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6 January 2006
(HPWLI 9751-05A)

Mofet Etzion
Kibbutz Kfar Etzion
Bott Postal Tzfon
Yhuda 90912, Israel

Attention: Mr. Nizan Sela

Gentlemen:

In accordance with your e-mail of 2 January 2006, H.P. White Laboratory, Inc. conducted Ballistic Resistance (Vo) testing of three ESAPI, rigid body armor inserts received on 4 January 2006, backed with panels of flexible woven armor.

The inserts were identified only as R&D Interceptor Enhanced, Small Arms Protection Inserts (ESAPI). The flexible armor backing panels were composed of 28 plies of flexible, woven aramid, known as "shoot packs", provided by H. P. White Laboratory, Incorporated.


Testing was conducted in accordance with the provisions of CO/PD 04-19, dated 17 May 2004, Paragraph 4.2.3, using caliber .30AP, M2 ammunition. The test panels were backed with a clay block conforming to NIJ-STD-0101.03 specifications, and were rigidly fixtured to produce zero and thirty-degree obliquity impacts at 25.0 feet. Photoelectric lumiline screens were positioned at 10.0 and 20.0 feet which, in conjunction with elapsed time counters (chronographs), were used to compute projectile velocities 15.0 feet forward of the muzzle, Table I (attached) presents a summary of the enclosed data records. Please note that, in accordance with your instructions, the inserts were stuck three times each with a 20 ounce hammer prior to ballistic testing.

This report is based on data obtained from having tested only the samples submitted and should NOT be interpreted as an endorsement by H.P. White Laboratory, Inc. of the continuing quality, or performance, of any other items of the same, or similar, design.

The tested samples are being returned via Federal Express. Should you have any questions regarding this matter, please do not hesitate to contact us.

Sincerely,

H.P. WHITE LABORATORY, INC.



Donald R. Dunn

DRD/ps
Enclosures

RESEARCH • DEVELOPMENT • ENGINEERING

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 Attention: Mr. Nizan Sela
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TABLE I. SUMMARY OF RESULTS (R&D)

Conditioning	Insert		Flexible	Ballistic Threat			Velocity(fps)			Results	
	Number	Weight (lbs.)	Weight (lbs.)	Caliber	Obliquity (degrees)	Shots	Shot 01/Shot 02 Shot 03			Pene- tration/ Plies	Deform. (mm)(a)
Ambicnt	01	5.87	2.01	.30 AP	0	2	2876	2871		0/0	30/34
					30	1	2872			0	34
					0	3	2879	2868	2866	0/0/0	37/36/31
	02	5.80	2.02	.30 AP	0	2	2866		2892	0/0	36/34
					30	1	2861			0	32
					0	3	2893	2881	2868	0/0/0	38/37/40
	03	5.86	2.03	.30 AP	0	2	2869		2876	0/0	31/28
					30	1	2873			0	31
					0	3	2878	2881	2872	0/0/0	38/37/38

(a) Required Velocity: 2850-2900 fps.

(b) Deformation of clay backing. Maximum allowable: 43mm.



H.P. White Laboratory, Inc.

BALLISTIC RESISTANCE TEST

Client: MOFET ETZION

Job No.: 9751-05

Test Date: 1/6/06

TEST PANEL

Manufacturer: MOFET ETZION

Size: PLATE: 9 x 11, VEST: 15x15 In.

Thicknesses: NA

Avg. Thick.: NA

Description: LIBA E-SAPI BODY ARMOR + 28 PLIES OF FLEX. WOVEN ARAMID FIBER (34x34)

Sample No.: APM2-1

Weight: PLATE: 5.87, VEST: 2.01 lbs, Date Recd.: 01-04-05

Hardness: NA

Plies/Laminates: PLATE + 28 PLIES

Via: Federal Express

Returned: Federal Express

SET-UP

Shot Spacing: PER CUSTOMER REQUEST

Witness Panel: CLAY

Obliquity: 0 & 30 deg.

Backing Material: 5.5" CLAY/PLYWOOD

Conditioning: AMBIENT

Primary Vel. Screens: 10.0 ft., 20.0 ft.

Primary Vel. Location: 15.0 ft. From Muzzle

Residual Vel. Screens: NA

Residual Vel. Location: NA

Range to Target: 25.0 ft.

Target to Wit.: 0.0 in.

Range No.: 1

Temp.: 70 F

BP: 29.78 in. Hg

RH: 32%

Barrel No./Gun: TEST BARREL

Gunner: B. WILLIAMSON

Recorder: THOMAS

AMMUNITION

(1): CAL. .30 AP, M2, 166 gr.

(2):

(3):

(4):

Lot No.: LC-13454

Lot No.:

Lot No.:

Lot No.:

APPLICABLE STANDARDS OR PROCEDURES

(1): PER CUSTOMER REQUEST

(2): CLAY DROPS: 28mm, 28mm, 28mm

(3):

Shot No.	Ammo.	Time 1 (usec)	Velocity 1 (ft/s)	Time 2 (usec)	Velocity 2 (ft/s)	Avg. Vel. (ft/s)	Vel. Loss (ft/s)	Strike Vel. (ft/s)	Penetration	Footnotes
1	1	3469	2883	3469	2883	2883	7	2876	None	DEF. 30mm
2	1	3475	2878	3475	2878	2878	7	2871	None	DEF. 34mm
3	1	3473	2879	3474	2879	2879	7	2872	None	(a), DEF. 34mm
4	1	3465	2886	3466	2885	2886	7	2879	None	DEF. 37mm
5	1	3478	2875	3478	2875	2875	7	2868	None	DEF. 36mm
6	1	3480	2874	3481	2873	2873	7	2866	None	DEF. 31mm

REMARKS:

Velocity loss computed using standard formulas.

SHOOT PACK: HPWLI

FOOTNOTES:

(a) IMPACTED AT A 30 DEGREE ANGLE

NOTE: THE PLATE WAS IMPACTED 3 TIMES WITH A 20oz HAMMER PRIOR TO TEST



H.P. White Laboratory, Inc.

BALLISTIC RESISTANCE TEST

Client : MOFET ETZION

Job No. : 9751-05

Test Date : 1/6/06

TEST PANEL

Manufacturer : MOFET ETZION

Size : PLATE: 9 x 11, VEST: 15x15 in.

Thicknesses : NA

Avg. Thick. : NA

Description : LIBA E-SAPI BODY ARMOR + 28 PLIES OF FLEX. WOVEN ARAMID FIBER (34x34)

Sample No. : APM2-2

Weight : PLATE: 5.80, VEST: 2.02 lbs Date Rec'd. : 01-04-05

Hardness : NA

Plies/Laminates : PLATE + 28 PLIES

Via : Federal Express

Returned : Federal Express

SET-UP

Shot Spacing : PER CUSTOMER REQUEST

Witness Panel : CLAY

Obliquity : 0 & 30 deg.

Backing Material : 5.5" CLAY/PLYWOOD

Conditioning : AMBIENT

Primary Vel. Screens : 10.0 ft., 20.0 ft.

Primary Vel. Location : 15.0 ft. From Muzzle

Residual Vel. Screens : NA

Residual Vel. Location : NA

Range to Target : 25.0 ft.

Target to Wit. : 0.0 in.

Range No. : 1

Temp. : 70 F

BP : 29.78 in. Hg

RH : 32%

Barrel No./Gun : TEST BARREL

Gunner : B. WILLIAMSON

Recorder : THOMAS

AMMUNITION

(1) : CAL. .30 AP, M2, 166 gr.

(2) :

(3) :

(4) :

Lot No. : LC-13454

Lot No. :

Lot No. :

Lot No. :

APPLICABLE STANDARDS OR PROCEDURES

(1) : PER CUSTOMER REQUEST

(2) : CLAY DROPS: 28mm, 28mm, 28mm

(3) :

Shot No.	Ammo.	Time 1 (usec)	Velocity 1 (ft/s)	Time 2 (usec)	Velocity 2 (ft/s)	Avg. Vel. (ft/s)	Vel. Loss (ft/s)	Strike Vel. (ft/s)	Penetration	Footnotes
1	1	3480	2874	3481	2873	2873	7	2866	None	DEF. 36mm
2	1	3450	2899	3450	2899	2899	7	2892	None	DEF. 34mm
3	1	3486	2869	3487	2868	2868	7	2861	None	(a), DEF. 32mm
4	1	3448	2900	3448	2900	2900	7	2893	None	DEF. 38mm
5	1	3463	2888	3464	2887	2887	7	2881	None	DEF. 37mm
6	1	3478	2875	3480	2874	2874	7	2868	None	DEF. 40mm

REMARKS:

Velocity loss computed using standard formulas.

SHOOT PACK: HPWLI

FOOTNOTES:

(a) IMPACTED AT A 30 DEGREE ANGLE

NOTE: THE PLATE WAS IMPACTED 3 TIMES WITH A 20oz HAMMER PRIOR TO TEST



H.P. White Laboratory, Inc.

BALLISTIC RESISTANCE TEST

Client : MOFET ETZION

Job No. : 9751-05

Test Date : 1/6/06

TEST PANEL

Manufacturer : MOFET ETZION

Size : PLATE: 9 x 11, VEST: 15x15 in.

Thicknesses : NA

Avg. Thick. : NA

Description : LIBA E-SAPI BODY ARMOR + 28 PLIES OF FLEX. WOVEN ARAMID FIBER (34x34)

Sample No. : APM2-3

Weight : PLATE: 5.86, VEST: 2.03 lbs Date Rec'd. : 01-04-05

Hardness : NA

Plies/Laminates : PLATE + 28 PLIES

Via : Federal Express

Returned : Federal Express

SET-UP

Shot Spacing : PER CUSTOMER REQUEST

Witness Panel : CLAY

Obliquity : 0 & 30 deg.

Backing Material : 5.5" CLAY/PLYWOOD

Conditioning : AMBIENT

Primary Vel. Screens : 10.0 ft., 20.0 ft.

Primary Vel. Location : 15.0 ft. From Muzzle

Residual Vel. Screens : NA

Residual Vel. Location : NA

Range to Target : 25.0 ft.

Target to Wit. : 0.0 in.

Range No. : 1

Temp. : 70 F

BP : 29.78 in. Hg

RH : 32%

Barrel No./Gun : TEST BARREL

Gunner : B. WILLIAMSON

Recorder : THOMAS

AMMUNITION

(1) : CAL. .30 AP, M2, 166 gr.

(2) :

(3) :

(4) :

Lot No. : LC-13454

Lot No. :

Lot No. :

Lot No. :

APPLICABLE STANDARDS OR PROCEDURES

(1) : PER CUSTOMER REQUEST

(2) : CLAY DROPS: 28mm, 28mm, 28mm

(3) :

Shot No.	Ammo.	Time 1 (usec)	Velocity 1 (ft/s)	Time 2 (usec)	Velocity 2 (ft/s)	Avg. Vel. (ft/s)	Vel. Loss (ft/s)	Strike Vel. (ft/s)	Penetration	Footnotes
1	1	3477	2876	3477	2876	2876	7	2869	None	DEF. 31mm
2	1	3469	2883	3469	2883	2883	7	2876	None	DEF. 28mm
3	1	3472	2880	3473	2879	2880	7	2873	None	(a), DEF. 31mm
4	1	3467	2884	3467	2884	2884	7	2878	None	DEF. 38mm
5	1	3462	2889	3463	2888	2888	7	2881	None	DEF. 37mm
6	1	3473	2879	3474	2879	2879	7	2872	None	DEF. 38mm

REMARKS :

Velocity loss computed using standard formulas.
SHOOT PACK: HPWLI

FOOTNOTES :

(a) IMPACTED AT A 30 DEGREE ANGLE
NOTE: THE PLATE WAS IMPACTED 3 TIMES WITH A 20oz HAMMER PRIOR TO TEST