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(HPWLI 000002457)

Beijing Tongyizhong Specialty Fiber Technology & Development Co., Ltd.
No.17, Jingsheng South 2nd Street, Majuqiao Town, Tongzhou District
Beijing, China 101102

Attention: Simon Yu

In accordance with your instructions, H.P. White Laboratory, Inc. conducted ballistic resistance testing of two (2) rigid woven aramid fiber in matrix helmets received 24 March 2014 via DHL.

Testing was conducted in accordance with your instructions, and the modified provisions of NIJ-STD-0106.01, BALLISTIC HELMETS, using caliber .357 SIG, 125 grain, FMJ and .44 Magnum, 240 grain, SWCGC ammunition. The test samples were mounted on an indoor range 16.5 feet from the muzzle of a test barrel to produce zero degree obliquity impacts. Photoelectric infrared screens were positioned at 6.5 and 9.5 feet which, in conjunction with elapsed time counters (chronographs), were used to compute projectile velocities 8.0 feet from the muzzle. Penetrations were determined by visual examination of a 0.020-inch thick alloy 2024T3 aluminum witness panel positioned 5.0 inches behind, and parallel to, the test samples. Table I presents a summary of the attached data records.

TABLE I. SUMMARY OF RESULTS

Test Sample			Ballistic Threat			Results	
Number	Weight (lbs.)	Thickness (in) (a)	Caliber	Shots (b)	Velocity (fps) Max Min		Penetrations
HPW-1	2.94	0.353	.44 Magnum	4	1455	1422	0
HPW-2	2.93	0.363	.357 SIG	4	1489	1449	0
(a) Average of four-area thickness.							
(b) See data records for shot placement.							

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 test samples are being returned via DHL. Should you have any questions regarding this matter, or if we may be of any further service, please do not hesitate to contact us.

Sincerely,

H.P. White Laboratory, Inc.

Tina Chaffman

TC/tc
Enclosures



TEST PANEL

Manufacturer :

Size : UNKNOWN

Thicknesses : 0.353, 0.363, 0.336, 0.360 in.

Avg. Thick : 0.353 in.

Description : RIDGID WOVEN ARAMID FIBER IN MATRIX,
(HELMET)

Sample No. : HPW-1 (44 MAG)

Weight : 2.94 lbs.

Hardness : NA

Plies/Laminates : NA

Date Rec'd. : 3/24/14

Via : DHL

Returned : DHL

SET-UP

Shot Spacing : PER NIJ-STD-0106.01

Witness Panel : 0.020", 2024-T3 ALUMINUM

Obliquity : 0 deg.

Backing Material : NA

Conditioning : AMBIENT

Primary Vel. Screens : 6.5 ft., 9.5 ft.

Primary Vel. Location : 8.0 ft. From Muzzle

Residual Vel. Screens : NA

Residual Vel. Location : NA

Range to Target : 16.5 ft.

Target to Wit. : 5.0 in.

Range No. : 10

Temp. : 68 F

BP : 30.07 in. Hg

RH : 48%

Barrel No./Gun : 44 MAG R10

Gunner : ALLINGHAM

Recorder : WOLFE

AMMUNITION

(1) : 44 MAG, SWCGC, 240 gr.

(2) :

(3) :

(4) :

Lot No. : UNKNOWN

Lot No. :

Lot No. :

Lot No. :

APPLICABLE STANDARDS OR PROCEDURES

(1) : PER NIJ-STD-0106.01 (MODIFIED)

(2) : LEVEL IIIA

(3) : REQUIRED VELOCITY: 1401-1460 fps

Shot No.	Ammo.	Time 1 (usec)	Velocity 1 (ft/s)	Time 2 (usec)	Velocity 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	2105	1425	2114	1419	1422	None	(a)
2	1	2060	1456	2064	1453	1455	None	(b)
3	1	2087	1437	2087	1437	1437	None	(c)
4	1	2060	1456	2064	1453	1455	None	(d)

REMARKS :

FOOTNOTES :

(a) SHOT IMPACTED ON FRONT OF HELMET
(b) SHOT IMPACTED ON BACK OF HELMET
(c) SHOT IMPACTED ON RIGHT OF HELMET
(d) SHOT IMPACTED ON LEFT OF HELMET



TEST PANEL

Manufacturer : |

Size : UNKNOWN

Thicknesses : 0.385, 0.362, 0.348, 0.356 in.

Avg. Thick : 0.363 in.

Description : RIDGID WOVEN ARAMID FIBER IN MATRIX,
(HELMET)

Sample No. : HPW-2 (357 SIG)

Weight : 2.93 lbs.

Hardness : NA

Plies/Laminates : NA

Date Rec'd. : 3/24/14

Via : DHL

Returned : DHL

SET-UP

Shot Spacing : PER NIJ-STD-0106.01

Witness Panel : 0.020", 2024-T3 ALUMINUM

Obliquity : 0 deg.

Backing Material : NA

Conditioning : AMBIENT

Primary Vel. Screens : 6.5 ft., 9.5 ft.

Primary Vel. Location : 8.0 ft. From Muzzle

Residual Vel. Screens : NA

Residual Vel. Location : NA

Range to Target : 16.5 ft.

Target to Wit. : 5.0 in.

Range No. : 10

Temp. : 68 F

BP : 30.07 in. Hg

RH : 48%

Barrel No./Gun : 357 SIG R10

Gunner : ALLINGHAM

Recorder : WOLFE

AMMUNITION

(1) : 357 SIG FMJ, 125 gr.

(2) :

(3) :

(4) :

Lot No. : UNKNOWN

Lot No. :

Lot No. :

Lot No. :

APPLICABLE STANDARDS OR PROCEDURES

(1) : PER NIJ-STD-0106.01 (MODIFIED)

(2) : LEVEL IIIA

(3) : REQUIRED VELOCITY: 1440-1499 fps

Shot No.	Ammo.	Time 1 (usec)	Velocity 1 (ft/s)	Time 2 (usec)	Velocity 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	2050	1463	2050	1463	1463	None	(a)
2	1	2071	1449	2071	1449	1449	None	(b)
3	1	2015	1489	2015	1489	1489	None	(c)
4	1	2044	1468	2044	1468	1468	None	(d)

REMARKS :

FOOTNOTES :

(a) SHOT IMPACTED ON FRONT OF HELMET
(b) SHOT IMPACTED ON BACK OF HELMET
(c) SHOT IMPACTED ON RIGHT OF HELMET
(d) SHOT IMPACTED ON LEFT OF HELMET