



Ballistic Resistance – Test Report

Client:	Leison Global (Italy) Co., Limited 8, Via Monte Cristallo 36061 Bassano del Grappa, Italy
Date of report:	17 September 2015
Report prepared by:	Ashley Gowland, Customer Operations Coordinator
Report reviewed by:	Wesley Mason, Manager of Technical Operations - Hard Armor
Test method and supporting documentation:	Per Customer Instructions NIJ-STD-0101.06, Level IIIA
Job number:	000004790A
Date of sample receipt, shipping method, identification information, and inspection results:	The sample(s) were received on 3 September 2015 via DHL. Sample item(s) were identified as enhanced Tactex ballistic fiber. The test sample(s) were inspected prior to testing and no anomalies were discovered.
Date of testing and location:	Testing commenced on 16 September 2015 , at the H.P. White Laboratory, Inc. facilities located at 3114 Scarboro Road, Street, Maryland.
Date of test completion and sample disposition:	Testing concluded on 16 September 2015 ; sample(s) will be discarded, unless otherwise instructed.
Test data transmittal method and storage location:	This test report and test data were transmitted via email in a manner compliant with ISO 17025 requirements. Permanent electronic and hardcopy files are maintained in accordance with HPWLI data storage policy on data storage systems, filed by job number.
Revision number and date:	REVISION 1, 24 SEPTEMBER 2015
Disclaimer:	Testing was performed on sample(s) provided by the client. H.P. White Laboratory, Inc. holds no responsibility for sample selection methods. This report is based on data obtained from testing only the sample(s) 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. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the Federal Government. This testing was performed by H.P. White Laboratory, Inc. to client specification, and the test results are the property of the client, who holds all rights of reproduction or publication of this report and related test data.
International control statement:	Information contained herein may be subject to the Export Administration Regulations, the Arms Export Control Act and/or the International Traffic in Arms Regulations. These commodities may not be resold, diverted, transferred, made available to, or otherwise disposed of, to any other country or to any person other than the authorized end-user or consignee(s), either in their original form or after being incorporated into other end-items, without first obtaining approval from the U.S. Government.

Test Procedures

Ballistic Resistance Testing: All testing was conducted on an indoor range at ambient conditions in accordance with your instructions and the general provisions of NIJ-STD-0101.06. Testing was conducted at threat level IIIA, using caliber 44 magnum, 240 grain, SWGC and 9mm, 124 grain, FMJ ammunitions. The test sample was positioned 16.5 feet from the muzzle of the barrel to produce zero (0) degree obliquity impacts. Photoelectric infrared screens were located at 6.5 feet and 9.5 feet which, in conjunction with electronic chronographs, were used to compute bullet velocities at 8.0 feet forward of the muzzle. Penetrations were determined by visual examination of the 0.020 inch thick 2024-T3 aluminum alloy witness plate, placed 6.0 inches behind and parallel to the test sample. Table I provides a summary of information on the attached data record(s).

Table I: Ballistic Resistance, Summary of Results

Test Sample			Ballistic Threat			Results		
Sample Number	Thickness (in.)	Weight (lbs.)	Caliber	Obliquity	Shots	Velocity (fps)		Penetrations
						Max	Min	
HPW-1	NA	1.59	44 Mag.	0°	5	1455	1371	0
HPW-2	NA	1.19	9mm	0°	5	1428	1367	0

Report prepared by:



Ashley Gowland
Customer Operations Coordinator

Report reviewed by:



Wesley Mason
Manager of Technical Operations - Hard Armor



TEST PANEL

Manufacturer : SUNSION OUTDOOR EQUIP. MANUF. CO.LTD

Size : 14x14 in.

Thicknesses : NA

Avg. Thick. : NA

Description : TACTEX BALLISTIC FIBER

Sample No. : HPW-1 (44Mag)

Weight : 1.59 lbs.

Hardness : NA

Plies/Laminates :

Date Rec'd. : 9/3/15

Via : DHL

Returned :

SET-UP

Shot Spacing : PER CUSTOMER REQUEST

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. : 6.0 in.

Range No. : 1

Temp. : 71 F

BP : 30.03 in. Hg

RH : 47%

Barrel No./Gun : R1/ 44 MAG

Gunner : WOLFE

Recorder : TRAUTMAN

AMMUNITION

(1) : 44 MAGNUM, SWGC, 240 gr.

(2) :

(3) :

(4) :

Lot No. : PMC B44243

Lot No. :

Lot No. :

Lot No. :

APPLICABLE STANDARDS OR PROCEDURES

- (1) : NIJ-STD-0101.06
- (2) : LEVEL IIIA
- (3) : REQUIRED VELOCITY: 1350-1450 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	2145	1399	2141	1401	1400	None	
2	1	2100	1429	2114	1419	1424	None	
3	1	2187	1372	2190	1370	1371	None	
4	1	2060	1456	2064	1453	1455	None	
5	1	2170	1382	2177	1378	1380	None	

REMARKS :	FOOTNOTES :



H.P. White Laboratory, Inc.

BALLISTIC RESISTANCE TEST

Client : 5389: LEISON GLOBAL (ITALY) CO., LIMITED

Job No. : 000004790

Test Date : 9/16/15

TEST PANEL

Manufacturer : SUNSION OUTDOOR EQUIP. MANUF. CO.LTD
Size : 12x12 in.
Thicknesses : NA
Avg. Thick. : NA
Description : TACTEX BALLISTIC FIBER

Sample No. : HPW-2 (9mm)
Weight : 1.19 lbs.
Hardness : NA
Plies/Laminates :

Date Rec'd. : 9/3/15
Via : DHL
Returned :

SET-UP

Shot Spacing : PER CUSTOMER REQUEST
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. : 6.0 in.

Range No. : 1
Temp. : 71 F
BP : 30.03 in. Hg
RH : 47%
Barrel No./Gun : R1/ 9mm
Gunner : WOLFE
Recorder : TRAUTMAN

AMMUNITION

(1) : 9mm, FMJ, 124 gr.
(2) :
(3) :
(4) :

Lot No. : PMC B44243
Lot No. :
Lot No. :
Lot No. :

APPLICABLE STANDARDS OR PROCEDURES

(1) : NIJ-STD-0101.06
(2) : LEVEL IIIA
(3) : REQUIRED VELOCITY: 1350-1450 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	2101	1428	2101	1428	1428	None	
2	1	2199	1364	2195	1367	1365	None	
3	1	2114	1419	2114	1419	1419	None	
4	1	2136	1404	2132	1407	1406	None	
5	1	2177	1378	2177	1378	1378	None	

REMARKS :

FOOTNOTES :