

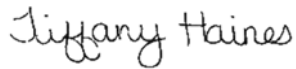


HOSDB – Test Report

Client:	Fortress Armour Attention: Khalid Khames 15 Bishops Park Mid Calder W Lothian EH53 OSQ United Kingdom
Report date:	26 June 2017
Job number:	000007369A
Test procedure and supporting documentation:	Per Customer Instructions HOSDB
Sample receipt, identification information, and disposition:	The sample(s) were received on 23 June 2017 . Sample item identification and description details are provided on the attached data record(s). The test sample(s) were inspected prior to testing and no anomalies were discovered. Sample(s) will be returned, discarded, or held, per customer instructions.
Test date(s) and location:	Testing commenced on 26 June 2017 , at the H.P. White Laboratory, Inc. facilities located at 3114 Scarboro Road, Street, Maryland. Testing concluded on 26 June 2017 .
Report prepared by:	Tiffany Haines, Customer Operations Specialist
Report reviewed by:	Rob Kinsler, Chief of Technical Operations
Revision number and date:	NA
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.
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.
Destination control statement:	These items are controlled by the U.S. government and authorized for export only to the country of ultimate destination for use by the ultimate consignee or end-user(s) herein identified. They may not be resold, transferred, or otherwise disposed of, to any other country or to any person other than the authorized ultimate consignee or end-user(s), either in their original form or after being incorporated into other items, without first obtaining approval from the U.S. government or as otherwise authorized by U.S. law and regulations.

Stab Resistance Testing: The stab resistance of body armor was evaluated using engineered test blades or spikes of uniform dimensions. In these tests, the test blades or spikes were held in a drop weight of specified mass. The drop weight was dropped from various heights in an apparatus that controls the orientation and position of impact of the test blade or spike. The body armor was supported on a composite backing material. The test measurement was the depth of blade or spike penetration through the armor at specified impact energies. See attached data record(s) for specific test information.

Report prepared by:



Tiffany Haines
Customer Operations Specialist

Report reviewed by:



Robert Kinsler
Chief of Technical Operations





HOSDB STAB TESTING

Client: 7032: FORTRESS ARMOUR

Job No. : 7369

Test Date : 6/26/17

TEST SAMPLE

Manufacturer : FORTRESS ARMOUR

Sample No.: 5

Date Rec'd : 6/23/17

Size (in.): 15.5 x 15.75

Weight (lbs.): 5.84

Description: PROPRIETARY

Thickness (in.): 0.085, 0.083, 0.083, 0.085

Average Thickness (in.): 0.084

SET-UP

Sabot Mass (g): 1254

D Time Base (mm) : 30.0

Test Personnel : WILLIAMS/ KAHLER

P1 Holder Mass (g): 652

Standoff Distance (mm) : 25.0

Temperature (F) : 70

S1 Holder Mass (g): 656

Backing Material Calibration Height (in): 16.5

Rel. Humidity (%) : 57

Spike Holder Mass (g): 650

Spike Lot Number: HOSDB03

P1/B Lot Number: HOSDB02

APPLICABLE STANDARDS OR PROCEDURES

(1) HOSDB

No.	Sample Description	Blade (P1, S1, Spike)	Angle (deg.)	Desired Energy		Drop Height		Blade Mass (g)	HRC	Time (ms)	Velocity (m/s)	Impact Energy (J)	Penet. (mm)	Footnotes
				Level	J	(ft.)	(in.)							
1	5	P1/B	0	L3, E1	43	7	8	18.20	-102	4.4891	6.68	43.29	0	
2	5	P1/B	0	L3, E1	43	7	8	18.00	-113	4.4930	6.68	43.21	0	
3	5	P1/B	0	L3, E1	43	7	8	18.09	-115	4.4850	6.69	43.37	0	
4	5	P1/B	0	L3, E2	65	11	8	18.01	-110	3.6455	8.23	65.26	0	
5	5	P1/B	0	L3, E2	65	11	8	18.03	-120	3.6458	8.23	65.25	0	
6	5	SP/B	0	L3, E1	43	7	8	7.95	-110	4.4788	6.70	43.44	0	h
7	5	SP/B	0	L3, E1	43	7	8	8.01	-107	4.4861	6.69	43.30	0	h
8														
9														
10														
11														
12														
13														
14														
15														

Notes:

Remarks:

- Sabot Mass includes average weight of dampers
- Holder Mass includes average weight of blades/spikes
- Height is for reference only, may vary to meet energy requirements
- D Time Base is distance between velocity sensors
- Standoff Distance is measured from blade tip to armor surface when drop mass is at 0 position (just breaking bottom velocity sensor beam)
- Impact energy is estimated based on calculated energy and efficiency
- For energy level E1, a max penetration of 7mm is allowed
- For energy level E2, a max penetration of 20mm is allowed

Footnotes

- a - Excessive energy (above tol)
- b - Insufficient energy (below tol)
- c - Too close (< 2 in) to armor edge
- d - Too close (< 2 in) to backing matl edge
- e - Too close (< 2 in) to prior impact
- f - Reliable measurement not possible
- g - Impact on seam
- h - Threat instrument bent
- i - Threat instrument broke
- j - Unfair double strike (bounce)
- k - Other (See remarks)