

# H.P. WHITE LABORATORY, INC.

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1 July 2014  
(HPWLI 000002963B)

Gigacrete Inc.  
6775 Speedway Boulevard, Suite M105  
Las Vegas, NV 89115

Attention: Michael Johnson

In accordance with your instructions, H.P. White Laboratory, Inc. conducted Ballistic Resistance Testing of one (1) un-grouted CMU Block assembly with 1 inch of BallistiCrete applied to one side of the sample. The sample was received 25 June 2014 via Old Dominion.

Testing was conducted in accordance with the general provisions of NIJ-STD-0108.01, BALLISTIC RESISTANT PROTECTIVE MATERIALS, dated September 1985, Level III, using caliber 7.62 x 51mm, 149 grain, M80 Ball ammunition. The test samples were rigidly mounted on an indoor range 50.0 feet from the muzzle of a test barrel to produce zero (0) degree obliquity impacts. Photoelectric infrared screens were positioned at 6.5 and 9.5 feet which, in conjunction with dual elapsed time counters (chronographs), were used to compute projectile velocities 8.0 feet forward of the muzzle. Penetrations were determined by visual examination of a 0.020 inch thick aluminum alloy 2024T3 witness panel positioned 6.0 inches behind, and parallel to, the test samples. Table I presents a summary of the enclosed data record.

TABLE I. SUMMARY OF RESULTS

Test Sample			Ballistic Threat				Results	
Sample Number	Thickness	Weight (lbs.)	Caliber	Obliquity (degrees)	Shots (a)	Velocity (fps)		Penetrations
						Max.	Min.	
HPW-1	1 inch	86.0	7.62, M80	0	5	2780	2747	0

(a) 4 on 8" square-1 in center.

This report is based on data obtained from having tested only the sample 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 sample will be returned per your instructions. Should you have any questions regarding this matter, or if we may be of any further service, please do not hesitate to contact us.

Report Prepared By:

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Customer Operations Coordinator-  
Vehicular Armor

Report Reviewed By:

Kevin Black  
Manager of Technical Operations-  
Vehicular Armor

Enclosure



# H.P. White Laboratory, Inc.

## BALLISTIC RESISTANCE TEST

Client : 5490: GIGACRETE

Job No. : 000002963      Test Date : 6/30/14

### TEST PANEL

Manufacturer : GIGACRETE

Size : 16 x 16 in.

Thicknesses : 1.00, 1.00, 1.00, 1.00 in.

Avg. Thick. : 1.000 in.

Description : UNGROUTED CMU BLOCK WITH 1" THICK COATING OF BALLISTICRETE

Sample No. : HPW-1

Weight : 86.0 lbs.

Hardness : NA

Plies/Laminates : NA

Date Rec'd. : 6/25/14

Via : OLD DOMINION

Returned : NA

### SET-UP

Shot Spacing : 4 ON 8" SQUARE - 1 IN CENTER

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 : 50.0 ft.

Target to Wit. : 6.0 in.

Range No. : 5

Temp. : 73 F

BP : 30.00 in. Hg

RH : 71%

Barrel No./Gun : R3/ .308

Gunner : GARRETT

Recorder : GORRERA

### AMMUNITION

(1) : 7.62mm Ball, M80, 149 gr.

(2) :

(3) :

(4) :

Lot No. : UNKNOWN

Lot No. :

Lot No. :

Lot No. :

### APPLICABLE STANDARDS OR PROCEDURES

(1) : NIJ-STD-0108.01

(2) : LEVEL III

(3) : REQUIRED VELOCITY: 2700-2800 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	1088	2757	1088	2757	2757	None	
2	1	1088	2757	1092	2747	2752	None	
3	1	1092	2747	1092	2747	2747	None	
4	1	1079	2780	1079	2780	2780	None	
5	1	1079	2780	1083	2770	2775	None	

### REMARKS :

### FOOTNOTES :