

Ballistic Testing and Design Services

Report Number: BTR-05-20-2005-N/A-Sample 3

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CloseFocusResearch.com

Name: **North American Bullet Proof**
 Address: **P.O. Box 628, Cibolo, Texas 78108**
 Phone: **Phone: 210-225-0982**

Report Date: **May 20, 2005**
 Contact: **Barry L. White**
 Email: **bwhite@shotgard.com**

Ballistic Results

General Information

Type of Products to be tested: **Composite Armor**
 Test Specimen Sample size(s): **24 x 24 inch**
 Number of test specimens: **3 Sample(s)**
 Weight of all samples: **420 lbs**
 Are Materials a Health Hazard: **No**
 Need the Tests performed by: **May 30, 2005**
 Need products shipped back: **Yes**
 Purchase Order Number: **N/A**

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: **MIL-SAMIT**
 Particular Test: **MIL-SAMIT Part 1 (.30 cal. 7.62 NATO M80)**
 Velocity Range: **2,750 to 2,850 ft/s**
 Number of Shots: **25 shots**
 Spacing / Pattern: **8 in. Ø circle**

Test Results

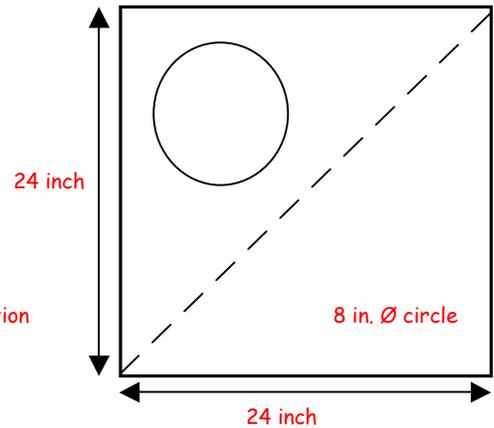
Product Number: **Sample 3**
 Sample Type: **Composite Armor**
 Sample Size: **24 x 24 inch**
 Thickness: **1.75 inch**
 Weight: **140 lbs**
 Weapon Type: **7.62 Rifle**
 Cartridge / Projectile Type: **7.62 x 51 NATO M80**
 Projectile Weight: **147 gr**
 Target Distance: **75 ft**
 Number of Shots: **25 shots**

Shot Sequence *:

Shot 1	Shot 12	Shot 25
2,796	2,802	2,790
2,551	2,562	2,540
1.82	1.83	1.82
Impact Angle (degrees): 0°		
Penetration Effect: NP		
Bulge Height (inches) ***: ~0.25 maximum		

Impact Velocity (ft/sec)**: **2,796 2,802 2,790**
 Impact Energy (ft-lbs): **2,551 2,562 2,540**
 Impact Momentum (lb-sec): **1.82 1.83 1.82**
 Impact Spacing / Pattern: **All 25 shots within the 8 inch diameter circle**
 Witness plate material: **Aluminum Foil**
 Witness Plate Distance: **6 inches**
 Spall Occurrence: **None**
 Test Temperature: **82 °F**
 Test Date: **May 20, 2005**
 Comments: **Passed the Test - All 25 shots penetrated the impact surface but did not exit the rear surface**

NP = No Penetration
 CP = Complete Penetration



Comments and Test Descriptions

- * Shot Sequence: velocity measurements were taken at the beginning, middle, and at the end of the 25 shot sequence.
- ** Velocity measurements were taken at a distance of 6.6 ft from muzzle
- *** The post impact Bulge Height is the distance between the apex of the extruded deformation bulge to the tangent plane of the flat surface. This measurement is taken from the side opposite to the impacts.

Test and Report Engineers

Tested and Reported by: **Sam Wilson**

Signature: *Sam Wilson*

Date: **May 20, 2005**

Name: North American Bullet Proof

Report Date: May 20, 2005

Ballistic Test Results and Photographs

Ballistic Test Results:

This Composite Armor test sample passed the 25 shot MIL-SAMIT Part 1 (.30 cal. 7.62 NATO M80) Ballistic test.

Projectile Penetration Effects:

There was no partial or complete projectile penetration of the Composite Armor sample for all 25 shots. All 25 shots penetrated the impact surface but did not exit the rear surface.

Witness Plate Spall Effects:

The Aluminum foil witness plate was unaffected by the test. No spall was observed.

Photographs

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

Sample 3: 24 x 24 x 1.75 inch MIL-SAMIT 7.62 NATO M80 Composite Armor



Sample3 Pre Test Impact Side



Sample3 Pre Test Read Side



Sample3 Post Test Impact Side



Sample3 Post Test Impact Side Closeup



Sample3 Post Test Rear Side



Sample3 Post Test Rear Side Closeup

Test and Report Engineers

Tested and Reported by: Sam Wilson

Signature: *Sam Wilson*

Date: May 20, 2005