

Ballistic Testing Services

Report Number: BTR-03-25-2021-1335-Sample 1

Phone: 800-513-4291 Email: techsupport@CloseFocusResearch.com

CloseFocusResearch.com

Name: Titan Specialty Doors  
 Address: 10 Millpond Drive Units 4 & 5, Lafayette, NJ 07848  
 Phone: Phone: 724-809-0655 / Mobile: 201-755-1652

Report Date: March 25, 2021  
 Contact: Danielle Harris  
 Email: danielle@titanspecialtydoors.com

**Ballistic Results**

**Project Summary**

Type of Products to be tested: **Bullet Resistant Door Assemb**  
 Test Specimen Sample size(s): **16 x 16 inch**  
 Number of test specimens: **1 Sample**  
 Weight of all samples: **58.2 lbs**  
 Are Materials a Health Hazard: **No**  
 Need the Tests performed by: **within 7 to 10 days**  
 Need products shipped back: **Yes**  
 Purchase Order Number: **1335**

**International Ballistic Standards / Specifications Testing**

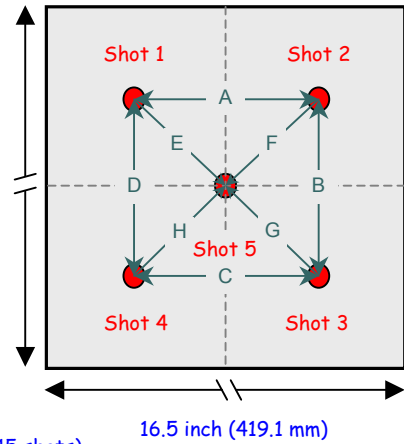
- ASTM  Canadian  FRA  NIJ  CFR Pass All
- Australian  EN1063  Germ DIN  State Dept  CFR SYA
- British  EN1522/23  MIL-SAMIT  UL 752  Other

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**  
 Shots: **5 shot UL752 Level 8 pattern and 15 follow-up shots**  
 Shot Pattern: **4.5 inch ± 0.5 in. square / 15 shots over sample surface**

**Test Results**

Test Sample: **Sample 1**  
 Item / DOM: **1 / March 11, 2021**  
 Sample ID: **SD191202-002**  
 Description: **UL752 Level 8 Door Assembly**  
 Sample Size: **15.1 x 16.5 inch (384.2 x 419.1 mm)**  
 Thickness: **5.91 inch (150.0 mm)**  
 Weight: **58.2 lbs (26.4 kg)**  
 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 shot UL752 Level 8 pattern (see page 2 for the remaining 15 shots)**

Shot Sequence:	Shot 1	Shot 2	Shot 3	Shot 4	Shot 5
Impact Velocity (ft/sec) *:	2,875	2,886	2,872	2,891	2,867
Impact Energy (ft-lbs):	2,753	2,774	2,747	2,783	2,737
Impact Momentum (lb-sec.):	1.91	1.92	1.91	1.93	1.91
Impact Angle (degrees):	0°	0°	0°	0°	0°
Sample Penetration:	NP	NP	NP	NP	NP
Witness Plate Penetration:	NP	NP	NP	NP	NP



Impact Spacing (inches)	
A	4.70
B	4.00
C	4.50
D	4.50
E	3.10
F	3.30
G	3.00
H	3.00
Average	
4.43	
Average	
3.10	

**Witness Plate & Spall Result**

Witness plate material: **0.125 in. thick corrugated cardboard**  
 Spall catch box: **Not required**  
 Witness / Box Distance: **18.0 inches**  
 Spall Occurrence: **No spall occurred**  
 Test Temperature: **68 ° F**  
 Test Date: **March 25, 2021**  
 Pass / Fail Results: **Passed the Test**  
 Comments:

NP = No Penetration  
 PP = Partial Penetration  
 CP = Complete Penetration  
 N/A = Not Applicable

**Footnotes**

\* 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: **March 25, 2021**

Name: **Titan Specialty Doors**

Report Date: **March 25, 2021**

**Ballistic Test Results**

15 additional shots distributed over the test sample's surface

Shot Sequence:	Shot 6	Shot 7	Shot 8	Shot 9	Shot 10	Shot 11	Shot 12	Shot 13	Shot 14	Shot 15
Impact Velocity (ft/sec) *:	2,881	2,901	2,884	2,897	2,891	2,879	2,879	2,871	2,869	2,897
Impact Energy (ft-lbs):	2,764	2,803	2,770	2,795	2,783	2,760	2,760	2,745	2,741	2,795
Impact Momentum (lb-sec.):	1.92	1.93	1.92	1.93	1.93	1.92	1.92	1.91	1.91	1.93
Impact Angle (degrees):	0°	0°	0°	0°	0°	0°	0°	0°	0°	0°
Sample Penetration:	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP
Witness Plate Penetration:	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP

Shot Sequence:	Shot 16	Shot 17	Shot 18	Shot 19	Shot 20
Impact Velocity (ft/sec) *:	2,895	2,896	2,892	2,880	2,892
Impact Energy (ft-lbs):	2,791	2,793	2,785	2,762	2,785
Impact Momentum (lb-sec.):	1.93	1.93	1.93	1.92	1.93
Impact Angle (degrees):	0°	0°	0°	0°	0°
Sample Penetration:	NP	NP	NP	NP	NP
Witness Plate Penetration:	NP	NP	NP	NP	NP



Post Test Impact Side (20 shots)



Post Test Rear Side (20 shots)

**Ballistic Test Results:**

Test Sample 1 passed the Underwriters Laboratory UL752 UL Level 8 (.30 cal. 7.62 NATO FMJ) Ballistic test. There was no complete penetration of the test sample from any of the 7.62 NATO / M80 FMJ caliber projectiles.

**Witness Plate and Spall Effects:**

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

**Photographs**

The photographs shown on page 3 include both the pre and post-test sample. Additional larger sized photographs are included with this report.

**Test and Report Engineers**

Tested and Reported by: **Sam Raheb**

Signature: *Sam Raheb*

Date: **March 25, 2021**

Name: Titan Specialty Doors

Report Date: March 25, 2021

Ballistic Test Results and Photographs

Sample 1: D.O.M.: March 11, 2021 - SD191202-002 - UL Level 8 - 16.50 x 15.13 x 5.91 in.



Pre Test Impact Side



Pre Test Rear Side



Pre Test Top Left Side



Pre Test Top Right Side



Pre Test Impact Side



Pre Test Rear Side



Post Test Impact Side



Post Test Rear Side



Post Test Impact Side



Post Test Lock Impact Side



Post Test Lock Impact Side



Post Test Rear Side



Post Test Rear Side



Post Test Lock Rear Side



Post Test Top Left Impact Side



Post Test Top Left Rear Side



Post Test Top Right Rear Side



Post Test Top Rear Side



Post Test Left Rear Side



Post Test Left Rear Side



Post Test Top Rear Side



Post Test Top Rear Side



Post Test Right Rear Side



Post Test Top Impact Side



Post Test Top Rear Side



Post Test Left Rear Side



Post Test Top Left Rear Side



Post Test Top Left Impact Side



Post Test Top Left Impact Side



Post Test Right Impact Side

Test and Report Engineers

Tested and Reported by: Sam Raheb

Signature:

Date: March 25, 2021