0					

**Count:**      12      5      7      12

**Remarks:**

- a - Too close to edge      b - Too close to prior impact      c - Impact on seam



# NATIONAL INSTITUTE OF JUSTICE COMPLIANCE TEST REPORT

## Ballistic Limit Firing Data - New Armor - Threat 2

**Report Number:** 11697-22      **Report Date:** 10/12/11      **Test Date:** 10/06/11

**Manufacturer:** MKU Pvt. Ltd.      **Ammunition:** .44 Mag      240/SJHP

**Test ID:** MKU10-001840

**NIJ Armor Type:** 3A      **Water Submersion:** No

**TEST DIMENSIONS:**      Range Length: 17.20 ft.      Velocity 1: 5.00 ft.  
 Laboratory Range #: R1      Velocity 2: 5.00 ft.  
 Lab Technician(s): J.CONTRERAS/ GOMEZ

**Sample 20**  
**Front Panel**

**Panel Serial No:** T 3523 F      **Plate Serial No:** N/A

**PRE-TEST CLAY VALIDATION:**

**Block ID:** R1ER4  
**Time of Day:** 8:50 HH:mm  
**Temperature:** 99.1 F

Depth of Indent:	Drop 1	Drop 2	Drop 3	Drop 4	Drop 5	Avg.
	21	20	20	20	21	20.4
Requirements: All drops: 19 ± 3 mm, Average: 19 ± 2 mm						
						<b>Pass: Yes</b>

**TEST CONDITIONS:**

Ambient Temp: 66 F  
 Rel. Humidity: 52 %

**Firing Sequence**

**Start:** 8:52 HH:mm  
**End:** 9:05 HH:mm  
**Duration:** 12 min

**Enter NIJ Armor Types III and IV Sample Number(s) in Remarks Column as Applicable**

BL PANEL 1 - Front										
Shot No.	Charge Weight	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Vel. Avg. (ft/s)	Result		Used (Y/N)	Remarks
							Perf (CP)	Stop (PP)		
1		3486	1434	3486	1434	1434		X	Y	
2		3207	1559	3198	1563	1561		X	Y	
3		3104	1611	3095	1616	1613	X		Y	
4		3180	1572	3171	1577	1575	X		Y	
5		3293	1518	3284	1523	1520		X	Y	
6		3248	1539	3248	1539	1539		X	Y	
7		3108	1609	3099	1613	1611		X	Y	
8		3032	1649	3023	1654	1652	X		Y	
9		3090	1618	3086	1620	1619	X		Y	
10		3158	1583	3149	1588	1586	X		Y	
11		3270	1529	3266	1531	1530		X	Y	
12		3252	1538	3243	1542	1540		X	Y	
13			0		0					
14			0		0					
15			0		0					

**Count:**      12      5      7      12

**Remarks:**

- a - Too close to edge      b - Too close to prior impact      c - Impact on seam

# NATIONAL INSTITUTE OF JUSTICE COMPLIANCE TEST REPORT

## Ballistic Limit Firing Data - New Armor - Threat 2

**Report Number:** 11697-22      **Report Date:** 10/12/11      **Test Date:** 10/06/11

**Manufacturer:** MKU Pvt. Ltd.      **Ammunition:** .44 Mag 240/SJHP

**Test ID:** MKU10-001840

**NIJ Armor Type:** 3A      **Water Submersion:** No

**TEST DIMENSIONS:** Range Length: 17.20 ft.      Velocity 1: 5.00 ft.  
Laboratory Range #: R1      Velocity 2: 5.00 ft.  
Lab Technician(s): J.CONTRERAS/ GOMEZ

**Sample 20**  
**Back Panel**

**Panel Serial No:** T 3526 B      **Plate Serial No:** N/A

**PRE-TEST CLAY VALIDATION:**

**Block ID:** R1ER4  
**Time of Day:** 9:15 HH:mm  
**Temperature:** 97.5 F

Depth of Indent:	Drop 1	Drop 2	Drop 3	Drop 4	Drop 5	Avg.
	20	19	18	19	18	18.8
Requirements: All drops: 19 ± 3 mm, Average: 19 ± 2 mm						
<b>Pass: Yes</b>						

**TEST CONDITIONS:**

Ambient Temp: 66 F  
Rel. Humidity: 55 %

**Firing Sequence**

**Start:** 9:23 HH:mm  
**End:** 9:34 HH:mm  
**Duration:** 11 min

**Enter NIJ Armor Types III and IV Sample Number(s) in Remarks Column as Applicable**

BL PANEL 1 - Front										
Shot No.	Charge Weight	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Vel. Avg. (ft/s)	Result		Used (Y/N)	Remarks
							Perf (CP)	Stop (PP)		
1		3486	1434	3486	1434	1434		X	Y	
2		3243	1542	3230	1548	1545		X	Y	
3		3099	1613	3086	1620	1617	X		Y	
4		3230	1548	3216	1555	1551	X		Y	
5		3356	1490	3347	1494	1492		X	Y	
6		3257	1535	3243	1542	1538		X	Y	
7		3212	1557	3203	1561	1559		X	Y	
8		3131	1597	3131	1597	1597	X		Y	
9		3189	1568	3180	1572	1570		X	Y	
10		3126	1599	3117	1604	1602	X		Y	
11		3176	1574	3171	1577	1576	X		Y	
12		3189	1568	3176	1574	1571	X		Y	
13			0		0					
14			0		0					
15			0		0					

**Count:**      12      6      6      12

**Remarks:**

a - Too close to edge

b - Too close to prior impact

c - Impact on seam

# NATIONAL INSTITUTE OF JUSTICE COMPLIANCE TEST REPORT

## Perforation and BFS Firing Data - Conditioned Armor - Threat 1

Report Number: 11697-22      Report Date: 10/12/11      Test Date: 10/03/11

Manufacturer: MKU Pvt. Ltd.      Ammunition: .357 SIG      125/FMJ  
 Test ID: MKU10-001840      Reference Velocity: 1410      ± 30 ft/s  
 NIJ Armor Type: 3A      Water Submersion: No

TEST DIMENSIONS:      Range Length: 17.20 ft.      Velocity 1: 5.00 ft.      Lab Technician(s): ADAMS  
                                  Laboratory Range #: RQ      Velocity 2: 5.00 ft.      CHES

**Sample 21**

**Front Panel**

Panel Serial No: T 3266 F      Plate Serial No: N/A

**PRE-TEST CLAY VALIDATION:**

Block ID: R2B3  
 Time of Day: 1:48 HH:mm  
 Clay Temperature: 99.8 F

Depth of Indent:	Drop Number					Avg.
	1	2	3	4	5	
	20	20	20	21	18	19.8
Requirements: All drops: $19 \pm 3$ mm, Average: $19 \pm 2$ mm						
<b>Pass:</b>						<b>Yes</b>

**TEST CONDITIONS:**

		Start		End		Armor Submersion		Firing Sequence	
Ambient Temp:		<u>67</u>	<u>67</u>			Start:		<u>1:52</u>	HH:mm
Rel. Humidity:		<u>49</u>	<u>49</u>			End:		<u>2:01</u>	HH:mm
						Duration:		<u>9</u>	min

FRONT PANEL											
Shot No.	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Vel. Avg. (ft/s)	Angle	Fair (Y/N)	Perforate (Y=1/N=0)	Note	BFS (mm)	Comments
1	3490	1433	3490	1433	1433	0°	Y	0		24	
2	3527	1418	3527	1418	1418	0°	Y	0		28	
3	3513	1423	3513	1423	1423	0°	Y	0		26	
4	3518	1421	3522	1420	1420	30°	Y	0			
5	3545	1410	3545	1410	1410	45°	Y	0			
6	3491	1432	3491	1432	1432	0°	Y	0			
7		0		0							
8		0		0							

**POST-TEST CLAY VALIDATION:**

Block ID:             
 Time of Day:            HH:mm  
 Clay Temperature:            F

Depth of Indent:	Drop Number					Avg.
	1	2	3	4	5	
Requirements: All drops: $19 \pm 3$ mm, Average: $19 \pm 2$ mm						
<b>Pass:</b>						-

**NOTES:**

- |                           |   |                    |
|---------------------------|---|--------------------|
| a - Excessive velocity    | d - Too close to prior impact                 | g - Impact on seam |
| b - Insufficient velocity | e - Excessive total impacts (test terminated) |                    |
| c - Too close to edge     | f - Excessive area impacts (test terminated)  |                    |

# NATIONAL INSTITUTE OF JUSTICE COMPLIANCE TEST REPORT

## Perforation and BFS Firing Data - Conditioned Armor - Threat 1

Report Number: 11697-22      Report Date: 10/12/11      Test Date: 10/03/11

Manufacturer: MKU Pvt. Ltd.      Ammunition: .357 SIG 125/FMJ  
 Test ID: MKU10-001840      Reference Velocity: 1410 ± 30 ft/s  
 NIJ Armor Type: 3A      Water Submersion: No

TEST DIMENSIONS:      Range Length: 17.20 ft.      Velocity 1: 5.00 ft.      Lab Technician(s): ADAMS  
                                  Laboratory Range #: RQ      Velocity 2: 5.00 ft.      CHES

**Sample 21  
Back Panel**

Panel Serial No: T 3267 B      Plate Serial No: N/A

**PRE-TEST CLAY VALIDATION:**

Block ID: R2B3  
 Time of Day: 2:06 HH:mm  
 Clay Temperature: 99.0 F

Depth of Indent:	Drop Number					Avg.
	1	2	3	4	5	
	20	19	19	18	17	18.6
Requirements: All drops: $19 \pm 3$ mm, Average: $19 \pm 2$ mm						
Pass:						Yes

**TEST CONDITIONS:**

	Start		End		F	Armor Submersion		Firing Sequence		
	Start	End	Start	End		Start	End	Start	End	
Ambient Temp:	67	67			F			2:10	2:19	HH:mm
Rel. Humidity:	48	48	%			Duration:		9		min

BACK PANEL											
Shot No.	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Vel. Avg. (ft/s)	Angle	Fair (Y/N)	Perforate (Y=1/N=0)	Note	BFS (mm)	Comments
1	3495	1431	3500	1429	1430	0°	Y	0		22	
2	3531	1416	3531	1416	1416	0°	Y	0		25	
3	3482	1436	3486	1434	1435	0°	Y	0		25	
4	3504	1427	3504	1427	1427	45°	Y	0			
5	3518	1421	3518	1421	1421	30°	Y	0			
6	3549	1409	3549	1409	1409	0°	Y	0			
7	0		0								
8	0		0								

**POST-TEST CLAY VALIDATION:**

Block ID: R2B3  
 Time of Day: 2:22 HH:mm  
 Clay Temperature: 98.1 F

Depth of Indent:	Drop Number					Avg.
	1	2	3	4	5	
	18	17	17	18	16	17.2
Requirements: All drops: $19 \pm 3$ mm, Average: $19 \pm 2$ mm						
Pass:						Yes

**NOTES:**

- |                           |   |                    |
|---------------------------|---|--------------------|
| a - Excessive velocity    | d - Too close to prior impact                 | g - Impact on seam |
| b - Insufficient velocity | e - Excessive total impacts (test terminated) |                    |
| c - Too close to edge     | f - Excessive area impacts (test terminated)  |                    |

# NATIONAL INSTITUTE OF JUSTICE COMPLIANCE TEST REPORT

## Perforation and BFS Firing Data - Conditioned Armor - Threat 1

Report Number: 11697-22 Report Date: 10/12/11 Test Date: 10/03/11

Manufacturer: MKU Pvt. Ltd. Ammunition: .357 SIG 125/FMJ  
 Test ID: MKU10-001840 Reference Velocity: 1410 ± 30 ft/s  
 NIJ Armor Type: 3A Water Submersion: No

TEST DIMENSIONS: Range Length: 17.20 ft. Velocity 1: 5.00 ft. Lab Technician(s): ADAMS  
 Laboratory Range #: R2 Velocity 2: 5.00 ft. CHES

**Sample 22  
Front Panel**

Panel Serial No: T 3282 F Plate Serial No: N/A

**PRE-TEST CLAY VALIDATION:**

Block ID: R1B1  
 Time of Day: 2:30 HH:mm  
 Clay Temperature: 99.4 F

Depth of Indent:	Drop Number					Avg.
	1	2	3	4	5	
	20	20	19	19	18	19.2
Requirements: All drops: $19 \pm 3$ mm, Average: $19 \pm 2$ mm						
Pass:						Yes

**TEST CONDITIONS:**

		Start		End		Armor Submersion		Firing Sequence	
Ambient Temp:		<u>67</u>	<u>67</u>			Start:		<u>2:35</u>	HH:mm
Rel. Humidity:		<u>48</u>	<u>48</u>			End:		<u>2:47</u>	HH:mm
						Duration:		<u>12</u>	min

FRONT PANEL											
Shot No.	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Vel. Avg. (ft/s)	Angle	Fair (Y/N)	Perforate (Y=1/N=0)	Note	BFS (mm)	Comments
1	3554	1407	3554	1407	1407	0°	Y	0		27	
2	3545	1410	3545	1410	1410	0°	Y	0		25	
3	3482	1436	3486	1434	1435	0°	Y	0		24	
4	3500	1429	3500	1429	1429	45°	Y	0			
5	3509	1425	3509	1425	1425	30°	Y	0			
6	3531	1416	3531	1416	1416	0°	Y	0			
7	0		0								
8	0		0								

**POST-TEST CLAY VALIDATION:**

Block ID:           
 Time of Day:          HH:mm  
 Clay Temperature:          F

Depth of Indent:	Drop Number					Avg.
	1	2	3	4	5	
Requirements: All drops: $19 \pm 3$ mm, Average: $19 \pm 2$ mm						
Pass:						-

**NOTES:**

- |                           |   |                    |
|---------------------------|---|--------------------|
| a - Excessive velocity    | d - Too close to prior impact                 | g - Impact on seam |
| b - Insufficient velocity | e - Excessive total impacts (test terminated) |                    |
| c - Too close to edge     | f - Excessive area impacts (test terminated)  |                    |

# NATIONAL INSTITUTE OF JUSTICE COMPLIANCE TEST REPORT

## Perforation and BFS Firing Data - Conditioned Armor - Threat 1

Report Number: 11697-22      Report Date: 10/12/11      Test Date: 10/03/11

Manufacturer: MKU Pvt. Ltd.      Ammunition: .357 SIG      125/FMJ  
 Test ID: MKU10-001840      Reference Velocity: 1410      ± 30 ft/s  
 NIJ Armor Type: 3A      Water Submersion: No

TEST DIMENSIONS:      Range Length: 17.20 ft.      Velocity 1: 5.00 ft.      Lab Technician(s): ADAMS  
                                  Laboratory Range #: R2      Velocity 2: 5.00 ft.      CHES

**Sample 22  
Back Panel**

Panel Serial No: T 3279 B      Plate Serial No: N/A

**PRE-TEST CLAY VALIDATION:**

Block ID: R2B1  
 Time of Day: 2:53 HH:mm  
 Clay Temperature: 98.3 F

Depth of Indent:	Drop Number					Avg.
	1	2	3	4	5	
	19	18	18	18	18	18.2
Requirements: All drops: $19 \pm 3$ mm, Average: $19 \pm 2$ mm						
Pass:						Yes

**TEST CONDITIONS:**

		Start		End		Armor Submersion		Firing Sequence	
Ambient Temp:		<u>67</u>	<u>67</u>			Start:		<u>2:57</u>	HH:mm
Rel. Humidity:		<u>49</u>	<u>49</u>			End:		<u>3:05</u>	HH:mm
						Duration:		<u>8</u>	min

BACK PANEL											
Shot No.	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Vel. Avg. (ft/s)	Angle	Fair (Y/N)	Perforate (Y=1/N=0)	Note	BFS (mm)	Comments
1	3509	1425	3513	1423	1424	0°	Y	0		24	
2	3536	1414	3540	1412	1413	0°	Y	0		26	
3	3491	1432	3495	1431	1431	0°	Y	0		24	
4	3477	1438	3477	1438	1438	30°	Y	0			
5	3509	1425	3513	1423	1424	45°	Y	0			
6	3527	1418	3531	1416	1417	0°	Y	0			
7		0		0							
8		0		0							

**POST-TEST CLAY VALIDATION:**

Block ID: R2B1  
 Time of Day: 3:08 HH:mm  
 Clay Temperature: 97.5 F

Depth of Indent:	Drop Number					Avg.
	1	2	3	4	5	
	17	17	17	17	17	17.0
Requirements: All drops: $19 \pm 3$ mm, Average: $19 \pm 2$ mm						
Pass:						Yes

**NOTES:**

- |                           |   |                    |
|---------------------------|---|--------------------|
| a - Excessive velocity    | d - Too close to prior impact                 | g - Impact on seam |
| b - Insufficient velocity | e - Excessive total impacts (test terminated) |                    |
| c - Too close to edge     | f - Excessive area impacts (test terminated)  |                    |

# NATIONAL INSTITUTE OF JUSTICE COMPLIANCE TEST REPORT

## Perforation and BFS Firing Data - Conditioned Armor - Threat 2

Report Number: 11697-22      Report Date: 10/12/11      Test Date: 10/03/11

Manufacturer: MKU Pvt. Ltd.      Ammunition: .44 Mag 240/SJHP  
 Test ID: MKU10-001840      Reference Velocity: 1340 ± 30 ft/s  
 NIJ Armor Type: 3A      WATER SUBMERSION: No

TEST DIMENSIONS:    Range Length: 17.20 ft.      Velocity 1: 5.00 ft.      Lab Technician(s): ADAMS  
                                  Laboratory Range #: R2      Velocity 2: 5.00 ft.      CHES

**Sample 23**

**Front Panel**

Panel Serial No: T 3255 F      Plate Serial No: N/A

**PRE-TEST CLAY VALIDATION:**

Block ID: R2B1  
 Time of Day: 10:40 HH:mm  
 Clay Temperature: 99.8 F

Depth of Indent:	Drop Number					Avg.
	1	2	3	4	5	
	20	20	20	19	19	19.6
Requirements: All drops: $19 \pm 3$ mm, Average: $19 \pm 2$ mm						
Pass:						Yes

**TEST CONDITIONS:**

	Start	End		Start	End
Ambient Temp:	68	68	F	Armor Submersion	Firing Sequence
Rel. Humidity:	55	55	%	Start: <u>          </u> HH:mm	Start: <u>10:45</u> HH:mm
				End: <u>          </u> HH:mm	End: <u>11:08</u> HH:mm
				Duration: <u>          </u> min	Duration: <u>18</u> min

FRONT PANEL											
Shot No.	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Vel. Avg. (ft/s)	Angle	Fair (Y/N)	Perforate (Y=1/N=0)	Note	BFS (mm)	Comments
1	3549	1409	3563	1403	1406	0°	Y	0		33	
2	3507	1426	3507	1426	1426	0°	Y	0		35	
3	3554	1407	3564	1403	1405	0°	Y	0		34	
4	0	0	0	0	0	30°	Y	0	B		NO READING
5	3518	1421	3531	1416	1419	45°	Y	0			
6	3482	1436	3500	1429	1432	0°	Y	0			
7	3491	1432	3491	1432	1432	30°	Y	0			REPLACEMENT FOR SHOT#4
8		0		0							

**POST-TEST CLAY VALIDATION:**

Block ID:             
 Time of Day:            HH:mm  
 Clay Temperature:            F

Depth of Indent:	Drop Number					Avg.
	1	2	3	4	5	
Requirements: All drops: $19 \pm 3$ mm, Average: $19 \pm 2$ mm						
Pass:						-

**NOTES:**

- |                           |   |                    |
|---------------------------|---|--------------------|
| a - Excessive velocity    | d - Too close to prior impact                 | g - Impact on seam |
| b - Insufficient velocity | e - Excessive total impacts (test terminated) |                    |
| c - Too close to edge     | f - Excessive area impacts (test terminated)  |                    |

# NATIONAL INSTITUTE OF JUSTICE COMPLIANCE TEST REPORT

## Perforation and BFS Firing Data - Conditioned Armor - Threat 2

Report Number: 11697-22      Report Date: 10/12/11      Test Date: 10/03/11

Manufacturer: MKU Pvt. Ltd.      Ammunition: .44 Mag 240/SJHP  
 Test ID: MKU10-001840      Reference Velocity: 1340 ± 30 ft/s  
 NIJ Armor Type: 3A      WATER SUBMERSION: No

TEST DIMENSIONS:      Range Length: 17.20 ft.      Velocity 1: 5.00 ft.      Lab Technician(s): ADAMS  
                                  Laboratory Range #: R2      Velocity 2: 5.00 ft.      CHES

**Sample 23  
Back Panel**

Panel Serial No: T 3256 B      Plate Serial No: N/A

PRE-TEST CLAY VALIDATION:

Block ID: R2B1  
 Time of Day: 11:14 HH:mm  
 Clay Temperature: 98.5 F

Depth of Indent:	Drop Number					Avg.
	1	2	3	4	5	
	19	18	19	18	17	18.2
Requirements: All drops: $19 \pm 3$ mm, Average: $19 \pm 2$ mm						
Pass:						Yes

TEST CONDITIONS:

	Start		End			Armor Submersion		Firing Sequence	
	Start	End	Start	End		Start	End	Start	End
Ambient Temp:	68	68						11:18	11:29
Rel. Humidity:	55	55						11	

BACK PANEL											
Shot No.	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Vel. Avg. (ft/s)	Angle	Fair (Y/N)	Perforate (Y=1/N=0)	Note	BFS (mm)	Comments
1	3495	1431	3513	1423	1427	0°	Y	0		33	
2	3500	1429	3518	1421	1425	0°	Y	0		36	
3	3572	1400	3585	1395	1397	0°	Y	0	B	34	
4	3531	1416	3531	1416	1416	45°	Y	0			
5	3414	1465	3428	1459	1462	30°	Y	0			
6	3437	1455	3450	1449	1452	0°	Y	0			
7	3477	1438	3482	1436	1437	0°	Y	0		35	REPLACEMENT FOR SHOT#3
8		0		0							

POST-TEST CLAY VALIDATION:

Block ID: R2B1  
 Time of Day: 11:33 HH:mm  
 Clay Temperature: 97.6 F

Depth of Indent:	Drop Number					Avg.
	1	2	3	4	5	
	18	18	17	17	16	17.2
Requirements: All drops: $19 \pm 3$ mm, Average: $19 \pm 2$ mm						
Pass:						Yes

NOTES:

- |                           |   |                    |
|---------------------------|---|--------------------|
| a - Excessive velocity    | d - Too close to prior impact                 | g - Impact on seam |
| b - Insufficient velocity | e - Excessive total impacts (test terminated) |                    |
| c - Too close to edge     | f - Excessive area impacts (test terminated)  |                    |



# NATIONAL INSTITUTE OF JUSTICE COMPLIANCE TEST REPORT

## Perforation and BFS Firing Data - Conditioned Armor - Threat 2

Report Number: 11697-22      Report Date: 10/12/11      Test Date: 10/03/11

Manufacturer: MKU Pvt. Ltd.      Ammunition: .44 Mag 240/SJHP  
 Test ID: MKU10-001840      Reference Velocity: 1340 ± 30 ft/s  
 NIJ Armor Type: 3A      Water Submersion: No

TEST DIMENSIONS:      Range Length: 17.20 ft.      Velocity 1: 5.00 ft.      Lab Technician(s): ADAMS  
                                  Laboratory Range #: 2      Velocity 2: 5.00 ft.      CHES

**Sample 24  
Front Panel**

Panel Serial No: T 3279 F      Plate Serial No: N/A

**PRE-TEST CLAY VALIDATION:**

Block ID: R2B2  
 Time of Day: 1:26 HH:mm  
 Clay Temperature: 99.0 F

Depth of Indent:	Drop Number					Avg.
	1	2	3	4	5	
	20	19	20	19	19	19.4
Requirements: All drops: $19 \pm 3$ mm, Average: $19 \pm 2$ mm						
Pass:						Yes

**TEST CONDITIONS:**

	Start		End			Armor Submersion		Firing Sequence	
	HH	mm	HH	mm		Start	End	HH	mm
Ambient Temp:	68	68	F					1:30	
Rel. Humidity:	49	49	%					1:40	
					Duration:		min	10	min

FRONT PANEL											
Shot No.	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Vel. Avg. (ft/s)	Angle	Fair (Y/N)	Perforate (Y=1/N=0)	Note	BFS (mm)	Comments
1	3468	1442	3486	1434	1438	0°	Y	0		35	
2	3396	1472	3401	1470	1471	0°	Y	0		35	
3	3477	1438	3477	1438	1438	0°	Y	0		34	
4	3500	1429	3513	1423	1426	45°	Y	0			
5	3518	1421	3527	1418	1419	30°	Y	0			
6	3468	1442	3473	1440	1441	0°	Y	0			
7		0		0							
8		0		0							

**POST-TEST CLAY VALIDATION:**

Block ID:             
 Time of Day:            HH:mm  
 Clay Temperature:            F

Depth of Indent:	Drop Number					Avg.
	1	2	3	4	5	
Requirements: All drops: $19 \pm 3$ mm, Average: $19 \pm 2$ mm						
Pass:						-

**NOTES:**

- |                           |   |                    |
|---------------------------|---|--------------------|
| a - Excessive velocity    | d - Too close to prior impact                 | g - Impact on seam |
| b - Insufficient velocity | e - Excessive total impacts (test terminated) |                    |
| c - Too close to edge     | f - Excessive area impacts (test terminated)  |                    |

# NATIONAL INSTITUTE OF JUSTICE COMPLIANCE TEST REPORT

## Perforation and BFS Firing Data - Conditioned Armor - Threat 2

Report Number: 11697-22 Report Date: 10/12/11 Test Date: 10/03/11

Manufacturer: MKU Pvt. Ltd. Ammunition: .44 Mag 240/SJHP  
 Test ID: MKU10-001840 Reference Velocity: 1340 ± 30 ft/s  
 NIJ Armor Type: 3A Water Submersion: No

TEST DIMENSIONS: Range Length: 17.20 ft. Velocity 1: 5.00 ft. Lab Technician(s): ADAMS  
 Laboratory Range #: 2 Velocity 2: 5.00 ft. CHES

**Sample 24  
Back Panel**

Panel Serial No: T 3278 B Plate Serial No: N/A

PRE-TEST CLAY VALIDATION:

Block ID: R2B2  
 Time of Day: 1:26 HH:mm  
 Clay Temperature: 99.0 F

Depth of Indent:	Drop Number					Avg.
	1	2	3	4	5	
	20	19	20	19	19	19.4
Requirements: All drops: $19 \pm 3$ mm, Average: $19 \pm 2$ mm						
Pass:						Yes

TEST CONDITIONS:

	Start		End		F	Armor Submersion		Firing Sequence	
	Start	End	Start	End		Start	End	Start	End
Ambient Temp:	68	68			F			1:30	1:40
Rel. Humidity:	49	49	%			Duration:	10	min	

BACK PANEL											
Shot No.	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Vel. Avg. (ft/s)	Angle	Fair (Y/N)	Perforate (Y=1/N=0)	Note	BFS (mm)	Comments
1	3468	1442	3486	1434	1438	0°	Y	0		35	
2	3396	1472	3401	1470	1471	0°	Y	0		35	
3	3477	1438	3477	1438	1438	0°	Y	0		34	
4	3500	1429	3513	1423	1426	30°	Y	0			
5	3518	1421	3527	1418	1419	45°	Y	0			
6	3468	1442	3473	1440	1441	0°	Y	0			
7		0		0							
8		0		0							

POST-TEST CLAY VALIDATION:

Block ID: R2B2  
 Time of Day: 1:33 HH:mm  
 Clay Temperature: 98.2 F

Depth of Indent:	Drop Number					Avg.
	1	2	3	4	5	
	19	18	18	18	18	18.2
Requirements: All drops: $19 \pm 3$ mm, Average: $19 \pm 2$ mm						
Pass:						Yes

NOTES:

- |                           |   |                    |
|---------------------------|---|--------------------|
| a - Excessive velocity    | d - Too close to prior impact                 | g - Impact on seam |
| b - Insufficient velocity | e - Excessive total impacts (test terminated) |                    |
| c - Too close to edge     | f - Excessive area impacts (test terminated)  |                    |

# NATIONAL INSTITUTE OF JUSTICE COMPLIANCE TEST REPORT

## Ballistic Limit Firing Data - Conditioned Armor - Threat 1

Report Number: 11697-22 Report Date: 10/12/11 Test Date: 10/06/11

Manufacturer: MKU Pvt. Ltd. Ammunition: .357 SIG 125/FMJ

Test ID: MKU10-001840

NIJ Armor Type: 3A Water Submersion: No

TEST DIMENSIONS: Range Length: 17.20 ft. Velocity 1: 5.00 ft.  
Laboratory Range #: R2 Velocity 2: 5.00 ft.  
Lab Technician(s): ADAMS/CHES

**Sample 25**  
**Front Panel**

Panel Serial No: T 3261 F Plate Serial No: N/A

**PRE-TEST CLAY VALIDATION:**

Block ID: R2ER5  
Time of Day: 1:14 HH:mm  
Temperature: 101.0 F

Depth of Indent:	Drop 1	Drop 2	Drop 3	Drop 4	Drop 5	Avg.
	21	20	20	21	20	20.4
Requirements: All drops: $19 \pm 3$ mm, Average: $19 \pm 2$ mm						
<b>Pass: Yes</b>						

**TEST CONDITIONS:**

Ambient Temp: 70 F  
Rel. Humidity: 49 %

**Firing Sequence**

Start: 1:18 HH:mm  
End: 1:34 HH:mm  
Duration: 16 min

**Enter NIJ Armor Types III and IV Sample Number(s) in Remarks Column as Applicable**

BL PANEL 1 - Front										
Shot No.	Charge Weight	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Vel. Avg. (ft/s)	Result		Used (Y/N)	Remarks
							Perf (CP)	Stop (PP)		
1		3540	1412	3540	1412	1412		X	Y	
2		3279	1525	3279	1525	1525		X	Y	
3		3135	1595	3135	1595	1595		X	Y	
4		2933	1705	2933	1705	1705		X	Y	
5		2811	1779	2816	1776	1777		X	Y	
6		2690	1859	2690	1859	1859	X		Y	
7		2816	1776	2816	1776	1776		X	Y	
8		2780	1799	2780	1799	1799	X		Y	
9		2865	1745	2865	1745	1745		X	Y	
10		2820	1773	2825	1770	1771		X	Y	
11		2748	1820	2748	1820	1820	X		Y	
12		2820	1773	2820	1773	1773		X	Y	
13			0		0					
14			0		0					
15			0		0					

Count: 12 3 9 12

**Remarks:**

- a - Too close to edge                      b - Too close to prior impact                      c - Impact on seam

# NATIONAL INSTITUTE OF JUSTICE COMPLIANCE TEST REPORT

## Ballistic Limit Firing Data - Conditioned Armor - Threat 1

Report Number: 11697-22 Report Date: 10/12/11 Test Date: 10/06/11

Manufacturer: MKU Pvt. Ltd. Ammunition: .357 SIG 125/FMJ

Test ID: MKU10-001840

NIJ Armor Type: 3A Water Submersion: No

TEST DIMENSIONS: Range Length: 17.20 ft. Velocity 1: 5.00 ft.  
Laboratory Range #: R2 Velocity 2: 5.00 ft.  
Lab Technician(s): ADAMS/CHES

**Sample 25**  
**Back Panel**

Panel Serial No: T 3254 B Plate Serial No: N/A

**PRE-TEST CLAY VALIDATION:**

Block ID: R2ER5  
Time of Day: 1:42 HH:mm  
Temperature: 99.1 F

Depth of Indent:	Drop 1	Drop 2	Drop 3	Drop 4	Drop 5	Avg.
	19	21	19	18	17	18.8
Requirements: All drops: $19 \pm 3$ mm, Average: $19 \pm 2$ mm						
						<b>Pass: Yes</b>

**TEST CONDITIONS:**

Ambient Temp: 68 F  
Rel. Humidity: 50 %

**Firing Sequence**

Start: 1:47 HH:mm  
End: 2:00 HH:mm  
Duration: 13 min

**Enter NIJ Armor Types III and IV Sample Number(s) in Remarks Column as Applicable**

BL PANEL 1 - Front										
Shot No.	Charge Weight	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Vel. Avg. (ft/s)	Result		Used (Y/N)	Remarks
							Perf (CP)	Stop (PP)		
1		3576	1398	3576	1398	1398		X	Y	
2		3342	1496	3347	1494	1495		X	Y	
3		3135	1595	3140	1592	1594		X	Y	
4		2973	1682	2973	1682	1682		X	Y	
5		2865	1745	2865	1745	1745		X	Y	
6		2717	1840	2717	1840	1840		X	Y	
7		2631	1900	2631	1900	1900	X		Y	
8		2744	1822	2748	1820	1821		X	Y	
9		2681	1865	2685	1862	1864		X	Y	
10		2649	1888	2649	1888	1888	X		Y	
11		2672	1871	2676	1868	1870	X		Y	
12		2753	1816	2753	1816	1816		X	Y	
13			0		0					
14			0		0					
15			0		0					

Count: 12 3 9 12

Remarks:

- a - Too close to edge                      b - Too close to prior impact                      c - Impact on seam

# NATIONAL INSTITUTE OF JUSTICE COMPLIANCE TEST REPORT

## Ballistic Limit Firing Data - Conditioned Armor - Threat 2

Report Number: 11697-22 Report Date: 10/12/11 Test Date: 10/06/11

Manufacturer: MKU Pvt. Ltd. Ammunition: .44 Mag 240/SJHP

Test ID: MKU10-001840

NIJ Armor Type: 3A Water Submersion: No

TEST DIMENSIONS: Range Length: 17.20 ft. Velocity 1: 5.00 ft.  
Laboratory Range #: R2 Velocity 2: 5.00 ft.  
Lab Technician(s): ADAMS/CHES

**Sample 26**  
**Front Panel**

Panel Serial No: T 3260 F Plate Serial No: N/A

**PRE-TEST CLAY VALIDATION:**

Block ID: R2B4  
Time of Day: 9:25 HH:mm  
Temperature: 100.5 F

Depth of Indent:	Drop 1	Drop 2	Drop 3	Drop 4	Drop 5	Avg.
	21	22	20	20	20	20.6
Requirements: All drops: $19 \pm 3$ mm, Average: $19 \pm 2$ mm						
<b>Pass: Yes</b>						

**TEST CONDITIONS:**

Ambient Temp: 65 F  
Rel. Humidity: 46 %

**Firing Sequence**

Start: 9:33 HH:mm  
End: 9:49 HH:mm  
Duration: 16 min

**Enter NIJ Armor Types III and IV Sample Number(s) in Remarks Column as Applicable**

BL PANEL 1 - Front										
Shot No.	Charge Weight	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Vel. Avg. (ft/s)	Result		Used (Y/N)	Remarks
							Perf (CP)	Stop (PP)		
1		3743	1336	3747	1334	1335		X	Y	
2		3486	1434	3486	1434	1434		X	Y	
3		3180	1572	3185	1570	1571		X	Y	
4		3113	1606	3113	1606	1606	X		Y	
5		3284	1523	3284	1523	1523		X	Y	
6		3162	1581	3167	1579	1580		X	Y	
7		3059	1635	3059	1635	1635	X		Y	
8		3162	1581	3162	1581	1581		X	Y	
9		3077	1625	3077	1625	1625	X		Y	
10		3176	1574	3180	1572	1573		X	Y	
11		3090	1618	3090	1618	1618		X	Y	
12		3023	1654	3023	1654	1654	X		Y	
13			0		0					
14			0		0					
15			0		0					

Count: 12 4 8 12

**Remarks:**

- a - Too close to edge                      b - Too close to prior impact                      c - Impact on seam

# NATIONAL INSTITUTE OF JUSTICE COMPLIANCE TEST REPORT

## Ballistic Limit Firing Data - Conditioned Armor - Threat 2

Report Number: 11697-22 Report Date: 10/12/11 Test Date: 10/06/11

Manufacturer: MKU Pvt. Ltd. Ammunition: .44 Mag 240/SJHP

Test ID: MKU10-001840

NIJ Armor Type: 3A Water Submersion: No

TEST DIMENSIONS: Range Length: 17.20 ft. Velocity 1: 5.00 ft.  
Laboratory Range #: R2 Velocity 2: 5.00 ft.  
Lab Technician(s): ADAMS/CHES

**Sample 26**  
**Back Panel**

Panel Serial No: T 3263 B Plate Serial No: N/A

**PRE-TEST CLAY VALIDATION:**

Block ID: R2B4  
Time of Day: 10:04 HH:mm  
Temperature: 98.7 F

Depth of Indent:	Drop 1	Drop 2	Drop 3	Drop 4	Drop 5	Avg.
	19	18	19	18	18	18.4
Requirements: All drops: $19 \pm 3$ mm, Average: $19 \pm 2$ mm						
<b>Pass: Yes</b>						

**TEST CONDITIONS:**

Ambient Temp: 70 F  
Rel. Humidity: 48 %

**Firing Sequence**

Start: 10:10 HH:mm  
End: 10:29 HH:mm  
Duration: 19 min

**Enter NIJ Armor Types III and IV Sample Number(s) in Remarks Column as Applicable**

BL PANEL 1 - Front										
Shot No.	Charge Weight	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Vel. Avg. (ft/s)	Result		Used (Y/N)	Remarks
							Perf (CP)	Stop (PP)		
1		3806	1314	3806	1314	1314		X	Y	
2		3464	1443	3468	1442	1443		X	Y	
3		3194	1565	3198	1563	1564		X	Y	
4		3108	1609	3108	1609	1609		X	Y	
5		2946	1697	2951	1694	1696		X	Y	
6		2856	1751	2856	1751	1751	X		Y	
7		2960	1689	2960	1689	1689	X		Y	
8		3068	1630	3072	1628	1629	X		Y	
9		3338	1498	3342	1496	1497		X	Y	
10		3180	1572	3185	1570	1571		X	Y	
11		3117	1604	3117	1604	1604		X	Y	
12		3041	1644	3041	1644	1644		X	Y	
13			0		0					
14			0		0					
15			0		0					

Count: 12 3 9 12

Remarks:

- a - Too close to edge                      b - Too close to prior impact                      c - Impact on seam

# NATIONAL INSTITUTE OF JUSTICE COMPLIANCE TEST REPORT

### Perforation and BFS Summary Data

Report Number: 11697-22      Test ID: MKU10-001840      Report Date: 10/12/11  
 Manufacturer: MKU Pvt. Ltd.      Model Designation: MKS-1002      NIJ Armor Type: 3A

**Threat 1 - New Armor**  
 Ammunition: .357 SIG      125/FMJ      Reference Velocity: 1470 ± 30 ft/s      Water Submersion: Yes  
 Shot-to-Edge: 2 inches

Shot Number	Sample 1      Size: C5				Sample 2      Size: C5											
	Front Panel		Back Panel		Front Panel		Back Panel									
	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note								
1	1474.1	0	24.0		1480.2	0	23.0		1481.9	0	23.0		1451.2	0	24.0	
2	1469.3	0	24.0		1466.3	0	23.0		1467.4	0	23.0		1483.0	0	24.0	
3	1477.1	0	24.0		1468.4	0	23.0		1462.4	0	24.0		1485.0	0	24.0	
4	1475.1	0			1467.4	0			1463.5	0			1470.2	0		
5	1465.4	0			1465.4	0			1466.3	0			1481.0	0		
6	1483.0	0			1477.1	0			1471.2	0			1481.0	0		
7																
8																
<b>Summary:</b>		Perforations: 0 (Pass)				BFS Statistics: Count: 12				Average: 23.6 mm						
		Maximum BFS: 24.0 mm				k1: 1.568				St. Dev.: 0.51 mm						
(Pass - No BFS greater than 44 mm)																

Shot Number	Sample 3      Size: C3				Sample 4      Size: C3											
	Front Panel		Back Panel		Front Panel		Back Panel									
	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note								
1	1481.0	0	26.0		1475.1	0	25.0		1476.2	0	22.0		1469.3	0	24.0	
2	1487.0	0	26.0		1461.6	0	25.0		1477.1	0	27.0		1473.2	0	23.0	
3	1474.1	0	25.0		1467.4	0	25.0		1486.1	0	23.0		1472.3	0	23.0	
4	1477.1	0			1468.2	0			1465.4	0			1473.2	0		
5	1482.1	0			1481.0	0			1473.2	0			1463.5	0		
6	1475.1	0			1479.1	0			1478.0	0			1477.1	0		
7																
8																
<b>Summary:</b>		Perforations: 0 (Pass)				BFS Statistics: Count: 12				Average: 24.5 mm						
		Maximum BFS: 27.0 mm				k1: 1.568				St. Dev.: 1.51 mm						
(Pass - No BFS greater than 44 mm)																

**Threat 2 - New Armor**  
 Ammunition: .44 Mag      240/SJHP      Reference Velocity: 1430 ± 30 ft/s      Water Submersion: Yes  
 Shot-to-Edge: 3 inches

Shot Number	Sample 5      Size: C5				Sample 6      Size: C5											
	Front Panel		Back Panel		Front Panel		Back Panel									
	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note								
1	1444.5	0	33.0		1443.4	0	32.0		1457.7	0	34.0		1446.3	0	33.0	
2	1425.1	0	36.0		1452.0	0	34.0		1440.7	0	39.0		1448.2	0	35.0	
3	1418.6	0	36.0		1416.8	0	35.0		1446.3	0	36.0		1464.3	0	34.0	
4	1429.6	0			1404.3	0			1440.7	0			1427.8	0		
5	1420.5	0			1467.4	0			1448.2	0			1429.6	0		
6	1443.4	0			1469.3	0			1455.0	0			1444.5	0		
7																
8																
<b>Summary:</b>		Perforations: 0 (Pass)				BFS Statistics: Count: 12				Average: 34.8 mm						
		Maximum BFS: 39.0 mm				k1: 1.568				St. Dev.: 1.86 mm						
(Pass - No BFS greater than 44 mm)																

Shot Number	Sample 7      Size: C3				Sample 8      Size: C3											
	Front Panel		Back Panel		Front Panel		Back Panel									
	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note								
1	1418.6	0	35.0		1431.4	0	32.0		1425.9	0	37.0		1423.3	0	34.0	
2	1417.8	0	36.0		1446.3	0	35.0		1438.8	0	35.0		1448.2	0	36.0	
3	1438.8	0	36.0		1409.6	0	36.0		1443.4	0	36.0		1455.0	0	35.0	
4	1428.6	0			1382.6	0		b	1426.7	0			1453.9	0		
5	1424.1	0			1426.7	0			1443.4	0			1437.0	0		
6	1428.8	0			1427.8	0			1437.8	0			1422.3	0		
7					1436.99	0										
8																
<b>Summary:</b>		Perforations: 0 (Pass)				BFS Statistics: Count: 12				Average: 35.3 mm						
		Maximum BFS: 37.0 mm				k1: 1.568				St. Dev.: 1.29 mm						
(Pass - No BFS greater than 44 mm)																

**NATIONAL INSTITUTE OF JUSTICE  
COMPLIANCE TEST REPORT**

**Perforation and BFS Summary Data**

Report Number: 11697-22 Test ID: MKU10-001840 Report Date: 10/12/11  
 Manufacturer: MKU Pvt. Ltd. Model Designation: MKS-1002 NIJ Armor Type: 3A

**Threat 1 - Conditioned Armor**  
 Ammunition: .357 SIG 125/FMJ Test Velocity: 1410 ± 30 ft/s Water Submersion: No  
 Shot-to-Edge: 2 inches

Shot Number	Sample 21 Size: C5				Sample 22 Size: C3										
	Front Panel		Back Panel		Front Panel		Back Panel								
	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note							
1	1432.7	0	24.0		1429.6	0	22.0		1406.9	0	27.0		1424.1	0	24.0
2	1417.6	0	28.0		1416.0	0	25.0		1410.4	0	25.0		1413.2	0	26.0
3	1423.3	0	26.0		1435.1	0	25.0		1435.1	0	24.0		1431.4	0	24.0
4	1420.5	0			1426.9	0			1428.6	0			1438.0	0	
5	1410.4	0			1421.3	0			1424.9	0			1424.1	0	
6	1432.3	0			1408.8	0			1416.0	0			1416.8	0	
7															
8															
<b>Summary:</b>		Perforations: 0 (Pass) Maximum BFS: 28.0 mm (no requirement)				Perforations: 0 (Pass) Maximum BFS: 27.0 mm (no requirement)									

**Threat 2 - Conditioned Armor**  
 Ammunition: .44 Mag 240/SJHP Test Velocity: 1340 ± 30 ft/s Water Submersion: No  
 Shot-to-Edge: 3 inches

Shot Number	Sample 23 Size: C5				Sample 24 Size: C3										
	Front Panel		Back Panel		Front Panel		Back Panel								
	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note							
1	1406.1	0	33.0		1427.0	0	33.0		1438.0	0	35.0		1438.0	0	35.0
2	1425.7	0	35.0		1424.9	0	36.0		1471.2	0	35.0		1471.2	0	35.0
3	1404.9	0	34.0		1397.2	0	34.0	B	1438.0	0	34.0		1438.0	0	34.0
4	0.0	0		B	1416.0	0			1425.9	0			1425.9	0	
5	1418.6	0			1461.6	0			1419.4	0			1419.4	0	
6	1432.3	0			1452.0	0			1440.7	0			1440.7	0	
7	1432.25	0			1436.99	0	35.0								
8															
<b>Summary:</b>		Perforations: 0 (Pass) Maximum BFS: 36.0 mm (no requirement)				Perforations: 0 (Pass) Maximum BFS: 35.0 mm (no requirement)									

<b>Overall P-BFS Summary</b>	
<b>Perforations:</b>	This requirement is for all P-BFS tested samples - New and Conditioned 0 This armor model meets the perforation performance requirements of NIJ Standard-0101.06 Section 7.8.8.
<b>Backface Signature:</b>	This requirement is for New armors only
<b>Maximum BFS:</b>	39.0 mm This armor model meets the BFS performance requirements of NIJ Standard-0101.06 Section 7.8.8 Item a.



# NATIONAL INSTITUTE OF JUSTICE COMPLIANCE TEST REPORT

## Ballistic Limit Summary Data

Report Number: 11697-22      Test ID: MKU10-001840      Report Date: 10/12/11  
 Manufacturer: MKU Pvt. Ltd.      Model Designation: MKS-1002      NIJ Armor Type: 3A

Threat 1 - New Armor  
 Ammunition: .357 SIG      125/FMJ      Reference Velocity: 1470 ± 30 ft/s      Water Submersion: No

Shot Number	Sample 11			Sample 11			Sample 12			Sample 12			Sample 13		
	Front	Panel	Note	Back	Panel	Note	Front	Panel	Note	Back	Panel	Note	Front	Panel	Note
	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)		Avg. Vel. (ft/sec)	Perf (Y=1/N=0)		Avg. Vel. (ft/sec)	Perf (Y=1/N=0)		Avg. Vel. (ft/sec)	Perf (Y=1/N=0)		Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	
1	1464.6	0		1465.4	0		1438.0	0		1484.1	0		1446.3	0	
2	1538.5	0		1637.2	0		1562.3	0		1598.2	0		1535.2	0	
3	1707.7	0		1694.3	0		1735.5	1		1712.2	0		1697.2	0	
4	1787.0	1		1809.0	1		1668.9	0		1758.7	1		1796.0	1	
5	1731.3	0		1761.8	0		1688.0	0		1679.0	0		1734.3	0	
6	1732.8	0		1798.6	0		1723.5	0		1723.5	0		1764.3	0	
7	1808.97	1		1806.03	0		1769.91	0		1788.59	0		1810.28	1	
8	1775.57	1		1843.66	1		1888.93	1		1849.8	0		1758.71	0	
9	1736.71	0		1862.2	0		1840.26	1		1892.15	1		1837.56	0	
10	1773.05	0		1858.74	1		1813.57	1		1835.87	1		1877.58	1	
11	1838.91	1		1876.17	1		1791.47	1		1860.47	1		1838.91	1	
12	1782.85	1		1874.77	1		1736.71	1		1746.42	0		1792.76	1	
13															
14															
15															

Shot Number	Sample 13			Sample 14			Sample 14			Sample 15			Sample 15		
	Back	Panel	Note	Front	Panel	Note	Back	Panel	Note	Front	Panel	Note	Back	Panel	Note
	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)		Avg. Vel. (ft/sec)	Perf (Y=1/N=0)		Avg. Vel. (ft/sec)	Perf (Y=1/N=0)		Avg. Vel. (ft/sec)	Perf (Y=1/N=0)		Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	
1	1493.0	0		1471.2	0		1469.3	0		1487.0	0		1438.8	0	
2	1631.1	0		1620.2	0		1601.5	0		1593.6	0		1613.2	0	
3	1696.1	0		1686.9	0		1685.5	0		1697.2	0		1671.7	0	
4	1832.8	1		1780.0	0		1767.4	1		1763.0	0		1804.4	1	
5	1760.3	0		1846.4	1		1720.6	0		1849.8	1		1728.9	0	
6	1764.3	0		1798.6	0		1773.0	1		1803.1	0		1769.9	0	
7	1846.38	1		1807.66	1		1694.34	0		1848.09	1		1795.98	1	
8	1767.41	1		1808.97	1		1760.25	0		1792.76	0		1764.29	1	
9	1745.2	0		1708.82	0		1777.15	0		1816.2	1		1764.29	0	
10	1723.54	0		1775.57	0		1820.83	1		1764.29	0		1765.85	1	
11	1841.96	1		1813.57	0		1778.73	0		1795.98	0		1767.41	0	
12	1810.28	1		1846.72	1		1852.54	1		1828.49	1		1778.73	1	
13															
14															
15															

**Summary:**      Total Usable Shots: 120      Acceptable      Perforations below 1500 ft/s: 0      Acceptable  
 Perforations (Complete Penetrations): 47      Acceptable  
 Stops (Partial Penetrations): 73      Good

**Test Data and Regression Model**

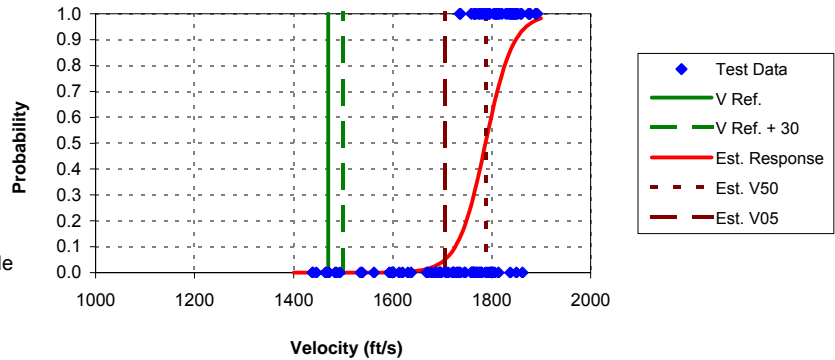
**Regression Analysis**

Regression Model: **Logistic**  
 Model Parameters:  $\beta_0$ : -64.1  
 $\beta_1$ : 0.036

Estimated V50: **1788 ft/s**

Estimated V05: 1706 ft/s

Probability of perforation at NIJ reference velocity (1470 ft/sec): **0.0%** Acceptable



# NATIONAL INSTITUTE OF JUSTICE COMPLIANCE TEST REPORT

## Ballistic Limit Summary Data

Report Number: 11697-22      Test ID: MKU10-001840      Report Date: 10/12/11  
 Manufacturer: MKU Pvt. Ltd.      Model Designation: MKS-1002      NIJ Armor Type: 3A

Threat 2 - New Armor  
 Ammunition: .44 Mag      240/SJHP      Reference Velocity: 1430 ± 30 ft/s      Water Submersion: No

Shot Number	Sample 16			Sample 16			Sample 17			Sample 17			Sample 18		
	Front	Panel	Note	Back	Panel	Note	Front	Panel	Note	Back	Panel	Note	Front	Panel	Note
	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)		Avg. Vel. (ft/sec)	Perf (Y=1/N=0)		Avg. Vel. (ft/sec)	Perf (Y=1/N=0)		Avg. Vel. (ft/sec)	Perf (Y=1/N=0)		Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	
1	1446.3	0		1467.4	0		1372.1	0		1443.4	0		1478.0	0	
2	1581.0	0		1583.5	1		1512.4	0		1524.9	0		1548.2	0	
3	1666.4	1		1450.4	0		1607.5	1		1609.8	0		1630.0	0	
4	1603.9	1		1595.7	1		1590.1	1		1689.5	1		1731.0	1	
5	1551.4	0		1462.4	0		1473.2	0		1646.6	1		1635.9	1	
6	1574.6	0		1575.5	1		1560.1	0		1601.8	1		1616.8	0	
7	1623.9	1		1518.61	0		1538.47	0		1580.03	0		1649.08	1	
8	1576.54	1		1576.54	0		1560.06	0		1605.14	1		1615.77	1	
9	1544.88	0		1541.55	1		1601.8	0		1560.06	0		1592.36	0	
10	1574.56	1		1539.65	0		1640.69	1		1626.28	1		1611.09	1	
11	1556.66	0		1575.55	1		1590.08	1		1567.65	0		1581.03	1	
12	1565.44	0		1532.1	0		1594.65	1		1601.8	1		1552.56	0	
13															
14															
15															

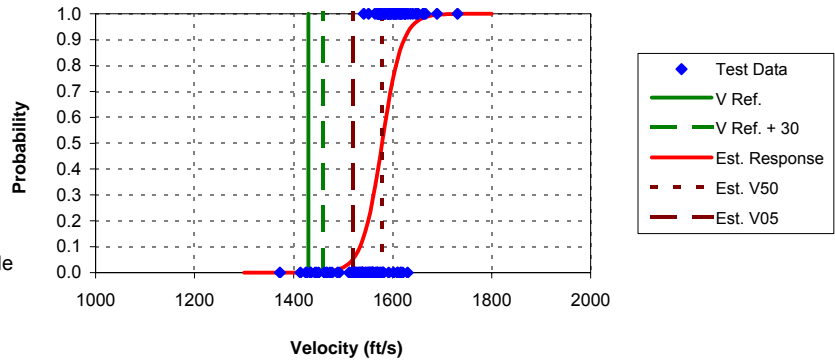
Shot Number	Sample 18			Sample 19			Sample 19			Sample 20			Sample 20		
	Back	Panel	Note	Front	Panel	Note	Back	Panel	Note	Front	Panel	Note	Back	Panel	Note
	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)		Avg. Vel. (ft/sec)	Perf (Y=1/N=0)		Avg. Vel. (ft/sec)	Perf (Y=1/N=0)		Avg. Vel. (ft/sec)	Perf (Y=1/N=0)		Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	
1	1426.9	0		1466.3	0		1414.0	0		1434.3	0		1434.3	0	
2	1424.7	0		1550.2	0		1524.9	0		1561.3	0		1544.9	0	
3	1489.0	0		1620.5	0		1615.8	1		1613.2	1		1616.8	1	
4	1572.1	1		1664.2	1		1583.5	1		1574.6	1		1551.4	1	
5	1512.4	0		1616.8	0		1527.0	0		1520.5	0		1491.9	0	
6	1568.9	1		1661.4	1		1557.9	0		1539.4	0		1538.5	0	
7	1554.49	0		1631.06	1		1594.65	1		1611.09	0		1558.85	0	
8	1570.11	1		1625.23	1		1564.46	1		1651.53	1		1596.93	1	
9	1535.39	0		1533.28	0		1554.49	0		1619.17	1		1570.11	0	
10	1591.34	1		1568.88	0		1570.11	0		1585.54	1		1601.8	1	
11	1536.34	0		1625.23	1		1606.43	1		1529.99	0		1575.55	1	
12	1572.08	1		1591.35	1		1581.03	0		1539.65	0		1571.1	1	
13															
14															
15															

**Summary:**      Total Usable Shots: 120      Good      Perforations below 1460 ft/s: 0      Acceptable  
 Perforations (Complete Penetrations): 54      Acceptable  
 Stops (Partial Penetrations): 66      Acceptable

### Test Data and Regression Model

**Regression Analysis**  
 Regression Model: **Logistic**  
 Model Parameters:     $\beta_0$ : -78.0  
                                $\beta_1$ : 0.049  
  
 Estimated V50: **1579 ft/s**  
 Estimated V05: 1519 ft/s

Probability of perforation at NIJ reference velocity (1470 ft/sec): **0.1% Acceptable**



**NATIONAL INSTITUTE OF JUSTICE  
COMPLIANCE TEST REPORT**

**Ballistic Limit Summary Data**

Report Number: 11697-22      Test ID: MKU10-001840      Report Date: 10/12/11  
 Manufacturer: MKU Pvt. Ltd.      Model Designation: MKS-1002      NIJ Armor Type: 3A

**Threat 1 - Conditioned Armor**  
 Ammunition: .357 SIG      125/FMJ  
 Test Velocity: 1410 ± 30 ft/s      Wet: No

**Threat 2 - Conditioned Armor**  
 Ammunition: .44 Mag      240/SJHP  
 Test Velocity: 1340 ± 30 ft/s      Wet: No

Shot Number	Sample 25			Sample 25		
	Front Panel		Note	Back Panel		Note
	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)		Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	
1	1412.4	0		1398.2	0	
2	1524.9	0		1495.0	0	
3	1594.9	0		1593.6	0	
4	1704.7	0		1681.8	0	
5	1777.1	0		1745.2	0	
6	1858.7	1		1840.3	0	
7	1775.57	0		1900.42	1	
8	1798.56	1		1820.83	0	
9	1745.2	0		1863.59	0	
10	1771.48	0		1887.5	1	
11	1819.51	1		1869.86	1	
12	1773.05	0		1816.2	0	
13						
14						
15						

Shot Num	Sample 26			Sample 26		
	Front Panel		Note	Back Panel		Note
	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)		Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	
1	1335.1	0		1313.7	0	
2	1434.3	0		1442.6	0	
3	1571.1	0		1564.5	0	
4	1606.2	1		1608.8	0	
5	1522.5	0		1695.8	0	
6	1580.0	0		1750.7	1	
7	1634.52	1		1689.19	1	
8	1581.28	0		1628.67	1	
9	1624.96	1		1497.01	0	
10	1573.32	0		1571.09	0	
11	1618.12	0		1604.11	0	
12	1653.99	1		1644.2	0	
13						
14						
15						

**Summary:**  
 Total Usable Shots: 24      Acceptable  
 Perforations (CP): 6  
 Stops (PP): 18  
 Perforations below 1440 ft/s: 0      Acceptable  
**Regression Analysis**  
 Regression Model: **Logistic**  
 Model Parameters: β0: -70.4  
                                  β1: 0.038  
 Estimated V50: 1838 ft/s

**Summary:**  
 Total Usable Shots: 24      Acceptable  
 Perforations (CP): 7  
 Stops (PP): 17  
 Perforations below 1370 ft/s: 0      Acceptable  
**Regression Analysis**  
 Regression Model: **Logistic**  
 Model Parameters: β0: -51.5  
                                  β1: 0.031  
 Estimated V50: 1638 ft/s

<b>Overall Ballistic Limit Summary</b>	
<b>Perforations below Vref + 30 ft/sec:</b>	<b>0</b> <u>This requirement is for all Ballistic Limit tested samples - New and Conditioned</u> This armor model meets the low perforation velocity performance requirements of NIJ Standard-0101.06 Section 7.9.5.
<b>Probability of perforation at the P-BFS reference velocity</b>	<u>This requirement is for New armors only</u>
Threat 1:	<b>0.0%</b>
Threat 2:	<b>0.1%</b>
This armor model meets the estimated V05 performance requirements of NIJ Standard-0101.06 Section 7.9.5.	

# NATIONAL INSTITUTE OF JUSTICE COMPLIANCE TEST REPORT

**#VALUE!**

Report Number: 11697-22      Report Date: 10/12/11      Test Date:

Manufacturer: MKU Pvt. Ltd.      Ammunition: #VALUE!      #VALUE!  
 Test ID: MKU10-001840      Reference Velocity: #VALUE!      ± 30 ft/s  
 NIJ Armor Type: 3A      Water Submersion: #VALUE!

TEST DIMENSIONS:      Range Length: 17.20 ft.      Velocity 1: 5.00 ft.      Lab Technician(s):   
                                  Laboratory Range #:       Velocity 2: 5.00 ft.     

**#VALUE!**

Panel Serial No: #VALUE!      Front Panel Plate Serial No: #VALUE!

**PRE-TEST CLAY VALIDATION:**

Block ID:   
 Time of Day:  HH:mm  
 Clay Temperature:  F

Depth of Indent:	Drop Number					Avg.
	1	2	3	4	5	
Requirements: All drops: $19 \pm 3$ mm, Average: $19 \pm 2$ mm						
Pass:						-

**TEST CONDITIONS:**

	<b>Start</b>	<b>End</b>		<b>Armor Submersion</b>		<b>Firing Sequence</b>
Ambient Temp:	<span style="background-color: #cccccc; border: 1px solid black; display: inline-block; width: 40px; height: 15px;"></span>	<span style="background-color: #cccccc; border: 1px solid black; display: inline-block; width: 40px; height: 15px;"></span>	F	Start:	<span style="background-color: #cccccc; border: 1px solid black; display: inline-block; width: 40px; height: 15px;"></span>	HH:mm
Rel. Humidity:	<span style="background-color: #cccccc; border: 1px solid black; display: inline-block; width: 40px; height: 15px;"></span>	<span style="background-color: #cccccc; border: 1px solid black; display: inline-block; width: 40px; height: 15px;"></span>	%	End:	<span style="background-color: #cccccc; border: 1px solid black; display: inline-block; width: 40px; height: 15px;"></span>	HH:mm
				Duration:	<span style="background-color: #cccccc; border: 1px solid black; display: inline-block; width: 40px; height: 15px;"></span>	min

FRONT PANEL											
Shot No.	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Vel. Avg. (ft/s)	Angle	Fair (Y/N)	Perforate (Y=1/N=0)	Note	BFS (mm)	Comments
1		0		0		0°					
2		0		0		0°					
3		0		0		0°					
4		0		0		#####					
5		0		0		#####					
6		0		0		0°					
7		0		0							
8		0		0							

**POST-TEST CLAY VALIDATION:**

Block ID:   
 Time of Day:  HH:mm  
 Clay Temperature:  F

Depth of Indent:	Drop Number					Avg.
	1	2	3	4	5	
Requirements: All drops: $19 \pm 3$ mm, Average: $19 \pm 2$ mm						
Pass:						-

**NOTES:**

- |                           |   |                    |
|---------------------------|---|--------------------|
| a - Excessive velocity    | d - Too close to prior impact                 | g - Impact on seam |
| b - Insufficient velocity | e - Excessive total impacts (test terminated) |                    |
| c - Too close to edge     | f - Excessive area impacts (test terminated)  |                    |

# NATIONAL INSTITUTE OF JUSTICE COMPLIANCE TEST REPORT

**#VALUE!**

Report Number: 11697-22      Report Date: 10/12/11      Test Date:

Manufacturer: MKU Pvt. Ltd.      Ammunition: #VALUE!      #VALUE!  
 Test ID: MKU10-001840      Reference Velocity: #VALUE!      ± 30 ft/s  
 NIJ Armor Type: 3A      Water Submersion: #VALUE!

TEST DIMENSIONS:      Range Length: 17.20 ft.      Velocity 1: 5.00 ft.      Lab Technician(s):   
                                  Laboratory Range #:       Velocity 2: 5.00 ft.     

**#VALUE!**

Panel Serial No: #VALUE!      Back Panel Plate Serial No: #VALUE!

**PRE-TEST CLAY VALIDATION:**

Block ID:   
 Time of Day:  HH:mm  
 Clay Temperature:  F

Depth of Indent:	Drop Number					Avg.
	1	2	3	4	5	
Requirements: All drops: $19 \pm 3$ mm, Average: $19 \pm 2$ mm						
Pass:						-

**TEST CONDITIONS:**

	<b>Start</b>	<b>End</b>		<b>Armor Submersion</b>		<b>Firing Sequence</b>
Ambient Temp:	<span style="background-color: #cccccc; display: inline-block; width: 50px; height: 15px;"></span>	<span style="background-color: #cccccc; display: inline-block; width: 50px; height: 15px;"></span>	F	Start:	<span style="background-color: #cccccc; display: inline-block; width: 50px; height: 15px;"></span>	HH:mm
Rel. Humidity:	<span style="background-color: #cccccc; display: inline-block; width: 50px; height: 15px;"></span>	<span style="background-color: #cccccc; display: inline-block; width: 50px; height: 15px;"></span>	%	End:	<span style="background-color: #cccccc; display: inline-block; width: 50px; height: 15px;"></span>	HH:mm
				Duration:	<span style="background-color: #cccccc; display: inline-block; width: 50px; height: 15px;"></span>	min

BACK PANEL											
Shot No.	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Vel. Avg. (ft/s)	Angle	Fair (Y/N)	Perforate (Y=1/N=0)	Note	BFS (mm)	Comments
1		0		0		0°					
2		0		0		0°					
3		0		0		0°					
4		0		0		#####					
5		0		0		#####					
6		0		0		0°					
7		0		0							
8		0		0							

**POST-TEST CLAY VALIDATION:**

Block ID:   
 Time of Day:  HH:mm  
 Clay Temperature:  F

Depth of Indent:	Drop Number					Avg.
	1	2	3	4	5	
Requirements: All drops: $19 \pm 3$ mm, Average: $19 \pm 2$ mm						
Pass:						-

**NOTES:**

- |                           |   |                    |
|---------------------------|---|--------------------|
| a - Excessive velocity    | d - Too close to prior impact                 | g - Impact on seam |
| b - Insufficient velocity | e - Excessive total impacts (test terminated) |                    |
| c - Too close to edge     | f - Excessive area impacts (test terminated)  |                    |



