

Ballistic Testing Services

Report Number: BTR-10-02-2009-TBD-Sample 5

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Report Date: October 2, 2009
 Contact: Carleton Elliott
 Email: support@sureboard.com

Ballistic Results

Project Summary

Type of Products to be tested: Series 200B Wall Assemblies
 Test Specimen Sample size(s): 13.4 x 15.5 inch
 Number of test specimens: 6 Samples
 Weight of all samples: 210 lbs
 Are Materials a Health Hazard: No
 Need the Tests performed by: October 5, 2009
 Need products shipped back: Yes
 Purchase Order Number: TBD

International Ballistic Standards / Specifications Testing

- ASTM Brunswick FRA NIJ CFR Pass All
 Australian Canadian Germ DIN State Dept CFR SYA
 British EN 1063 MIL-SAMIT UL 752 Other

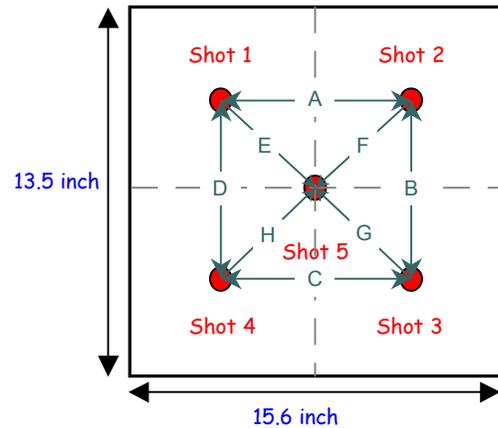
Test Standard: Underwriters Laboratory UL752
 Particular Test: UL Level 8 (.30 cal. 7.62 NATO FMJ)
 Velocity Range: 2,750 to 3,025 ft/s
 Number of Shots: 5 shots
 Spacing / Pattern: 4.5 inch square

Test Results

Product Number: Sample 5
 Sample Type: Series 200B Wall Assembly
 Sample Size: 13.5 x 15.6 inch
 Thickness: 5.3 inch
 Weight: 45 lbs
 Weapon Type: 7.62 NATO
 Cartridge / Projectile Type: 7.62 NATO / M80 FMJ
 Projectile Weight: 150 grains
 Target Distance: 15 feet
 Number of Shots: 5 shots

Shot Sequence:	Shot 1	Shot 2	Shot 3	Shot 4	Shot 5
Impact Velocity (ft/sec) *:	2,798	2,818	2,845	2,793	2,867
Impact Energy (ft-lbs):	2,607	2,644	2,695	2,598	2,737
Impact Momentum (lb-sec.):	1.86	1.88	1.89	1.86	1.91
Impact Angle (degrees):	0°	0°	0°	0°	0°
Penetration Effect:	NP	NP	NP	NP	NP

Witness plate material: 0.125 in. thick corrugated cardboard
 Spall catch box: Not required
 Witness / Box Distance: 18 inches
 Spall Occurrence: None
 Test Temperature: 75 ° F
 Test Date: October 2, 2009
 Comments: Passed the Test



Impact Spacing (inches)	
A	4.50
B	4.50
C	4.50
D	4.50
E	3.30
F	3.13
G	3.25
H	3.13
Average 4.50	
Average 3.20	

NP = No Penetration
 CP = Complete Penetration

Comments and Test Descriptions

* Velocity measurements were taken at a distance of 6 feet from muzzle.

Test and Report Engineers

Tested and Reported by: Sam Raheb

Signature: Sam Raheb Date: October 2, 2009

Name: **Intermat Inc.**

Report Date: **October 2, 2009**

Ballistic Test Results and Photographs

Ballistic Test Results:

The test sample passed the Underwriters Laboratory UL752 Level 8 (.30 cal. 7.62 NATO FMJ) Ballistic test.

Projectile Penetration Effects:

There was no partial or complete projectile penetration of the sample for all 5 shots.

Witness Plate and Spall Effects:

No spall was observed, but no damage to the witness plate occurred.

Photographs

The following photographs show both the pre and post-test sample. *Additional larger sized photographs are included with this report.*

Sample 5 - Series 200B Wall Assy - UL Level 8 7.62 NATO - 13.5 x 15.6 x 5.3 inch



Sample 5 Pretest Impact Side Sample 5 Pretest Rear Side Sample 5 Posttest Impact Side Sample 5 Posttest Rear Side

Test and Report Engineers

Tested and Reported by: **Sam Raheb**

Signature: *Sam Raheb*

Date: **October 2, 2009**