

Ballistic Testing Services

Report Number: BTR-03-26-2009-PO-020355-BR-8 - Sample 1

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 Address: 5700 Hannum Avenue, Suite 250, Culver City, CA 90230
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Report Date: March 26, 2009
 Contact: Roger Lange
 Email: sales@secmet.com

Ballistic Results

Project Summary

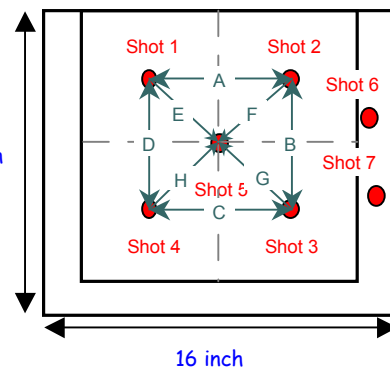
Type of Products to be tested: Door and Frame Assembly
 Test Specimen Sample size(s): 14 x 16 inch
 Number of test specimens: 6 Sample(s)
 Weight of all samples: 215 lbs
 Are Materials a Health Hazard: No
 Need the Tests performed by: March 31, 2009
 Need products shipped back: Yes
 Purchase Order Number: PO-020355

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: UL 752
 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: BR-8 - Sample 1
 Sample Type: Door and Frame Assembly
 Sample Size: 14 x 16 inch
 Thickness: 6 inches
 Weight: 41 lbs
 Weapon Type: 7.62 Rifle
 Cartridge / Projectile Type: 7.62 x 51 NATO / M80 FMJ
 Projectile Weight: 150 gr
 Target Distance: 15 ft



	UL Level 8 (.30 cal. 7.62 NATO FMJ)				
	Door Section				
Particular Test:	UL Level 8 (.30 cal. 7.62 NATO FMJ)				
Number of Shots:	5 shots				
Shot Sequence:	Shot 1	Shot 2	Shot 3	Shot 4	Shot 5
Impact Velocity (ft/sec) *:	2,805	2,828	2,825	2,830	2,769
Impact Energy (ft-lbs):	2,620	2,663	2,658	2,667	2,553
Impact Momentum (lb-sec.):	1.87	1.88	1.88	1.88	1.84
Impact Angle (degrees):	0°	0°	0°	0°	0°
Penetration Effect:	NP	NP	NP	NP	NP

Frame shots	
2 shots	
Shot 6	Shot 7
2,821	2,828
2,650	2,663
1.88	1.88
0°	0°
NP	NP

Witness plate material: 0.125 in. thick corrugated cardboard
 Witness Plate Distance: 18 inches
 Spall Occurrence: None
 Test Temperature: 74 °F
 Test Date: March 26, 2009 NP = No Penetration
 Comments: Passed the Test CP = Complete Penetration

Impact Spacing (inches)	
A	3.90
B	4.38
C	4.50
D	3.75
E	1.90
F	3.13
G	3.75
H	2.75
Average	
4.13	
Average	
2.88	

Comments and Test Descriptions

* Velocity measurements were taken at a distance of 6.6 ft from muzzle

Test and Report Engineers

Tested and Reported by: Sam Wilson

Signature: *Sam Wilson*

Date: March 26, 2009

Name: Security Metal Products Corporation

Report Date: March 26, 2009

Ballistic Test Results and Photographs

Ballistic Test Results:

The Door and Frame Assembly sample passed the UL Level 8 (.30 cal. 7.62 NATO FMJ) Ballistic test. Ten (10) additional shots were taken to verify both the structural integrity and extra ballistic resistance performance of the sample.

Projectile Penetration Effects:

There was no partial or complete projectile penetration of the Door and Frame Assembly sample for all 17 shots.

Witness Plate and Spall Effects:

No spall was observed and no damage occurred to the 0.125 in. thick corrugated cardboard witness plate.

Photographs

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

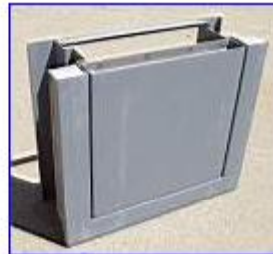
Sample 1 - UL752 Level 8 (7.62 NATO) Door and Frame Assembly - 16 x 14 x 6 in.



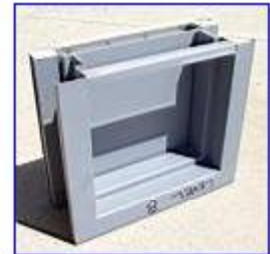
Sample 1 Pre Test Impact Side



Sample 1 Pre Test Rear Side



Sample 1 Pre Test Impact Side



Sample 1 Pre Test Rear Side



Sample 1 Post Test Impact Side



Sample 1 Post Test Rear Side



Sample 1 Post Test Rear Side



Sample 1 Post Test Impact Side



Sample 1 Post Test Rear Side

Test and Report Engineers

Tested and Reported by: Sam Wilson

Signature: *Sam Wilson*

Date: March 26, 2009