

**INDEPENDENT TEST REPORT  
ARMOUR TEST RESULTS**

REPORT NUMBER: R2011-096

DATE: 2011-10-20

STATUS: Commercial in Confidence

TEST TYPE: Evaluation

STANDARD: NIJ 0101.06

CONTRACT: OZ-091184

PREPARED FOR: Fresh Gear  
3393 County Road 42, Unit 3  
Windsor, ON.  
N9A 6J3  
Att: Mike Mantinozzi

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## LIMITATIONS OF TEST DATA

R2011-096 Fresh Gear.xls

All panels have been tested in the as new condition and wet conditioned as per NIJ 0101.06. All panels were tested for backface signature only, as per NIJ 0101.06 (6 shots, including obliquities of 0, 30, and 45 degrees).

All panels will be shot as per NIJ 0101.06 type II, using only the second threat: 357MAG 158GR JSP (REM 22847) at the new armour test velocity of 436 m/s.

A comparison will be made between the ozone conditioned armour and the untreated armour.

## TEST SAMPLE DESCRIPTION

R2011-096 Fresh Gear.xls

SAMPLE ID	MANUFACTURER	DESCRIPTION	CONDITION	PROJECTILE	REFERENCE VELOCITY (M/S)	CONFIGURATION	TEST TYPE	REMARK
1	Fresh Gear	A1118395 (Ozone Cleaned)	Wet	.357 MAG	436	Stand Alone	BFS	Ozone Cleaned
2	Fresh Gear	A1118396 (Ozone Cleaned)	Wet	.357 MAG	436	Stand Alone	BFS	Ozone Cleaned
3	Fresh Gear	A1118397 (Ozone Cleaned)	Wet	.357 MAG	436	Stand Alone	BFS	Ozone Cleaned
4	Fresh Gear	A1118398 (Ozone Cleaned)	Wet	.357 MAG	436	Stand Alone	BFS	Ozone Cleaned
5	Fresh Gear	A1118391 (Untreated)	Wet	.357 MAG	436	Stand Alone	BFS	Untreated
6	Fresh Gear	A1118392 (Untreated)	Wet	.357 MAG	436	Stand Alone	BFS	Untreated
7	Fresh Gear	A1118393 (Untreated)	Wet	.357 MAG	436	Stand Alone	BFS	Untreated
8	Fresh Gear	A1118394 (Untreated)	Wet	.357 MAG	436	Stand Alone	BFS	Untreated

# TEST SUMMARY

SAMPLE ID	MANUFACTURER	CONDITION	PROJECTILE	DESCRIPTION	BFS <sub>max.</sub> (mm)	Speed <sub>max</sub> (m/s)	BFS <sub>max</sub> (avg.)	Speed <sub>max</sub> (avg.)
1	Fresh Gear	Wet	.357 MAG	Ozone Cleaned	34	436	37	434
2					37	433		
3					40	433		
4					36	435		
5				Untreated	39	441	39	438
6					39	445		
7					39	432		
8					37	433		

$V_{\text{proof}}$  DATA

**V<sub>proof</sub> Data**

SAMPLE ID

MANUFACTURER Fresh Gear

DESCRIPTION **Ozone Cleaned Summary**

CONDITION Wet

PROJECTILE .357 MAG

SAMPLE	VELOCITY m/s	PERFORATE Y/N	BFS mm	OBLIQUITY Deg.	FAIR Y/N	SPALL	REMARK
1	436	N	34	0	Y		
	430	N	32	0	Y		
	427	N	34	0	Y		
	427	N		30	Y		
	425	N		45	Y		
	435	N		0	Y		
2	438	N	36	0	Y		
	433	N	37	0	Y		
	433	N	35	0	Y		
	446	N		30	Y		
	438	N		45	Y		
442	N		0	Y			
3	440	N	37	0	Y		
	444	N	35	0	Y		
	433	N	40	0	Y		
	440	N		30	Y		
	436	N		45	Y		
437	N		0	Y			
4	433	N	35	0	Y		
	435	N	36	0	Y		
	432	N	35	0	Y		
	435	N		30	Y		
	440	N		45	Y		
439	N		0	Y			

VELOCITY SUMMARY (m/s)		
Obliquity	Min	Max
0°:	427	444
30°:	427	446
45°:	425	440

**Performance**  
 BFS<sub>max</sub>:  mm  
 Penetration: NO

RANGE #: 2  
 TECH: M. Pees  
 DATE: 2011-10-25  
 BMF #: 2  
 BACKING: CLAY  
 CALIBRATED: DROP CALIBRATED  
 STAND-OFF: 5 m

**V<sub>proof</sub> Data**

**SAMPLE ID**

**MANUFACTURER** Fresh Gear

**DESCRIPTION** A1118395 (Ozone Cleaned)

**CONDITION** Wet

**PROJECTILE** .357 MAG

SHOT	VELOCITY m/s	PERFORATE Y/N	BFS mm	OBLIQUITY Deg.	FAIR Y/N	SPALL	REMARK
1	436	N	34	0	Y		
2	430	N	32	0	Y		
3	427	N	34	0	Y		
4	427	N		30	Y		
5	425	N		45	Y		
6	435	N		0	Y		

VELOCITY SUMMARY (m/s)		
Obliquity	Min	Max
0°:	427	436
30°:	427	427
45°:	425	425

Performance		
BFS <sub>max</sub> :	<input type="text" value="34"/>	mm
Penetration:	<input type="text" value="NO"/>	

**Remarks**

RANGE #: 2  
 TECH: M. Pees  
 DATE: 2011-10-25  
 BMF #: 2  
 BACKING: CLAY  
 CALIBRATED: DROP CALIBRATED  
 STAND-OFF: 5 m

**V<sub>proof</sub> Data**

**SAMPLE ID**

**MANUFACTURER** Fresh Gear

**DESCRIPTION** A1118396 (Ozone Cleaned)

**CONDITION** Wet

**PROJECTILE** .357 MAG

SHOT	VELOCITY m/s	PERFORATE Y/N	BFS mm	OBLIQUITY Deg.	FAIR Y/N	SPALL	REMARK
1	438	N	36	0	Y		
2	433	N	37	0	Y		
3	433	N	35	0	Y		
4	446	N		30	Y		
5	438	N		45	Y		
6	442	N		0	Y		

VELOCITY SUMMARY (m/s)		
Obliquity	Min	Max
0°:	433	442
30°:	446	446
45°:	438	438

Performance		
BFS <sub>max</sub> :	<input type="text" value="37"/>	mm
Penetration:	<input type="text" value="NO"/>	

**Remarks**

RANGE #: 2  
 TECH: M. Pees  
 DATE: 2011-10-25  
 BMF #: 5

BACKING: CLAY  
 CALIBRATED: DROP CALIBRATED  
 STAND-OFF: 5 m



**V<sub>proof</sub> Data**

**SAMPLE ID**

**MANUFACTURER** Fresh Gear

**DESCRIPTION** A1118397 (Ozone Cleaned)

**CONDITION** Wet

**PROJECTILE** .357 MAG

SHOT	VELOCITY m/s	PERFORATE Y/N	BFS mm	OBLIQUITY Deg.	FAIR Y/N	SPALL	REMARK
1	440	N	37	0	Y		
2	444	N	35	0	Y		
3	433	N	40	0	Y		
4	440	N		30	Y		
5	436	N		45	Y		
6	437	N		0	Y		

VELOCITY SUMMARY (m/s)		
Obliquity	Min	Max
0°:	433	444
30°:	440	440
45°:	436	436

Performance		
BFS <sub>max</sub> :	<input type="text" value="40"/>	mm
Penetration:	<input type="text" value="NO"/>	

**Remarks**

RANGE #: 2  
 TECH: M. Pees  
 DATE: 2011-10-25  
 BMF #: 4  
 BACKING: CLAY  
 CALIBRATED: DROP CALIBRATED  
 STAND-OFF: 5 m

**V<sub>proof</sub> Data**

**SAMPLE ID** 4

**MANUFACTURER** Fresh Gear

**DESCRIPTION** A1118398 (Ozone Cleaned)

**CONDITION** Wet

**PROJECTILE** .357 MAG

SHOT	VELOCITY m/s	PERFORATE Y/N	BFS mm	OBLIQUITY Deg.	FAIR Y/N	SPALL	REMARK
1	433	N	35	0	Y		
2	435	N	36	0	Y		
3	432	N	35	0	Y		
4	435	N		30	Y		
5	440	N		45	Y		
6	439	N		0	Y		

VELOCITY SUMMARY (m/s)		
Obliquity	Min	Max
0°:	432	439
30°:	435	435
45°:	440	440

Performance		
BFS <sub>max</sub> :	36	mm
Penetration:	NO	

Remarks

RANGE #: 2  
 TECH: M. Pees  
 DATE: 2011-10-25  
 BMF #: 3  
 BACKING: CLAY  
 CALIBRATED: DROP CALIBRATED  
 STAND-OFF: 5 m

**V<sub>proof</sub> Data**

**SAMPLE ID** 5

**MANUFACTURER** Fresh Gear

**DESCRIPTION** Untreated Summary

**CONDITION** Wet

**PROJECTILE** .357 MAG

SAMPLE	VELOCITY m/s	PERFORATE Y/N	BFS mm	OBLIQUITY Deg.	FAIR Y/N	SPALL	REMARK
5	439	N	35	0	Y		
	440	N	34	0	Y		
	441	N	39	0	Y		
	435	N		30	Y		
	436	N		45	Y		
	436	N		0	Y		
6	434	N	34	0	Y		
	440	N	36	0	Y		
	445	N	39	0	Y		
	441	N		30	Y		
	434	N		45	Y		
7	425	N		0	Y		
	433	N	36	0	Y		
	440	N	36	0	Y		
	432	N	39	0	Y		
	435	N		30	Y		
	437	N		45	Y		
8	429	N		0	Y		
	433	N	37	0	Y		
	428	N	34	0	Y		
	443	N	36	0	Y		
	428	N		30	Y		
	436	N		45	Y		
432	N		0	Y			

VELOCITY SUMMARY (m/s)		
Obliquity	Min	Max
0°:	425	445
30°:	428	441
45°:	434	437

**Performance**  
**BFS<sub>max</sub>:** 39 mm  
**Penetration:** NO

RANGE #: 2  
 TECH: M. Pees  
 DATE: 2011-10-25  
 BMF #: 1  
 BACKING: CLAY  
 CALIBRATED: DROP CALIBRATED  
 STAND-OFF: 5 m

**V<sub>proof</sub> Data**

**SAMPLE ID**

**MANUFACTURER** Fresh Gear

**DESCRIPTION** A1118391 (Untreated)

**CONDITION** Wet

**PROJECTILE** .357 MAG

SHOT	VELOCITY m/s	PERFORATE Y/N	BFS mm	OBLIQUITY Deg.	FAIR Y/N	SPALL	REMARK
1	439	N	35	0	Y		
2	440	N	34	0	Y		
3	441	N	39	0	Y		
4	435	N		30	Y		
5	436	N		45	Y		
6	436	N		0	Y		

VELOCITY SUMMARY (m/s)		
Obliquity	Min	Max
0°:	436	441
30°:	435	435
45°:	436	436

Performance		
BFS <sub>max</sub> :	<input type="text" value="39"/>	mm
Penetration:	<input type="text" value="NO"/>	

**Remarks**

RANGE #: 2  
 TECH: M. Pees  
 DATE: 2011-10-25  
 BMF #: 1

BACKING: CLAY  
 CALIBRATED: DROP CALIBRATED  
 STAND-OFF: 5 m

**V<sub>proof</sub> Data**

**SAMPLE ID**

**MANUFACTURER** Fresh Gear

**DESCRIPTION** A1118392 (Untreated)

**CONDITION** Wet

**PROJECTILE** .357 MAG

SHOT	VELOCITY m/s	PERFORATE Y/N	BFS mm	OBLIQUITY Deg.	FAIR Y/N	SPALL	REMARK
1	434	N	34	0	Y		
2	440	N	36	0	Y		
3	445	N	39	0	Y		
4	441	N		30	Y		
5	434	N		45	Y		
6	425	N		0	Y		

VELOCITY SUMMARY (m/s)		
Obliquity	Min	Max
0°:	425	445
30°:	441	441
45°:	434	434

Performance		
BFS <sub>max</sub> :	<input type="text" value="39"/>	mm
Penetration:	<input type="text" value="NO"/>	

**Remarks**

RANGE #: 2  
 TECH: M. Pees  
 DATE: 2011-10-26  
 BMF #: 5  
 BACKING: CLAY  
 CALIBRATED: DROP CALIBRATED  
 STAND-OFF: 5 m

**V<sub>proof</sub> Data**

**SAMPLE ID**

**MANUFACTURER** Fresh Gear

**DESCRIPTION** A1118393 (Untreated)

**CONDITION** Wet

**PROJECTILE** .357 MAG

SHOT	VELOCITY m/s	PERFORATE Y/N	BFS mm	OBLIQUITY Deg.	FAIR Y/N	SPALL	REMARK
1	433	N	36	0	Y		
2	440	N	36	0	Y		
3	432	N	39	0	Y		
4	435	N		30	Y		
5	437	N		45	Y		
6	429	N		0	Y		

VELOCITY SUMMARY (m/s)		
Obliquity	Min	Max
0°:	429	440
30°:	435	435
45°:	437	437

Performance		
BFS <sub>max</sub> :	<input type="text" value="39"/>	mm
Penetration:	<input type="text" value="NO"/>	

**Remarks**

RANGE #: 2  
 TECH: M. Pees  
 DATE: 2011-10-26  
 BMF #: 4

BACKING: CLAY  
 CALIBRATED: DROP CALIBRATED  
 STAND-OFF: 5 m

**V<sub>proof</sub> Data**

**SAMPLE ID**

**MANUFACTURER** Fresh Gear

**DESCRIPTION** A1118394 (Untreated)

**CONDITION** Wet

**PROJECTILE** .357 MAG

SHOT	VELOCITY m/s	PERFORATE Y/N	BFS mm	OBLIQUITY Deg.	FAIR Y/N	SPALL	REMARK
1	433	N	37	0	Y		
2	428	N	34	0	Y		
3	443	N	36	0	Y		
4	428	N		30	Y		
5	436	N		45	Y		
6	432	N		0	Y		

VELOCITY SUMMARY (m/s)		
Obliquity	Min	Max
0°:	428	443
30°:	428	428
45°:	436	436

Performance		
BFS <sub>max</sub> :	<input type="text" value="37"/>	mm
Penetration:	<input type="text" value="NO"/>	

**Remarks**

RANGE #: 2  
 TECH: M. Pees  
 DATE: 2011-10-26  
 BMF #: 3

BACKING: CLAY  
 CALIBRATED: DROP CALIBRATED  
 STAND-OFF: 5 m