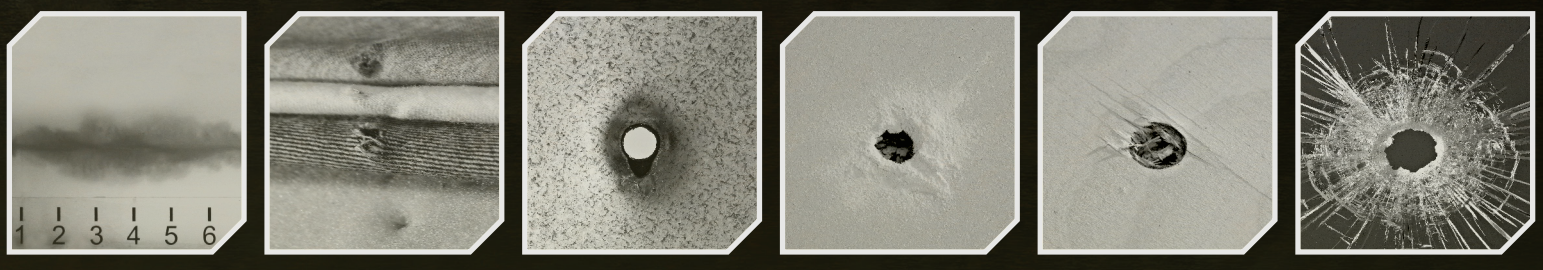
Hornady®

LAW ENFORCEMENT & MILITARY

AMMUNITION & TEST REPORT APPLICATION GUIDE



LAW ENFORCEMENT
& MILITARY

Ammunition Test Report and Application Guide

Thank you for your interest in Hornady Law Enforcement and Military Ammunition. Every care has been taken to ensure that the information in this notebook is accurate and presented in the most straightforward manner possible. We plan to regularly update this notebook as more data becomes available or as the product line is expanded.

If you have any questions requiring further information or technical assistance, please feel free to contact us at 800-338-3220, ext. 0. Once again, thank you for your interest in our products.

Hornady Manufacturing Co.
3625 W. Old Potash Hwy.
Grand Island, NE 68803
www.hornadyLE.com

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Hornady Test Protocol

Location: Hornady Manufacturing Ballistics Laboratory, Grand Island, Nebraska

Elevation: 1,800 feet ASL | **Temperature:** 74º F

Bullet Velocity [feet per second, fps]
All trajectories and associated velocities are from SAAMI minimum specification test barrels. An Oehler 83 with model 55 skyscreens was used for velocity measurements. Bullet velocity was measured at a distance of 15 feet from the muzzle. Down range velocities shown in the ballistic tables are calculated with an exterior ballistics computer program.

Trajectory Tables
Trajectories are calculated using a computer program. A (-) sign indicates the trajectory of the bullet is below the line of sight. A (+) sign indicates the trajectory of the bullet is above the line of sight. All trajectories were calculated for standard atmosphere (Sea level, 59º Fahrenheit, 29.92" Hg, .07647 lb./cu ft. density)

All Hornady® ammunition featured in this Application Guide is tested according to established FBI Penetration Testing protocol unless otherwise stated.

An explanation of the official FBI Penetration Testing is included on the following five pages.

Note: The data provided in this report is intended as a guide for making informed choices. Actual bullet trajectory and terminal performance may vary depending on the velocity of the bullet in your firearm, atmospheric conditions, type of materials encountered and the anatomical structures contacted.

All terminal testing is from actual firearms. The gelatin images represent one fired test shot. The data represents an average of five fired test shots. Individual results may vary.

FBI Penetration Testing

The purpose of the FBI Penetration Test is to determine the following information regarding a particular cartridge:

1. The penetration performance of the cartridge's projectile, throughout the series of six tests (depth of penetration to nearest .25 inch, expansion of projectile, retained weight of the projectile)
2. The average velocity, both from a test barrel and a service firearm
3. The average accuracy, both from a test barrel and a service firearm

The test medium utilized is 10% ballistic gelatin *(nominal)*, by weight. For a detailed description of the mixing procedure, see *"Ballistic Gelatin Mixing Procedures Practiced by the FBI"*, below.

Tests One through Six are shot at a distance of 10 feet from the muzzle to the front face of the gelatin block, unless otherwise noted.

Test One - *Bare Gelatin* – Made in accordance with standard FBI protocol (10% ordnance gelatin).

Test Two - *Heavy Clothing* – The gelatin block is covered with four layers of clothing: one layer of cotton t-shirt material (approximately 5.25 ounces per yard, 48 threads per inch); one layer of cotton shirt material (approximately 3.5 ounces per yard, 80 threads per inch); one layer of Malden Mills Polartec 200 fleece and one layer of cotton denim (approximately 14.4 ounces per yard, 50 threads per inch).

Tests 3-6 utilize light clothing (e.g. the cotton t-shirt and dress shirt materials above), in addition to the mentioned intermediate barrier.

Test Three - *Steel* – Two pieces of 20 gauge, hot-rolled steel with a galvanized finish are set three inches apart. The clothing covered gelatin block is placed 18 inches behind the rear most piece of steel. This test event simulates the weakest part of a car door.

Test Four - ***Wallboard*** – Two pieces of 1/2-inch standard gypsum board are set 3.5 inches apart. The gelatin block is placed 18 inches behind the rear most piece of gypsum. This test event simulates a typical building interior wall.

Test Five - *Plywood* – One piece of 3/4-inch "AA" fir plywood is set 18 inches in front of the gelatin block. This test event simulates the resistance of typical wooden doors or construction timbers.

Test Six - *Automobile Glass* – One piece (15" X 18") of A.S.I. 1/4-inch laminated automobile safety glass is set at an angle of 45˚ to the horizontal and 15˚ to the side, resulting in a compound angle. The gelatin block is placed 18 inches behind the glass. This test event simulates a shot taken at the driver of a car from the left front quarter of the vehicle.

[1] Polartec 200 (7614-9017). Available from: Polartec, LLC owned by Chrysalis Capital partners of Philadelphia, PA.

FBI Penetration Testing

Close Quarter Battle (CQB) testing is designed to provide information regarding the performance of projectiles fired from commonly used carbines. The CQB testing consists of tests 1-6 and the following:

Bare Gelatin at 100 yards, short barrel – This test is conducted with the shortest barrel carbine normally used in that caliber. In the case of FBI 5.56 short barrel carbines, the barrel length used is 10" 1:7 twist.

If the performance of the short barrel test indicates that the projectile is failing to expand, the test will be repeated with the original barrel length used throughout the test. In the case of the 5.56, FBI standard barrel configuration is 14.5", 1:7 twist.

The penetration shots are conducted with a test barrel, when practical/available, in order to allow for more consistent comparison of the **AMMUNITION**. The results received from a test barrel might be the same, or different than those from a service firearm. A service firearm is utilized during velocity and accuracy tests in order to show a perspective of the deviation, if any, from the test barrel. It is important to note that a cartridge should not be chosen solely due to its accuracy from a service firearm, unless that accuracy is compared to other cartridges fired from the same EXACT service firearm. Results may vary somewhat from firearm to firearm, including functional characteristics e.g. one pistol may be substantially more accurate, or produce higher velocity than another of the same make and model. Each test report will clearly specify the firearm used for testing.

Criteria For Which the FBI Will Conduct Penetration Testing For Outside Agencies:

- Ammunition must conform to the voluntary standards recommended by the Sporting Arms & Ammunition Manufacturers Institute (SAAMI).
- Ammunition must be "Newly Manufactured", and consist of no previously used or loaded components.
- Ammunition must be currently utilized, or being strongly considered, as a duty round by the requesting agency.
- Ammunition must be currently available to the Law Enforcement market.
- Ammunition must be substantially different from other ammunition previously tested by the FBI. (e.g. Identical projectiles at the same velocity from different companies will generally not be tested).
- Request must be made on Official Agency Letterhead Stationary, signed by a supervisory level or higher officer.
- Request must be accompanied by 200 rounds of ammunition, from the same lot number. No ammunition will be returned.
- Results of all testing are the property of the FBI, and will be shared with the requesting agency and other law enforcement agencies.

FBI Penetration Testing

Revisions to standard test:

Switch from Down to Polartec, January 1, 2004

The original test, created in 1988, used a down comforter (500-550 fill power) in a cambric shell (approx 232 threads per inch) as part of the heavy clothing mix. On January 1st, 2004, the protocol was changed to replace the down comforter with Polartec 200 fleece.

The switch to Polartec 200 was made in an effort to reduce uncontrollable variables in the test procedure and because fleece had become more prevalent than Down. Down comforters typically consist of stitched baffles containing the down. As the comforter is laid in front of the gelatin block, it is not uncommon for down to migrate to the bottom of the panel. It was difficult, if not impossible, to ensure that each shot was subjected to the same amount of down.

Prior to the switch, a comparison of bullet penetration, expansion and retained weight was conducted to see what, if any, changes would occur. Five shots were fired into a block of gelatin covered with the "down" heavy clothing and five shots were fired into a block of gelatin covered with the "fleece" heavy clothing. The validation numbers for the gelatin blocks were similar to ensure that the blocks were as identical as possible.

Ten (10) cartridges, two (2) rifle and eight (8) handgun, were compared. The results showed that the penetration averages differed by .2" (a -0.8% change), the expansion differed by .01" (a 2.2% change) and the weight difference was negligible (a .5% change).

Based on the testing conducted, it was determined that the consistency provided by a change to fleece would make the test protocol more scientifically repeatable and, therefore, provide better data for making ammunition selections.

Revisions to CQB test:

The CQB test originally consisted of 13 events, the eight original events plus four additional tests designed to provide input into the performance of ammunition from submachine guns and/or carbines. Reporting CQB results for 13 tests required three pages (two data pages and a photograph page). As testing continued and data was compared, the following modifications were made to the protocol.

Bare Gelatin at 50 yards – Eliminated during 2006. Examination of data showed it was always midway between bare gelatin at 10' and bare gelatin at 100 yards.

Bare Gelatin at 100 yards – Modified during 2010 to be fired with the shortest barrel commonly used in the FBI inventory.

Exterior Wall – Eliminated April 2010. Examination of data showed it to be statistically insignificant compared to sheetrock and plywood tests.

IIA Soft Body Armor – Eliminated during 2006. Every expanding pistol projectile tested was defeated by IIA soft Body Armor.

IIIA Soft Body Armor – Eliminated during 2006. Every rifle projectile tested successfully penetrated front panel of IIIA soft Body Armor. Expanding projectiles were stopped by back panel. This limited penetration depth to the distance between the panels. Captured data, therefore, was of limited value in evaluation of projectiles for LE use.

In addition to the above, on many tests, a cartridge which successfully defeated IIIA soft armor was not tested against IIA armor. Similarly, a cartridge which was defeated by IIA soft armor was not tested against IIIA armor.

Additionally, during 2006, the CQB results were analyzed to see if any tests appeared redundant. Based on data available at that time, the 20 yard glass test was removed from the CQB protocol.

FBI Penetration Testing

Elimination of 20 yard events, February 1, 2011: The test protocol originally was created with a 10 ft. distance to target to reflect the close nature of most LE shootings. At the time of conception, a logical question was how much difference, if any, would be seen at 20 yards. Therefore, the heavy clothing and (a slight variation of) the automobile glass test were repeated at 20 yards.

While the question is understandable, the 20 yard tests are now believed to be of limited value for the following reasons:

1. Historical data shows a statistically insignificant, if any, difference between the 10 foot and 20 yard data for identical barriers.
2. The 20 yard impact velocity may be identical to, or even higher than, a 10 foot impact velocity.
3. The 20 yard events may skew the test results in favor of the barrier used.

With respect to velocity, the Sporting Arms and Ammunition Manufacturer's Institute (SAAMI) recommends velocity boundaries of +/- 90 feet per second (fps). Most LE ammunition historically has shown much tighter tolerances than recommended. A random test of 40 rounds of premium factory service ammunition showed an average velocity of 988 fps with a range of 940 – 1024 fps. While the extreme spread of 84 fps is approximately ½ as large as SAAMI recommended limits, it could result in a 20 yard impact that is higher than a 10 ft. impact. Ballistic calculations during this test indicated that the projectile velocity decreased by approximately .4 fps per foot of travel. Therefore, in 50 feet of travel, it would be reasonable to expect the projectile to have lost approximately 20 fps.

If the fastest recorded shot had been 1024 fps, it would have impacted the 20 yard target with more velocity than an average shot would impact the 10 foot target.

An analysis of 23 years of ballistic data supports the opinion that any difference in data of 20 yard results is statistically insignificant compared to 10 foot results.

The 20 yard events, therefore, simply add more shots in the glass and heavy clothing test events. The FBI theory of a projectile that is "barrier blind" treats each barrier equally. Five shots are fired for each event. The inclusion of the 20 yard tests results in data of 10 shots for each of those barriers being considered. As the data for each test is individually reported, those analyzing performance have the option of assigning more emphasis on any individual event, at their discretion.

Ballistic Gelatin Mixing Procedures Practiced By The FBI:

In December, 1988, the FBI Academy Firearms Training Unit (FTU) designed and implemented the FBI Ammunition Tests. The test designs are based on research and consultation with experts in the fields of wound ballistics, forensic pathology, wound research and medical research. The full report of this research is available to *Law Enforcement Agencies and Military Units on the FBI Ammunition Data and Sniper Targets* CD ROM. This CD may be obtained from the FBI Ballistic Research Facility.

The tissue simulant utilized in FBI ballistic tests is Kind & Knox or Vyse 250-A ordnance gelatin. The mixture is 10%, by weight. Properly calibrated 10% ordnance gelatin is a reliable tissue simulant. Validation of ballistic gelatin is conducted by firing a .177" steel BB at 590 feet per second (fps), plus or minus 15 fps, into the gelatin, resulting in 8.5 centimeters (cm), plus or minus 1 cm, penetration (2.95" - 3.74"). All gelatin was stored at 40° F until just prior to testing. The gelatin was placed 10 feet from the muzzle of the test firearm (unless otherwise noted).

FBI Penetration Testing

The gelatin is mixed in the following manner (assuming a 20 pound block is desired):

- Weigh out two (2) pounds of gelatin powder[2] and place aside.
- Weigh out 18 pounds of hot 60˚C (140˚F) water in a plastic bucket.
  (Note: The FBI utilizes a scale which weighs to the nearest .01 lb).
- Add 2.5 ml of Foam Eater to the hot water.
- Add approximately .5 ml of oil of cinnamon to the hot water (prevents fungus growth).
- While utilizing a battery-operated drill with a mixing paddle attached, mix the water to the point of forming a whirlpool, but without introducing air into the mixture.
- While the water is being mixed, slowly add the gelatin powder.
- Pour the mixture into a clean mold pan.
- Allow to stand at room temperature for approximately 4 hours.
- Write date on small square of cardboard and place on top of mixture.
- Place pan with mixture into refrigerator set at 4˚C (39.2˚F).
- Allow to cure for 36 hours
  (***note:*** *larger blocks require longer cure time e.g. an 80 lb. block requires 96 hours to cure).*

Blocks, over time, deteriorate and are temperature sensitive. Former FBI publications advocated utilizing blocks within 20 minutes of removal from the refrigerator (a general statement pertaining to ambient temperature indoors). Allowable time outside the refrigerator is, however, relative to the temperature of the test environment (e.g. a block removed from a refrigerator and maintained in a room at the same temperature as the refrigerator will retain its validation significantly longer than one placed outside on a hot summer day). Note: some authorities believe mixing procedures may vary the consistency of gelatin. FBI studies indicate, however, that a block which displays the required level of penetration, within the required velocity range, is a "valid" tissue simulant.

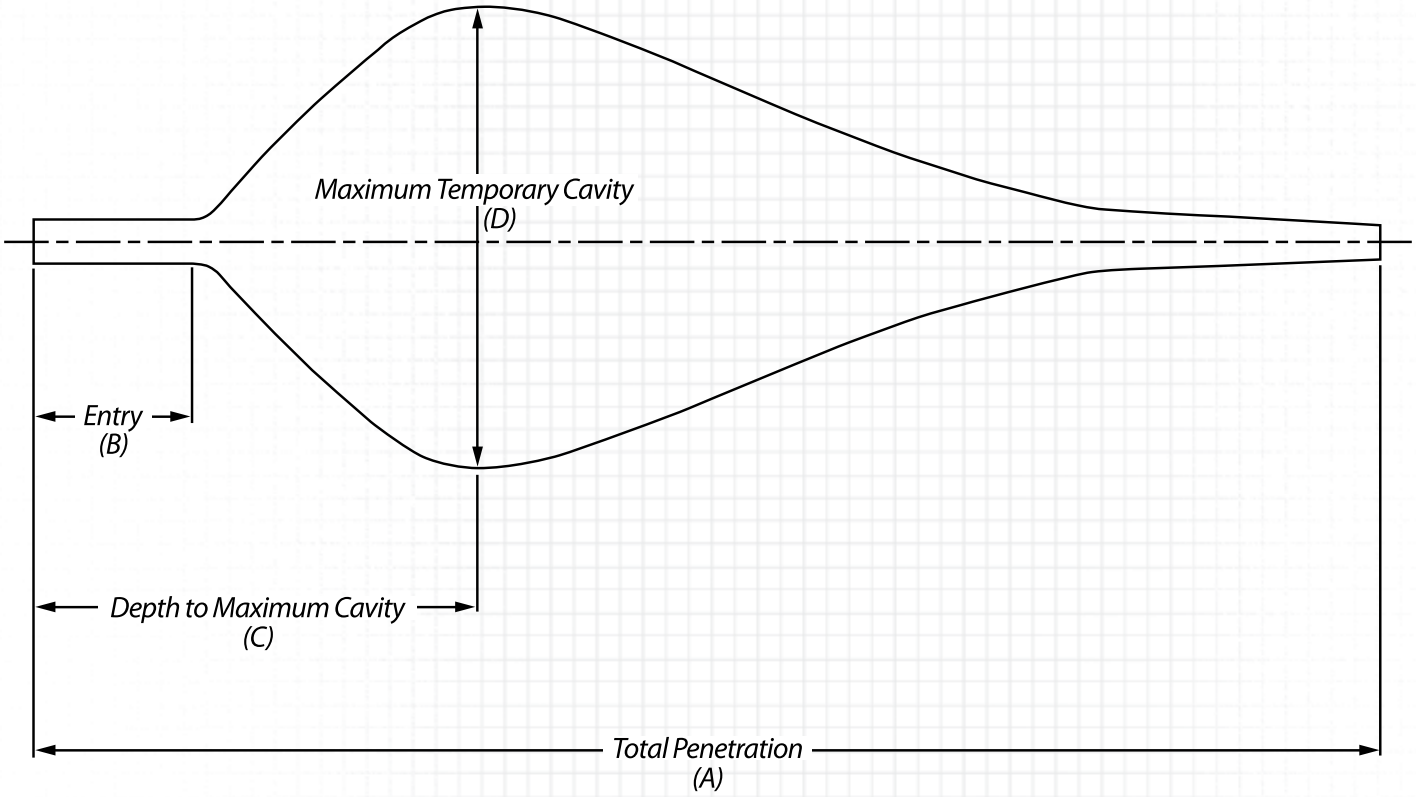
The FBI Ballistic Research Facility conducts its tests in an environmentally controlled shooting laboratory. Blocks of gelatin are removed from the refrigerator and checked for validation. Only valid blocks are used for testing. Blocks used in testing of conventional pistol ammunition are approximately 6.25" X 6.25" X 16". The initial block of gelatin used in a test is called the Primary Block. Each Primary Block is utilized for a maximum of 5 shots, one in each corner, approximately 1.75" from the nearest edge, and one in the center. Tests conducted by the FBI indicate this placement of shots results in substantially the same penetration as single shots into virgin blocks of gelatin. Any shots which cross the wound path of previous shots are refired. Primary blocks are not utilized for more than 5 shots, to include any shots which are refired.

Because some shots may penetrate more than one block of gelatin, one or more "stopper" blocks are placed behind the primary block. The stopper blocks may be utilized for more than one test, provided that wound channels are not crossed. At the end of each test, the stopper block is placed back into the refrigerator while another stopper is utilized with an unused Primary block. Stopper blocks may receive more than 5 penetrations, provided that no wound channels are crossed (e.g. a stopper which has 5 penetrations of 3" into one end can be flipped over and again used as a stopper). The FBI does not reuse gelatin. Used blocks are discarded.

[2] This weight is approximate. Due to the nature of gelatin, the exact ratio of powder to water must be determined, via testing. The current (February 2011) lot number (49454-81711) of Vyse gelatin in use by the FBI requires 2.35 pounds of powder to 17.65 pounds of water to create a block which most exhibits proper validation.

Gelatin Wound Profile Nomenclature

Gelatin Wound Channel



What is the NTOA Member Tested and Recommended Program?

This program allows manufacturers to have their products tested in the field by the law enforcement community. Results are published on the NTOA website and in the quarterly journal, *The Tactical Edge*. Products receiving a rating of 3.0 or higher will receive NTOA Field Tester Recommended Status and be allowed to affix the NTOA Member Tested & Recommended logo to the product materials. Products that score lower than 3.0 will not receive approval.

Products are tested and scored in 13 possible categories on a scale of 0 to 5.

1. Design
2. Performance
3. Ease of Use
4. Size
5. Quality
6. Durability
7. Storage
8. Versatility
9. Convenience
10. Application for Law Enforcement
11. Comfort
12. Cleaning/Maintenance
13. Accuracy

5 – Excellent: Defined as a product that performs at a level above advertised specifications and demonstrates its usefulness and quality of workmanship every time it is used and can be used for other purposes.

4 – Very Good: Defined as a product that exceeds advertised specifications on a regular basis and outperforms others in usefulness and quality of workmanship.

3 – Average: Defined as a product that meets minimum advertised specifications, has practical use, but does not go above or beyond the scope of quality or usefulness that is expected.

2 – Fair: Defined as a product that has occasional applications and in some situations meets advertised specifications, but overall is not effective.

0-1 – Poor: Defined as a product that does not meet minimum advertised specifications needed to make the product useful, product does not meet any of its practical purposes.

NOTICE:
Please note that this is not a product endorsement from the NTOA, it is a recommendation by a field tester for the law enforcement community. The NTOA Member Tested and Recommended program is designed as a service to assist the association's membership in selecting the best products available to the tactical community. NTOA does not provide a warranty, expressed or implied, or guarantee any of the products that have been tested and approved. NTOA assumes no liability for the use or misuse of any of the featured products.

Following is a listing of Hornady products that have been tested by an NTOA field tester, along with their overall score.

RIFLE

Item No.	NTOA Rated Hornady Product	Product Line	Score
83276	223 Rem 55 gr.	TAP Urban®	**4.82**
83286	223 Rem 60 gr.	TAP Urban®	**4.5**
80896	308 WIN 110 gr.	TAP Urban®	**4.68**
83285	223 Rem 62 gr.	TAP® Barrier™	**4.37**
8125N	5.56 NATO 62 gr.	TAP® Barrier™	**4.95**
81265	5.56 NATO 70 gr. GMX®	TAP® Barrier™	**4.59**
81295	5.56 NATO 75 gr. SBR®	TAP SBR®	**4.45**
80295	223 REM 53 gr. GMX®	TAP Patrol®	**4.79**
81275	5.56 NATO 53 gr. GMX®	TAP Patrol®	**4.71**
80265	223 Rem 75 gr. BTHP	TAP Precision®	**4.69**
8126N	5.56 NATO 75 gr. BTHP T2	TAP Precision®	**4.95**
80905	308 Win 155 gr. ELD® Match	TAP Precision®	**4.36**
80725	308 Win 168 gr. ELD® Match	TAP Precision®	**4.78**
80715	308 Win 168 gr. ELD® Match	TAP Precision®	**4.75**
80895	300 Blackout 190 gr. Sub-X®	TAP® Blackout	**4.86**
80885	300 Blackout 110 gr. TAP Urban®	TAP® Blackout	**4.93**

HANDGUN

Item No.	NTOA Rated Hornady Product	Product Line	Score
90080	380 AUTO 90 gr. FTX®	Critical Defense®	**4.42**
90250	9mm Luger 115 gr. FTX	Critical Defense®	**4.65**
90215	9mm LUGER+P 124 gr. FlexLock®	Critical DUTY®	**4.65**
90225	9mm Luger +P 135 gr. Flexlock®	Critical DUTY®	**4.93**
91295	357 SIG 135 gr. FlexLock®	Critical DUTY®	**4.78**
90925	45 AUTO+P 220 gr. FlexLock®	Critical DUTY®	**4.79**
90238	9mm LUGER 135 gr. FMJ	Training Ammo	**4.6**
90230	9mm Luger 90 gr. Frangible	Training Ammo	**4.34**
91298	357 SIG 135 gr. FMJ	Training Ammo	**4.36**
91319	40 S&W 125 gr. Frangible	Training Ammo	**3.91**
91374	40 S&W 175 gr. FMJ	Training Ammo	**4.34**

SHOTGUN

Item No.	NTOA Rated Hornady Product	Product Line	Score
86285	12 GA 2 3/4" 1 oz. Reduced Recoil™	Rifle Slug	**4.02**
86235	12 GA 2 3/4" 1 oz. Light Magnum®	Rifle Slug	**4.3**
86265	12 GA TAP® Reduced Recoil™	Buckshot	**4.33**
86275	12 GA TAP® Light Magnum®	Buckshot	**4.03**
86245	12 GA Frangible 3/4 oz.	TAP® Entry™	**4.06**

NOTES:

124 gr. 9mm LUGER+P — #90215
FlexLock® Bullet | B.C. = .179

135 gr. 9mm LUGER — #90235
FlexLock® Bullet | B.C. = .195

135 gr. 9mm LUGER+P — #90225
FlexLock® Bullet | B.C. = .195

135 gr. 357 SIG — #91295
FlexLock® Bullet | B.C. = .153

135 gr. 357 MAG — #90515
FlexLock® Bullet | B.C. = .170

175 gr. 40 S&W — #91375
FlexLock® Bullet | B.C. = .155

175 gr. 10mm AUTO — #91255
FlexLock® Bullet | B.C. = .160

220 gr. 45 AUTO+P — #90925
FlexLock® Bullet | B.C. = .180

U.S. Patent No. 8,413,587

The patented Hornady® Flex Tip® design of the FlexLock® bullet eliminates clogging and aids bullet expansion. A large mechanical jacket-to-core InterLock® band works to keep the bullet and core from separating for maximum weight retention, excellent expansion and consistent penetration and terminal performance through all FBI test barriers.

The FlexLock® is an "intelligent bullet" that reacts differently depending on the barrier it encounters, delivering "barrier blind" performance after penetrating urban barriers such as plywood, sheet metal and even auto glass.

Bright nickel-plated cases eliminate cartridge case tarnish, and the highly visible silver nickel simplifies chamber checks in reduced light. Additionally, all Critical DUTY® ammunition is loaded with low flash propellant to help preserve night vision in low-light firing.

For the ultimate in tactical terminal ballistic performance through all FBI established urban barriers, choose Critical DUTY® ammunition.

CRITICAL DUTY®

Hornady Product Summary

Law enforcement and tactical professionals now have a truly advanced, 21st century handgun ammunition solution that delivers the most consistent and reliable urban barrier performance ever created! The proven Flex Tip® design of the new FlexLock® bullet eliminates clogging and aids bullet expansion. Its large mechanical jacket-to-core InterLock® band works to keep the bullet and core from separating for maximum weight retention and proven terminal performance through all FBI test barriers.

This line of ammunition is intended for Law Enforcement sales ONLY.

B.C. = Ballistic Coefficient

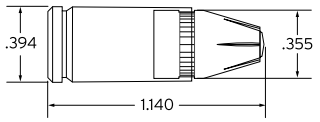
1. **FLEXLOCK® BULLET**
   Incorporates two revolutionary Hornady features: the patented Flex Tip® that initiates consistent expansion every single time while preventing any clogging, and the heavy duty InterLock® band that locks the jacket and core together.
2. **CANNELURED BULLET WITH CRIMPED CASE**
   Ensures no bullet setback during feeding.
3. **INTERLOCK® BAND**
   Works to keep the jacket and core from separating for maximum weight retention and proven terminal performance through all FBI test barriers
4. **CORE**
   Is made of high-antimony lead making it extremely tough, delivering controlled expansion for unparalleled terminal performance consistency through all FBI test barriers. It's also more economical than bonded bullets.
5. **NICKEL-PLATED CASES**
   Resist corrosion and greatly enhance low-light chamber checks.
6. **WATER-PROOF AMMUNITION**
   Sealed primers and case mouths.

CRITICAL DUTY®
9MM LUGER+P 124 gr. FlexLock®

ITEM NO. 90215

Performance Characteristics:

- Meets FBI Protocol
- High retained weight
- Barrier blind
- Proven terminal performance
- MADE IN THE USA
- **Net Explosive Weight** (approx. per box): 0.0200 lbs / .0090 kg



CASE: 9MM LUGER+P

- Manufacturer's name (Hornady) and caliber designation (9mm Luger+P) imprinted on case head
- **Characteristics:** Nickel-plated brass alloy

BULLET: FLEXLOCK®

- **Ballistic Coefficient:** .179
- **Sectional Density:** .141
- **Recommended Rifling Twist Rate:** Best terminal performance achieved in 1:10" twist
- **Characteristics:** Flex Tip® and InterLock®
- **Push/Pull:** 80/80 minimum (lbs)

POWDER & PRIMER

- **Powder:** Temperature stable with flash suppressant
- **Primer:** Small pistol, sealed case mouth, sealed primer

LOT NUMBERS

- Lot numbers on each box and case

BALLISTIC DATA

	Muzzle	50 yds	100 yds
Velocity (fps)	1175	1081	1012
Energy (ft lbs)	380	322	282

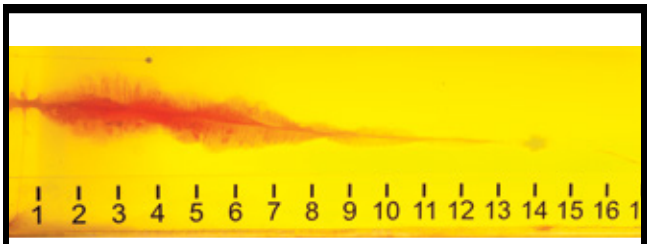
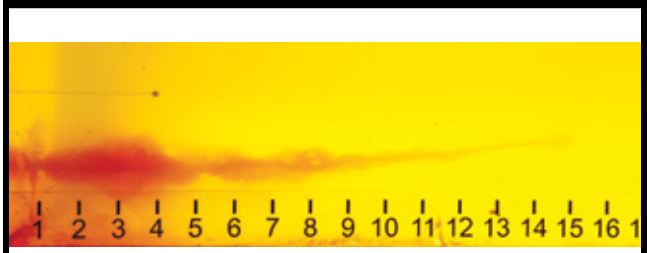
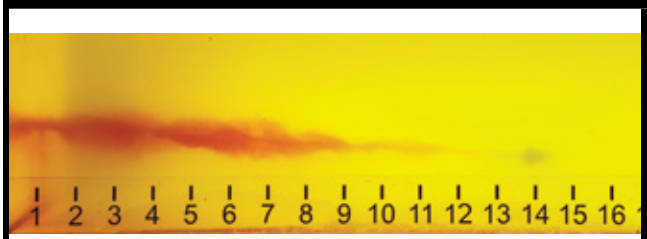
PACKAGING

- Tray Number: 5733

- Gross Weight: 1.50 lbs
- 50 rounds per box with plastic tray

- Carton Number: 8452
- Carton Weight: 15.3 lbs
- Carton Dimensions: 3.25" x 5.675" x 13.25"
- 10 boxes per carton | 500 rounds per carton

CRITICAL DUTY®
9MM LUGER+P | 124 gr. FlexLock®
3.1" BBL | SIG P365
ITEM NO. 90215

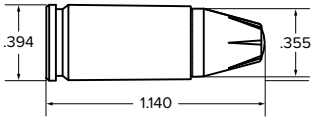
	Total Penetration	Max Cavity	Depth to Max Cavity	Initial Penetration	Retained Weight	Retained Weight %	Expanded Diameter	Velocity (fps)	
	14.5"	2.0"	2.0"	0.75"	124.0 gr.	100%	0.54"	1079	BARE GELATIN
	15.5"	1.75"	3.5"	0.50"	124.0 gr.	100%	0.51"	1093	HVY CLOTHING
	12.25"	1.75"	3.5"	0.0"	119.9 gr.	97%	0.53"	1083	STEEL
	15.25"	2.0"	2.5"	0.0"	123.5 gr.	99.6%	0.55"	1081	WALLBOARD
	14.25"	2.0"	3.5"	0.0"	123.6 gr.	99.7%	0.53"	1087	PLYWOOD
	13.25"	1.5"	2.0"	0.0"	89.8 gr.	72%	0.41"	1081	AUTO GLASS

CRITICAL DUTY®
9MM LUGER 135 gr. FlexLock®

ITEM NO. 90235

Performance Characteristics:

- Meets FBI Protocol
- High retained weight
- Barrier blind
- Proven terminal performance
- MADE IN THE USA
- **Net Explosive Weight** (approx. per box): 0.0364 lbs / .0165 kg



SCALE 1:1

CASE: 9MM LUGER

- Manufacturer's name (Hornady) and caliber designation (9mm Luger) imprinted on case head
- **Characteristics:** Nickel-plated brass alloy

BULLET: FLEXLOCK®

- **Ballistic Coefficient:** .195
- **Sectional Density:** .153
- **Recommended Rifling Twist Rate:** Best terminal performance achieved in 1:10" twist
- **Characteristics:** Flex Tip® and InterLock®
- **Push/Pull:** 100/100 minimum (lbs)

POWDER & PRIMER

- **Powder:** Temperature stable with flash suppressant
- **Primer:** Small pistol, sealed case mouth, sealed primer

LOT NUMBERS

- Lot numbers on each box and case

BALLISTIC DATA

	Muzzle	50 yds	100 yds
Velocity (fps)	1010	960	918
Energy (ft lbs)	306	276	253

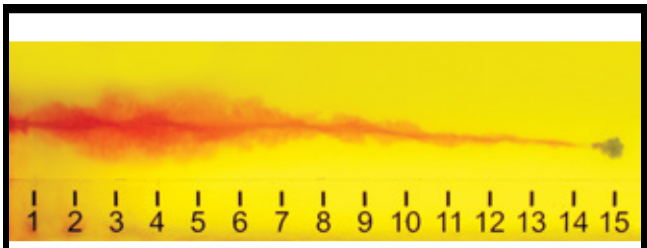
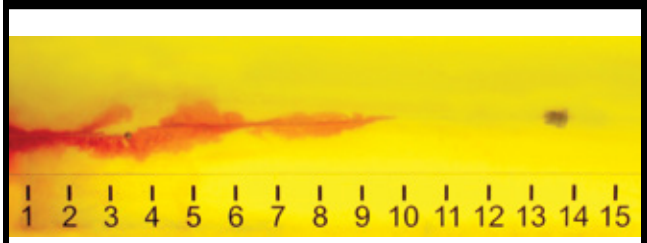
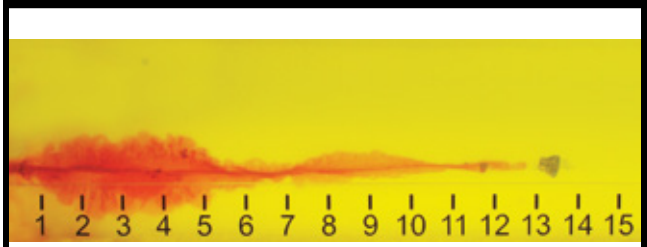
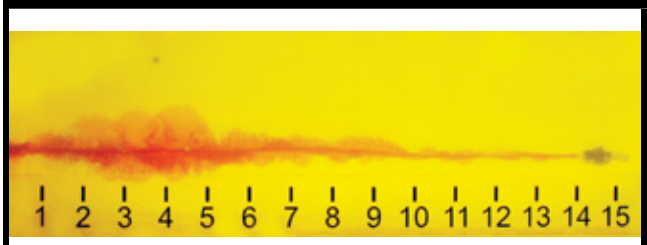
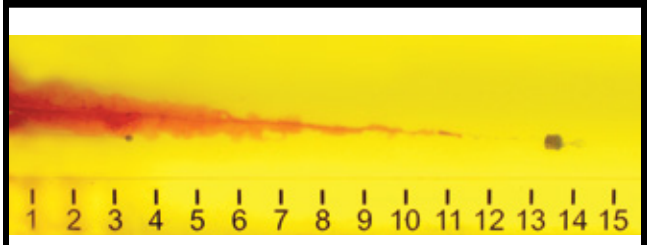
PACKAGING

- Tray Number: 5733

- Gross Weight: 1.54 lbs
- 50 rounds per box with plastic tray

- Carton Number: 8452
- Carton Weight: 15.4 lbs
- Carton Dimensions: 3.25" x 5.675" x 13.25"
- 10 boxes per carton | 500 rounds per carton

CRITICAL DUTY®
9MM LUGER | 135 gr. FlexLock®
4.5" BBL | Glock 17
ITEM NO. 90235

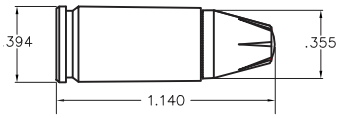
	Total Penetration	Max Cavity	Depth to Max Cavity	Initial Penetration	Retained Weight	Retained Weight %	Expanded Diameter	Velocity (fps)	
	15.25"	2.25"	2.0"	0.25"	135.0 gr.	100%	0.56"	1056	BARE GELATIN
	15.5"	2.25"	4.0"	0.5"	135.0 gr.	100%	0.50"	1066	HVY CLOTHING
	13.75"	1.5"	3.5"	0.0"	133.0 gr.	99%	0.49"	1067	STEEL
	13.5"	2.0"	2.0"	0.25"	136.0 gr.	100%	0.58"	1065	WALLBOARD
	15.0"	1.5"	3.0"	0.25"	135.0 gr.	100%	0.51"	1070	PLYWOOD
	13.75"	1.75"	0.75"	0.0"	90.5 gr.	67%	0.41"	1061	AUTO GLASS

CRITICAL DUTY®
135 gr. 9MM LUGER+P

ITEM NO. 90225

Performance Characteristics:

- Meets FBI Protocol
- High retained weight
- Barrier blind
- Proven terminal performance
- MADE IN THE USA
- **Net Explosive Weight** (approx. per box): 0.0443 lbs / .0200 kg



SCALE 1:1

CASE: 9MM LUGER+P

- Manufacturer's name (Hornady) and caliber designation (9mm LUGER+P) imprinted on case head
- **Characteristics:** Nickel-plated brass alloy

BULLET: FLEXLOCK®

- **Ballistic Coefficient:** .195
- **Sectional Density:** .153
- **Recommended Rifling Twist Rate:** Best terminal performance achieved in 1:10" twist
- **Characteristics:** Flex Tip® and InterLock®
- **Push/Pull:** 100/100 minimum (lbs)

POWDER & PRIMER

- **Powder:** Temperature stable with flash suppressant
- **Primer:** Small pistol, sealed case mouth, sealed primer

LOT NUMBERS

- Lot numbers on each box and case

BALLISTIC DATA

	Muzzle	50 yds	100 yds
Velocity (fps)	1070	1008	958
Energy (ft lbs)	343	304	275

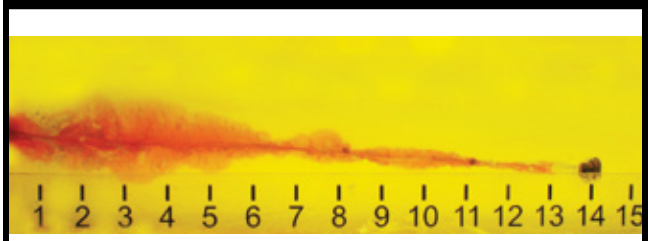
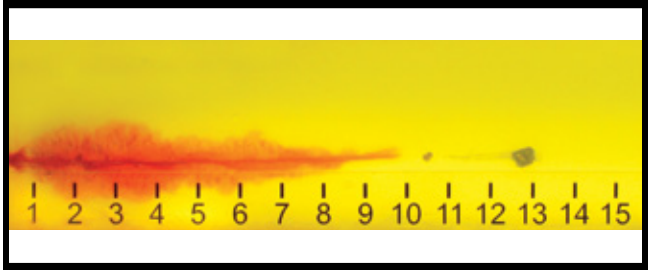
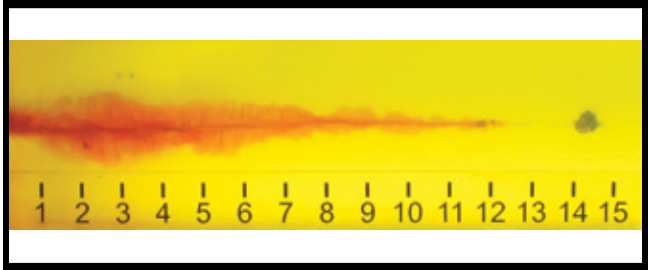
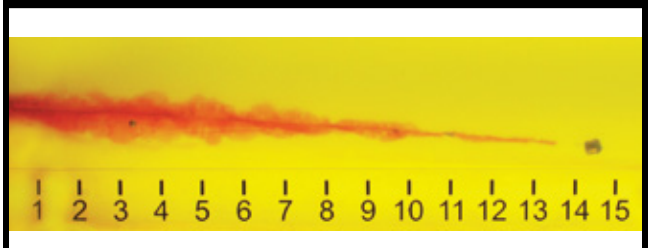
PACKAGING

- Tray Number: 5733

- Gross Weight: 1.55 lbs
- 50 rounds per box with plastic tray

- Carton Number: 8452
- Carton Weight: 15.5 lbs
- Carton Dimensions: 3.25" x 5.675" x 13.25"
- 10 boxes per carton | 500 rounds per carton

CRITICAL DUTY® | 135 gr. 9MM LUGER +P
4.5" BBL | Glock 17
ITEM NO. 90225

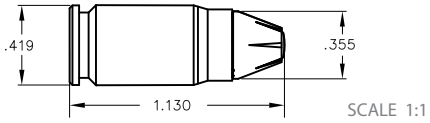
	Total Penetration	Max Cavity	Depth to Max Cavity	Initial Penetration	Retained Weight	Retained Weight %	Expanded Diameter	Velocity (fps)	
	14.0"	2.5"	3.0"	0.25"	135.0 gr.	100%	0.60"	1162	BARE GELATIN
	15.0"	3.0"	3.0"	0.5"	135.0 gr.	100%	0.55"	1164	HVY CLOTHING
	14.5"	1.5"	2.5"	0.0"	131.4 gr.	97%	0.53"	1171	STEEL
	13.0"	2.25"	2.25"	0.25"	135.0 gr.	100%	0.62"	1159	WALLBOARD
	14.75"	2.25"	4.0"	0.5"	134.8 gr.	100%	0.57"	1167	PLYWOOD
	14.75"	2.0"	1.25"	0.0"	92.6 gr.	69%	0.42"	1157	AUTO GLASS

CRITICAL DUTY®
357 SIG 135 gr. FlexLock®

ITEM NO. 91295

Performance Characteristics:

- Meets FBI Protocol
- High retained weight
- Barrier blind
- Proven terminal performance
- MADE IN THE USA
- **Net Explosive Weight** (approx. per box): 0.0500 lbs / .0227 kg



CASE: 357 SIG

- Manufacturer's name (Hornady) and caliber designation (357 SIG) imprinted on case head
- **Characteristics:** Nickel-plated brass alloy

BULLET: FLEXLOCK®

- **Ballistic Coefficient:** .153
- **Sectional Density:** .153
- **Recommended Rifling Twist Rate:** Best terminal performance achieved in 1:10" twist
- **Characteristics:** Flex Tip® and InterLock®
- **Push/Pull:** 75/75 minimum (lbs)

POWDER & PRIMER

- **Powder:** Temperature stable with flash suppressant
- **Primer:** Small pistol, sealed case mouth, sealed primer

LOT NUMBERS

- Lot numbers on each box and case

BALLISTIC DATA

	Muzzle	50 yds	100 yds
Velocity (fps)	1225	1102	1016
Energy (ft lbs)	450	364	309

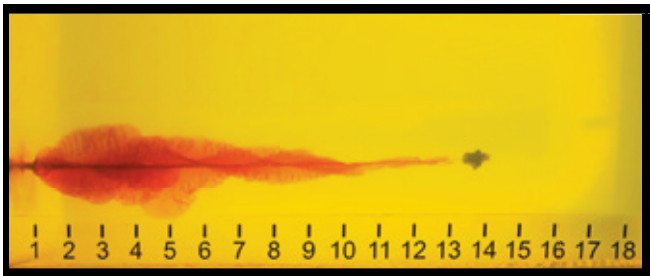
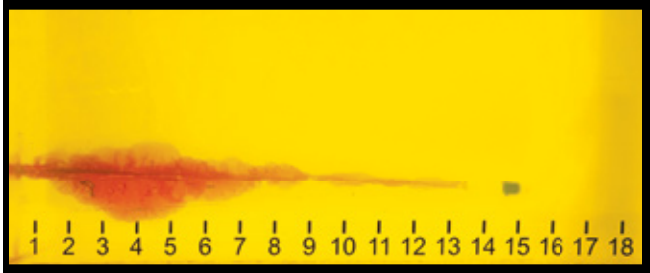
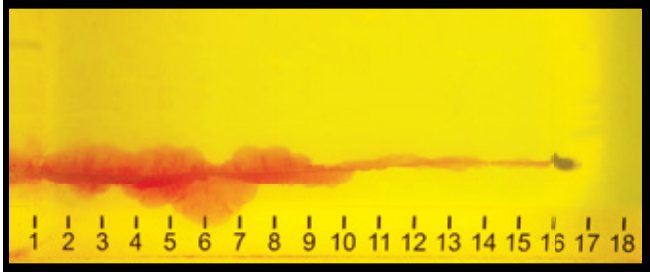
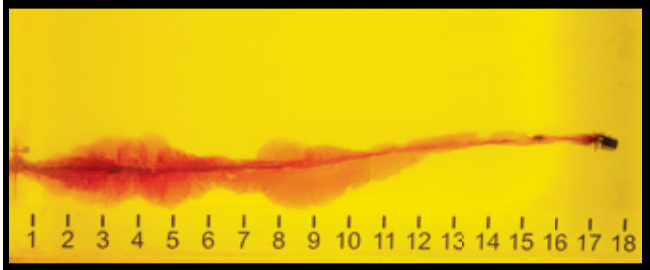
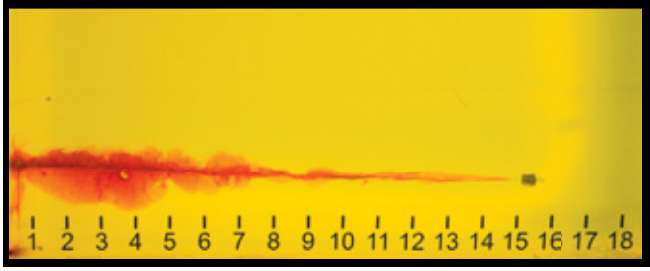
PACKAGING

- Tray Number: 5732

- Gross Weight: 1.68 lbs
- 50 rounds per box with plastic tray

- Carton Number: 5744
- Carton Weight: 16.8 lbs
- Carton Dimensions: 6.75" x 6.687" x 7.5"
- 10 boxes per carton | 500 rounds per carton

CRITICAL DUTY®
357 SIG | 135 gr. FlexLock®
4.5" BBL | Glock 31
ITEM NO. 91295

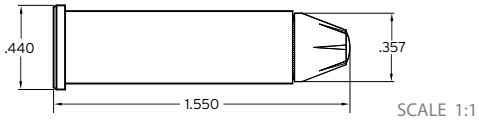
	Total Penetration	Max Cavity	Depth to Max Cavity	Initial Penetration	Retained Weight	Retained Weight %	Expanded Diameter	Velocity (fps)	
	14.0"	2.75"	3.5"	0.25"	133.7 gr.	99%	0.58"	1221	BARE GELATIN
	13.5"	2.25"	2.75"	0.25"	133.3 gr.	99%	0.56"	1218	HVY CLOTHING
	15.0"	2.5"	4.0"	1.0"	128.2 gr.	95%	0.51"	1227	STEEL
	16.5"	2.0"	4.5"	0.25"	134.4 gr.	100%	0.42"	1226	WALLBOARD
	17.75"	2.25"	3.0"	0.5"	134.7 gr.	100%	0.53"	1231	PLYWOOD
	15.5"	1.75"	3.5"	0.0"	104.0 gr.	77%	0.49"	1230	AUTO GLASS

CRITICAL DUTY®
357 MAG 135 gr. FlexLock®

ITEM NO. 90515

Performance Characteristics:

- High retained weight
- Barrier blind
- Proven terminal performance
- MADE IN THE USA
- **Net Explosive Weight** (approx. per box): 0.0657 lbs / .0298 kg



CASE: 357 MAG

- Manufacturer's name (Hornady) and caliber designation (357 MAG) imprinted on case head
- **Characteristics:** Nickel-plated brass alloy

BULLET: FLEXLOCK®

- **Ballistic Coefficient:** .170
- **Sectional Density:** .151
- **Recommended Rifling Twist Rate:** Best terminal performance achieved in 1:18.75" twist
- **Characteristics:** Flex Tip® and InterLock®
- **Push/Pull:** 150/150 minimum (lbs)

POWDER & PRIMER

- **Powder:** Temperature stable with flash suppressant
- **Primer:** Small pistol, sealed case mouth, sealed primer

LOT NUMBERS

- Lot numbers on each box and case

BALLISTIC DATA

	Muzzle	50 yds	100 yds
Velocity (fps)	1275	1150	1059
Energy (ft lbs)	487	693	336

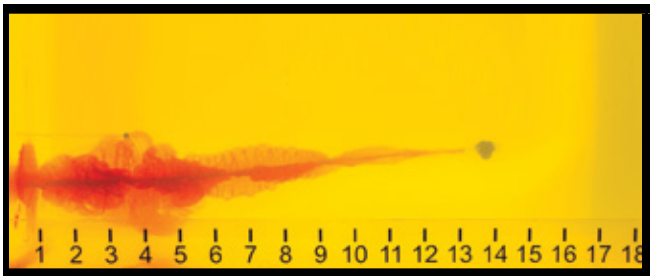
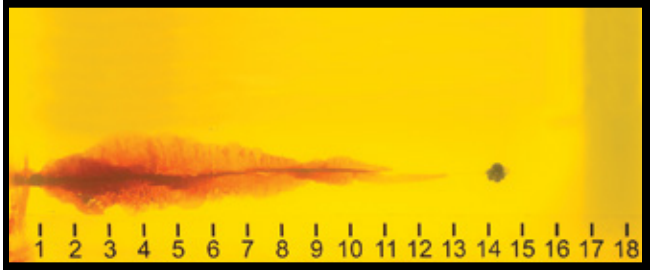
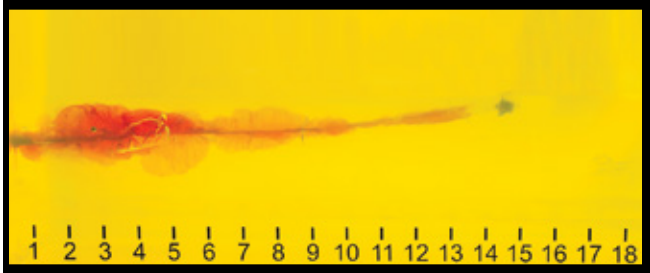
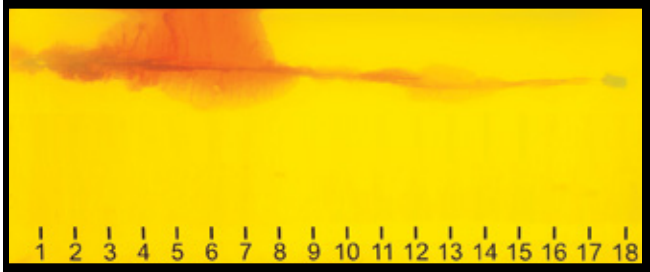
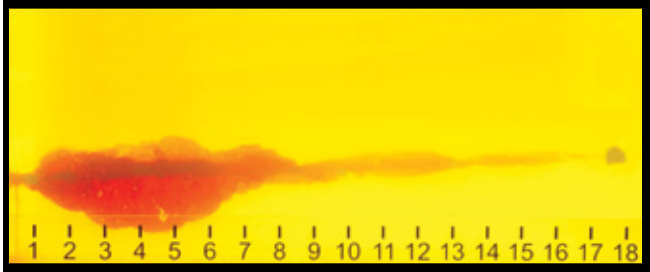
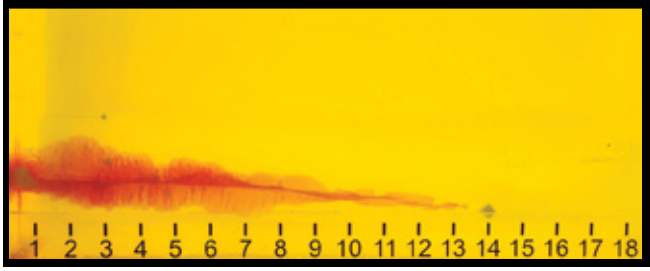
PACKAGING

- Tray Number: 5733

- Gross Weight: 1.7 lbs
- 50 rounds per box with plastic tray

- Carton Number: 5717
- Carton Weight: 17.0 lbs
- Carton Dimensions: 4.0" x 5.75" x 14.625"
- 10 boxes per carton | 500 rounds per carton

CRITICAL DUTY®
357 MAG | 135 gr. FlexLock®
4.2" BBL | Ruger GP-100
ITEM NO. 90515

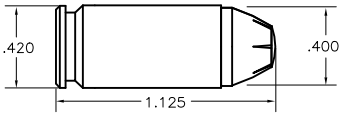
	Total Penetration	Max Cavity	Depth to Max Cavity	Initial Penetration	Retained Weight	Retained Weight %	Expanded Diameter	Velocity (fps)	
	14.0"	3.5"	4.0"	0.5"	133.8 gr.	99%	0.58"	1272	BARE GELATIN
	14.4"	2.5"	3.25"	0.5"	133.8 gr.	99%	0.57"	1287	HVY CLOTHING
	14.7"	2.0"	3.0"	0.5"	132.6 gr.	98%	0.50"	1266	STEEL
	18.5"	2.0"	5.0"	0.5"	134.3 gr.	100%	0.44"	1284	WALLBOARD
	18.1"	2.0"	3.0"	0.5"	134.4 gr.	100%	0.46"	1280	PLYWOOD
	14.1"	2.0"	2.5"	0.5"	98.0 gr.	73%	0.46"	1276	AUTO GLASS

CRITICAL DUTY®
40 S&W 175 gr. FlexLock®

ITEM NO. 91375

Performance Characteristics:

- Meets FBI Protocol
- High retained weight
- Barrier blind
- Proven terminal performance
- **Net Explosive Weight** (approx. per box): 0.0436 lbs/ .0198 kg



SCALE 1:1

CASE: 40 S&W

- Manufacturer's name (Hornady) and caliber designation (40 S&W) imprinted on case head
- **Characteristics:** Nickel-plated brass alloy

BULLET: FLEXLOCK®

- **Ballistic Coefficient:** .155
- **Sectional Density:** .156
- **Recommended Rifling Twist Rate:** Best terminal performance achieved in 1:10" twist
- **Characteristics:** Flex Tip® and InterLock®
- **Push/Pull:** 150/150 minimum (lbs)

POWDER & PRIMER

- **Powder:** Temperature stable with flash suppressant
- **Primer:** Small pistol, sealed case mouth, sealed primer

LOT NUMBERS

- Lot numbers on each box and case

BALLISTIC DATA

	Muzzle	50 yds	100 yds
Velocity (fps)	1010	948	899
Energy (ft lbs)	396	350	314

PACKAGING

- Tray Number: 5732

- Gross Weight: 1.97 lbs
- 50 rounds per box with plastic tray

- Carton Number: 5744
- Carton Weight: 19.7 lbs
- Carton Dimensions: 6.75" x 6.687" x 7.5"
- 10 boxes per carton | 500 rounds per carton

CRITICAL DUTY®
40 S&W | 175 gr. FlexLock®
4.5" BBL | Glock 22
ITEM NO. 91375

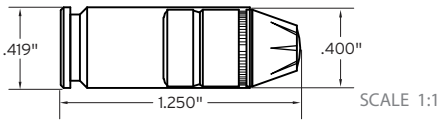
	Total Penetration	Max Cavity	Depth to Max Cavity	Initial Penetration	Retained Weight	Retained Weight %	Expanded Diameter	Velocity (fps)
BARE GELATIN	13.5"	2.0"	3.5"	0.25"	172.5 gr.	99%	0.57"	1067
HVY CLOTHING	14.5"	2.5"	2.5"	0.25"	173.0 gr.	99%	0.54"	1062
STEEL	13.0"	2.0"	2.0"	0.0"	172.0 gr.	98%	0.57"	1066
WALLBOARD	14.0"	2.75"	2.5"	0.25"	173.0 gr.	99%	0.63"	1059
PLYWOOD	15.0"	1.75"	2.0"	0.25"	173.0 gr.	99%	0.52"	1063
AUTO GLASS	13.0"	1.5"	3.5"	0.0"	138.0 gr.	79%	0.61"	1063

CRITICAL DUTY®
10MM AUTO 175 gr. Flex

ITEM NO. 91255

Performance Characteristics:

- Meets FBI Protocol
- High retained weight
- Barrier blind
- Proven terminal performance
- MADE IN THE USA
- **Net Explosive Weight** (approx. per box): 0.0564 lbs / .0256 kg



CASE: 10MM

- Manufacturer's name (Hornady) and caliber designation (10MM) imprinted on case head
- **Characteristics:** Nickel-plated brass alloy

BULLET: FLEXLOCK®

- **Ballistic Coefficient:** .155
- **Sectional Density:** .156
- **Recommended Rifling Twist Rate:** 1:10" twist
- **Characteristics:** Flex Tip® and InterLock®
- **Push/Pull:** 100/100 minimum (lbs)

POWDER & PRIMER

- **Powder:** Temperature stable with flash suppressant
- **Primer:** Small pistol, sealed case mouth, sealed primer

LOT NUMBERS

- Lot numbers on each box and case

BALLISTIC DATA

	Muzzle	50 yds	100 yds
Velocity (fps)	1150	1052	981
Energy (ft lbs)	523	437	381

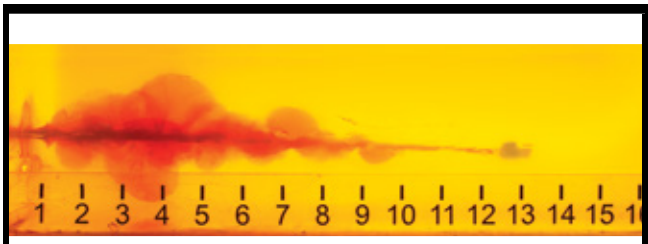
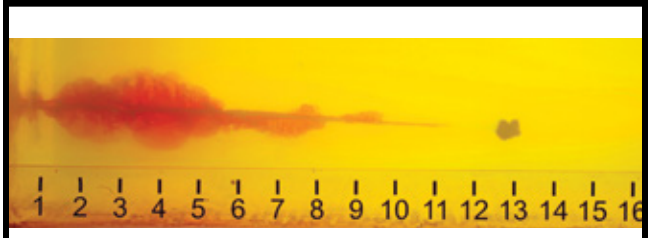
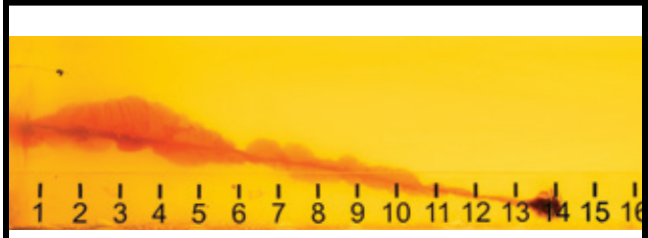
PACKAGING

- Tray Number: 5732

- Gross Weight: 2.04 lbs
- 50 rounds per box with plastic tray

- Carton Number: 5739
- Carton Weight: 20.4 lbs
- Carton Dimensions: 6.875" x 6.625" x 9.375"
- 10 boxes per carton | 500 rounds per carton

CRITICAL DUTY®
10MM AUTO | 175 gr. FlexLock®
4.6" BBL | Glock 20
ITEM NO. 91255

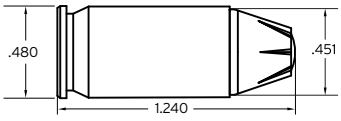
	Total Penetration	Max Cavity	Depth to Max Cavity	Initial Penetration	Retained Weight	Retained Weight %	Expanded Diameter	Velocity (fps)	
	13.25"	2.5"	3.25"	0.25"	172.5 gr.	99%	0.66"	1134	BARE GELATIN
	14.5"	2.75"	3.0"	0.25"	173.1 gr.	99%	0.63"	1121	HVY CLOTHING
	15.75"	2.25"	2.5"	0.0"	172.8 gr.	99%	0.56"	1126	STEEL
	13.0"	3.25"	3.0"	0.25"	168.4 gr.	96%	0.67"	1139	WALLBOARD
	14.0"	2.25"	2.5"	0.25"	170.1 gr.	97%	0.68"	1128	PLYWOOD
	14.0"	1.75"	4.0"	0.0"	139.5 gr.	80%	0.55"	1119	AUTO GLASS

CRITICAL DUTY®
45 AUTO+P 220 gr. FlexLock®

ITEM NO. 90925

Performance Characteristics:

- Meets FBI Protocol
- High retained weight
- Barrier blind
- Proven terminal performance
- MADE IN THE USA
- **Net Explosive Weight** (approx. per box): 0.0557 lbs / .0252 kg



CASE: 45 AUTO+P

- Manufacturer's name (Hornady) and caliber designation (45 AUTO+P) imprinted on case head
- **Characteristics:** Nickel-plated brass alloy

BULLET: FLEXLOCK®

- **Ballistic Coefficient:** .180
- **Sectional Density:** .155
- **Recommended Rifling Twist Rate:** Performance achieved in 1:16" twist
- **Characteristics:** Flex Tip® and InterLock®
- **Push/Pull:** 150/150 minimum (lbs)

POWDER & PRIMER

- **Powder:** Temperature stable with flash suppressant
- **Primer:** Small pistol, sealed case mouth, sealed primer

LOT NUMBERS

- Lot numbers on each box and case

BALLISTIC DATA

	Muzzle	50 yds	100 yds
Velocity (fps)	975	927	887
Energy (ft lbs)	464	420	384

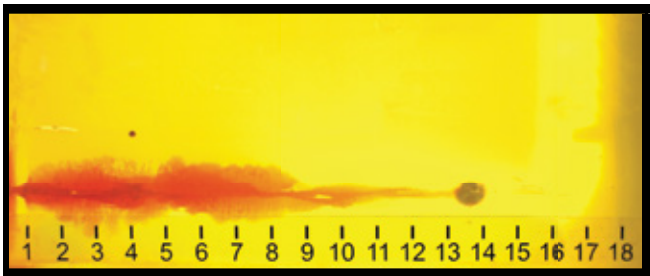
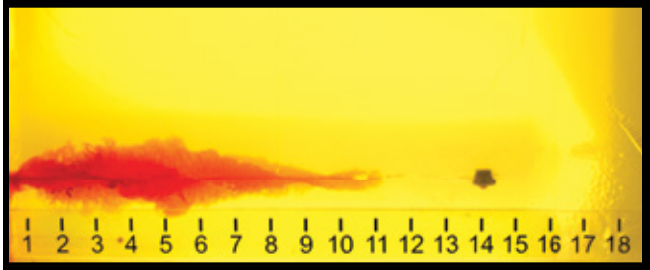
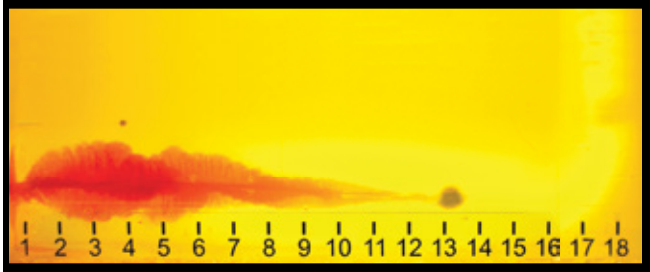
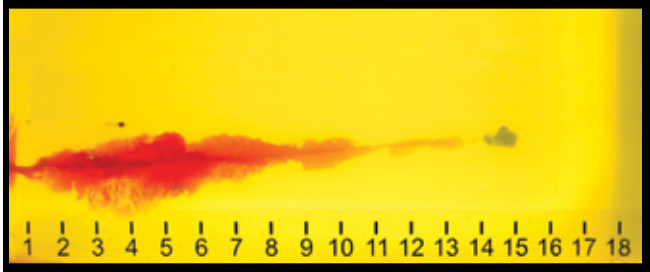
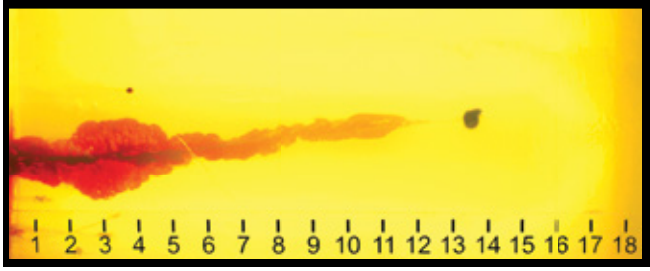
PACKAGING

- Tray Number: 5732

- Gross Weight: 2.5 lbs
- 50 rounds per box with plastic tray

- Carton Number: 5739
- Carton Weight: 25.0 lbs
- Carton Dimensions: 6.875" x 6.625" x 9.375"
- 10 boxes per carton | 500 rounds per carton

CRITICAL DUTY®
45 AUTO+P | 220 gr. FlexLock®
5" BBL | Glock 21
ITEM NO. 90925

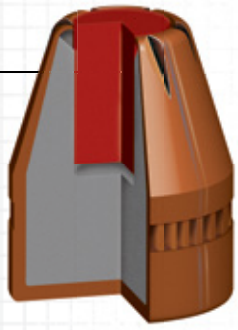
	Total Penetration	Max Cavity	Depth to Max Cavity	Initial Penetration	Retained Weight	Retained Weight %	Expanded Diameter	Velocity (fps)	
	14.0"	2.25"	3.75"	0.5"	217.8 gr.	99%	0.71"	969	BARE GELATIN
	14.5"	2.25"	4.5"	0.5"	218.1 gr.	99%	0.69"	976	HVY CLOTHING
	17.75"	2.0"	3.0"	0.0"	217.9 gr.	99%	0.54"	973	STEEL
	13.5"	2.0"	2.5"	0.5"	218.0 gr.	99%	0.70"	979	WALLBOARD
	15.0"	2.5"	3.5"	0.75"	218.0 gr.	99%	0.66"	978	PLYWOOD
	13.75"	1.25"	4.5"	0.0"	165.7 gr.	75%	0.53"	972	AUTO GLASS

The difference between
Critical Defense® & Critical DUTY®

CRITICAL DEFENSE®

Critical Defense® = Backup Firearms/Off-Duty Carry

Critical Defense® handgun ammunition is ideal for backup firearms, off-duty carry or for those serving in executive protection, undercover operations, or any dedicated close quarters situation.

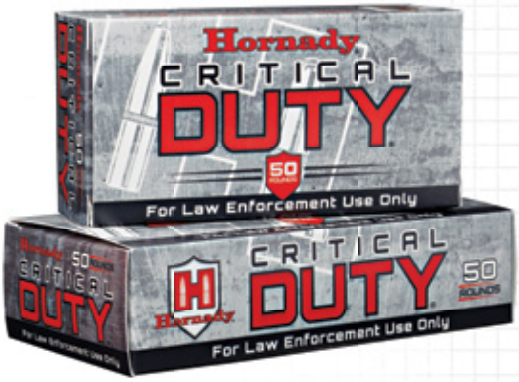


Critical Defense® provides controlled expansion while reducing the potential of over penetration. The patented FTX® bullet and associated Flex Tip® technology used in Critical Defense® ammunition eliminates the clogging and inconsistent expansion and penetration that often plagues hollow point bullets.

All Critical Defense® ammunition is loaded in nickel-plated cases for improved feeding and increased visibility in low-light situations. Critical Defense® is unaffected by thick, heavy clothing (including denim and leather) and delivers superior controlled expansion with deep wound cavities over a wide range of velocities. Premium low-flash propellants have been specifically tailored for short-barreled handguns to deliver proven performance.

U.S. Patent Nos.
8,161,885
8,413,587

CRITICAL DUTY®



Critical DUTY® = On-Duty/ Patrol/Tactical

Critical DUTY® handgun ammunition is built to meet the diverse on-duty requirements of law enforcement and tactical professionals. Critical DUTY® ammunition delivers superior barrier penetration and subsequent terminal performance, while still minimizing the liability of over-penetration.

The FlexLock® bullets loaded in all Critical DUTY® offerings are rugged, heavy-jacketed bullets that deliver "barrier blind" performance when shot through common urban barriers* (bare gelatin, auto glass, sheet metal, plywood, drywall, and heavy clothing). In addition, Critical DUTY® loads are designed to work in ALL handguns. However, these loads deliver optimized performance through the FBI Protocol test when used in full-sized handguns.

All Critical DUTY® ammunition is loaded in nickel-plated cases for improved feeding and increased visibility in low-light situations and features waterproof sealant around the primer and the case mouth to provide superior performance no matter your environment.

*As defined by the "FBI Protocol" handgun ammunition test.

U.S. Patent Nos.
8,161,885
8,413,587
9,121,677

Critical DUTY® ammo features waterproof sealant around the primer.

Critical DUTY® ammo features an "H" on the tip.

Critical DUTY® ammo is packaged in 50-count boxes for Law Enforcement.

380 AUTO 90 gr. FTX® — #90080
FTX Bullet | B.C. = .099

9X18 MAKAROV 95 gr. FTX® — #91000
FTX Bullet | B.C. = .100

9mm LUGER 100 gr. FTX® LITE — #90240
FTX Bullet | B.C. = .110

9mm LUGER 115 gr. FTX® — #90250
FTX Bullet | B.C. = .129

38 SPECIAL 90 gr. FTX® LITE — #90300
FTX Bullet | B.C. = .099

38 SPECIAL 110 gr. FTX® — #90310
FTX Bullet | B.C. = .131

38 SPECIAL + P 110 gr. FTX® — #90311
FTX Bullet | B.C. = .131

357 MAG 125 gr. FTX® — #90500
FTX Bullet | B.C. = .150

40 S&W 165 gr. FTX® — #91340
FTX Bullet | B.C. = .145

44 SPECIAL 165 gr. FTX® — #90700
FTX Bullet | B.C. = .125

45 AUTO 185 gr. FTX® — #90900
FTX Bullet | B.C. = .140

45 COLT 185 gr. FTX® — #92790
FTX Bullet | B.C. = .140

CRITICAL DEFENSE®

Hornady Product Summary

Critical Defense® handgun ammunition is built to meet the needs and requirements of individuals serving in undercover capacities and specialized assignments, including those providing executive protection in the law enforcement and tactical communities. Critical Defense ammo is a great option for those carrying backup handguns on and off duty, as well as law abiding citizens looking for concealed carry reliability.

CRITICAL DEFENSE®

Critical Defense® ammunition is optimized for executive protection, undercover operations, close quarters situations, or for use in backup firearms or off-duty carry.

Personal defense ammunition is redefined with Hornady® Critical Defense® ammunition. You may have never thought about the effects of fabric and clothing on the performance of ammo. But clothing — especially heavy clothing — has a lot to do with how the bullet expands upon impact. Conventional hollow point bullets often experience tip clogging as the bullet passes through light and heavy clothing, which diminishes expansion and causes unreliable bullet performance.

Hornady® Critical Defense® ammo eliminates clogging with the use of the patented FTX® (Flex Tip eXpanding) bullet. Upon entering soft tissue, the tip swells and imparts equal pressure across the entire circumference of the bullet cavity. The result is unrivaled bullet expansion and performance every single time!

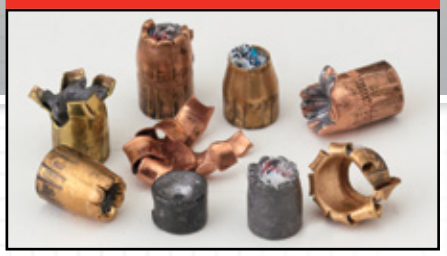
U.S. Patent No. 8,413,587

1. **FTX® BULLET TECHNOLOGY**
   The patented FTX® bullet will expand reliably.
2. **OPTIMIZED PROPELLANTS**
   Optimized propellants burn quickly, reduce recoil and limit muzzle flash to protect night vision.
3. **NICKEL-PLATED CASE**
   Nickel-plated cases resist tarnish and greatly enhance low-light chamber checks.

OURS

Flex Tip® technology guarantees reliable performance.

THEIRS



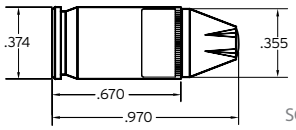
Conventional hollow point bullets perform unreliably when encountering heavy fabric or layers of clothing.

CRITICAL DEFENSE®
380 AUTO 90 gr. FTX®

ITEM NO. 90080

Performance Characteristics:

- High retained weight
- Proven terminal performance
- MADE IN THE USA
- **Net Explosive Weight** (approx. per box): 0.0118 lbs / .0053 kg



CASE: 380 AUTO

- Manufacturer's name (Hornady) and caliber designation (380 AUTO) imprinted on case head
- **Characteristics:** Nickel-plated brass alloy

BULLET: FTX® (Flex Tip eXpanding)

- **Ballistic Coefficient:** .099
- **Sectional Density:** .102
- **Recommended Rifling Twist Rate:** Performance achieved in 1:16" twist
- **Push/Pull:** 120/100 minimum (lbs)

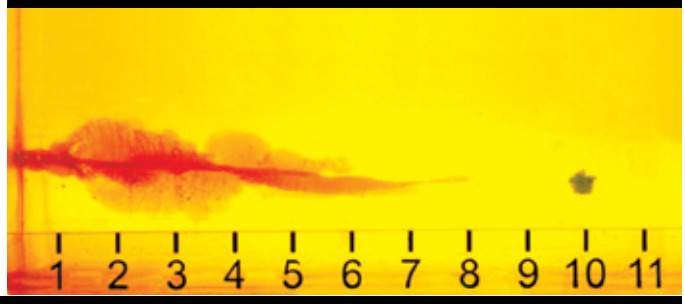
POWDER & PRIMER

- **Powder:** Temperature stable with flash suppressant
- **Primer:** Small pistol

BALLISTICS: 2¾" BBL | RUGER LCP

Total Penetration	10.25"
Max Cavity	1.6"
Depth to Max Cavity	2.0"
Initial Penetration	0.5"
Retained Weight	89.0 gr.
Retained Weight %	98%
Expanded Diameter	0.51"
Velocity (fps)	1000

HEAVY CLOTHING



BALLISTIC DATA

	Muzzle	50 yds	100 yds
Velocity (fps)	1000	912	845

LOT NUMBERS

- Lot numbers on each box and case

PACKAGING

- Tray Number: 8418

- Gross Weight: 0.61 lbs
- 25 rounds per box with plastic tray

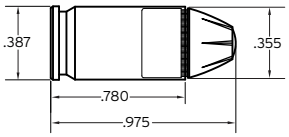
- Carton Number: 8453
- Carton Weight: 6.1 lbs
- Carton Dimensions: 2.875" x 5.25" x 10.75"
- 10 boxes per carton | 250 rounds per carton

CRITICAL DEFENSE®
9x18 MAKAROV 95 gr. FTX®

ITEM NO. 91000

Performance Characteristics:

- High retained weight
- Proven terminal performance
- MADE IN THE USA
- **Net Explosive Weight** (approx. per box): 0.0125 lbs / .0056 kg



SCALE 1:1

CASE: 9X18 MAKAROV

- Manufacturer's name (Hornady) and caliber designation (9X18 MAKAROV) imprinted on case head
- **Characteristics:** Nickel-plated brass alloy

BULLET: FTX® (Flex Tip eXpanding)

- **Ballistic Coefficient:** .100
- **Sectional Density:** .102
- **Recommended Rifling Twist Rate:** Performance achieved in 1:9.45" twist
- **Push/Pull:** 75/125 minimum (lbs)

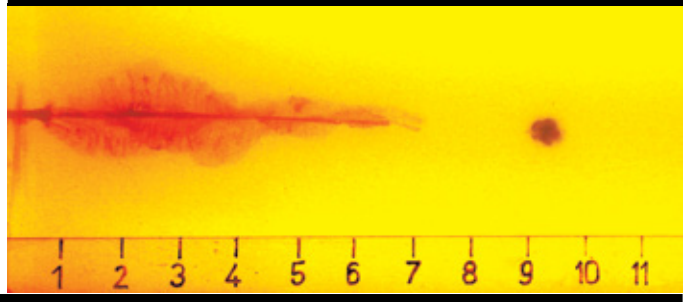
POWDER & PRIMER

- **Powder:** Temperature stable with flash suppressant
- **Primer:** Small pistol

BALLISTICS: 3¾" BBL | MAKAROV M

Total Penetration	9.75"
Max Cavity	1.6"
Depth to Max Cavity	2.5"
Initial Penetration	0.5"
Retained Weight	95.0 gr.
Retained Weight %	100%
Expanded Diameter	0.57"
Velocity (fps)	1000

HEAVY CLOTHING



BALLISTIC DATA

	Muzzle	50 yds	100 yds
Velocity (fps)	1000	913	846

LOT NUMBERS

- Lot numbers on each box and case

PACKAGING

- Tray Number: 8418

- Gross Weight: 0.66 lbs
- 25 rounds per box with plastic tray

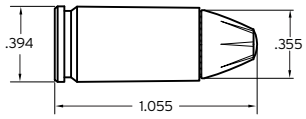
- Carton Number: 8453
- Carton Weight: 6.6 lbs
- Carton Dimensions: 2.875" x 5.25" x 10.75"
- 10 boxes per carton | 250 rounds per carton

CRITICAL DEFENSE®
9MM LUGER 100 gr. FTX® LITE

ITEM NO. 90240

Performance Characteristics:

- High retained weight
- Proven terminal performance
- MADE IN THE USA
- **Net Explosive Weight** (approx. per box): 0.0125 lbs / .0057 kg



SCALE 1:1

CASE: 9MM LUGER

- Manufacturer's name (Hornady) and caliber designation (9X18 MAKAROV) imprinted on case head
- **Characteristics:** Nickel-plated brass alloy

BULLET: FTX® (Flex Tip eXpanding)

- **Ballistic Coefficient:** .110
- **Sectional Density:** .113
- **Recommended Rifling Twist Rate:** Performance achieved in 1:10" twist
- **Push/Pull:** 150/125 minimum kg

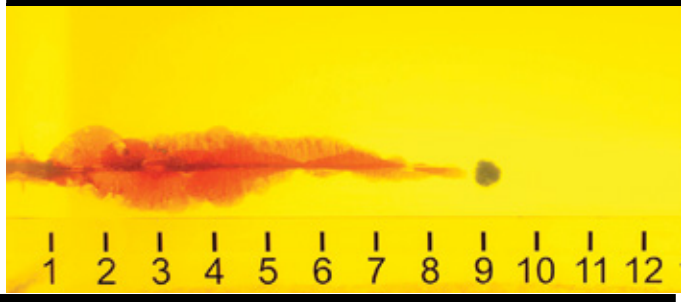
POWDER & PRIMER

- **Powder:** Temperature stable with flash suppressant
- **Primer:** Small pistol

BALLISTICS: 3" BBL | KAHR MK9

Total Penetration	9.25"
Max Cavity	1.5"
Depth to Max Cavity	3.0"
Initial Penetration	0.5"
Retained Weight	99.4 gr.
Retained Weight %	99%
Expanded Diameter	0.57"
Velocity (fps)	1125

HEAVY CLOTHING



BALLISTIC DATA

	Muzzle	50 yds	100 yds
Velocity (fps)	1125	1003	922

LOT NUMBERS

- Lot numbers on each box and case

PACKAGING

- Tray Number: 8418

- Gross Weight: 0.68 lbs
- 25 rounds per box with plastic tray

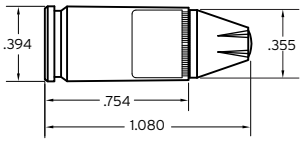
- Carton Number: 8453
- Carton Weight: 6.8 lbs
- Carton Dimensions: 2.875" x 5.25" x 10.75"
- 10 boxes per carton | 250 rounds per carton

CRITICAL DEFENSE®
9MM LUGER 115 gr. FTX®

ITEM NO. 90250

Performance Characteristics:

- High retained weight
- Proven terminal performance
- MADE IN THE USA
- **Net Explosive Weight** (approx. per box): 0.0179 lbs / .0081 kg



SCALE 1:1

CASE: 9MM LUGER

- Manufacturer's name (Hornady) and caliber designation (9MM LUGER) imprinted on case head
- **Characteristics:** Nickel-plated brass alloy

BULLET: FTX® (Flex Tip eXpanding)

- **Ballistic Coefficient:** .129
- **Sectional Density:** .130
- **Recommended Rifling Twist Rate:** Performance achieved in 1:10" twist
- **Push/Pull:** 125/125 minimum (lbs)

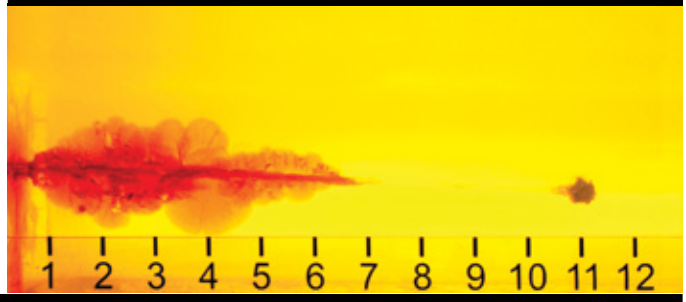
POWDER & PRIMER

- **Powder:** Temperature stable with flash suppressant
- **Primer:** Pistol primer

BALLISTICS: 3" BBL | KAHR MK9

Total Penetration	11.25"
Max Cavity	2.25"
Depth to Max Cavity	2.25"
Initial Penetration	0.25"
Retained Weight	115.0 gr.
Retained Weight %	100%
Expanded Diameter	0.55"
Velocity (fps)	1140

HEAVY CLOTHING



BALLISTIC DATA

	Muzzle	50 yds	100 yds
Velocity (fps)	1135	1025	949

LOT NUMBERS

- Lot numbers on each box and case

PACKAGING

- Tray Number: 8418

- Gross Weight: 0.75 lbs
- 25 rounds per box with plastic tray

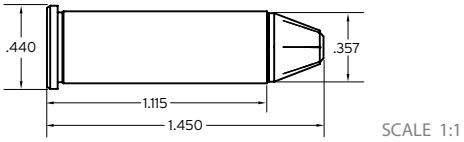
- Carton Number: 8453
- Carton Weight: 7.5 lbs
- Carton Dimensions: 2.875" x 5.25" x 10.75"
- 10 boxes per carton | 250 rounds per carton

CRITICAL DEFENSE®
38 SPECIAL 90 gr. FTX® LITE

ITEM NO. 90300

Performance Characteristics:

- High retained weight
- Proven terminal performance
- MADE IN THE USA
- **Net Explosive Weight** (approx. per box): 0.0175 lbs / .0079 kg



CASE: 38 SPECIAL

- Manufacturer's name (Hornady) and caliber designation (38 SPL) imprinted on case head
- **Characteristics:** Nickel-plated brass alloy

BULLET: FTX® (Flex Tip eXpanding)

- **Ballistic Coefficient:** .099
- **Sectional Density:** .101
- **Recommended Rifling Twist Rate:** Performance achieved in 1:18.75" twist
- **Push/Pull:** 80/100 minimum (lbs)

POWDER & PRIMER

- **Powder:** Temperature stable with flash suppressant
- **Primer:** Pistol primer

BALLISTICS: W BBL | SMITH & WESSON 637

Total Penetration	8.25"
Max Cavity	1.4"
Depth to Max Cavity	3.0"
Initial Penetration	0.5"
Retained Weight	89.0 gr.
Retained Weight %	98%
Expanded Diameter	0.54"
Velocity (fps)	1010

HEAVY CLOTHING

BALLISTIC DATA

	Muzzle	50 yds	100 yds
Velocity (fps)	1080	962	881

LOT NUMBERS

- Lot numbers on each box and case

PACKAGING

- Tray Number: 8418

- Gross Weight: 0.70 lbs
- 25 rounds per box with plastic tray

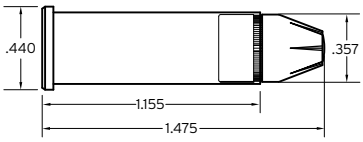
- Carton Number: 8453
- Carton Weight: 7.0 lbs
- Carton Dimensions: 2.875" x 5.25" x 10.75"
- 10 boxes per carton | 250 rounds per carton

CRITICAL DEFENSE®
38 SPECIAL 110 gr. FTX®

ITEM NO. 90310

Performance Characteristics:

- High retained weight
- Proven terminal performance
- MADE IN THE USA
- **Net Explosive Weight** (approx. per box): 0.0196 lbs / .0089 kg



SCALE 1:1

CASE: 38 SPECIAL

- Manufacturer's name (Hornady) and caliber designation (38 SPL) imprinted on case head
- **Characteristics:** Nickel-plated brass alloy

BULLET: FTX® (Flex Tip eXpanding)

- **Ballistic Coefficient:** .131
- **Sectional Density:** .123
- **Recommended Rifling Twist Rate:** Performance achieved in 1:18.75" twist
- **Push/Pull:** 100/100 minimum (lbs)

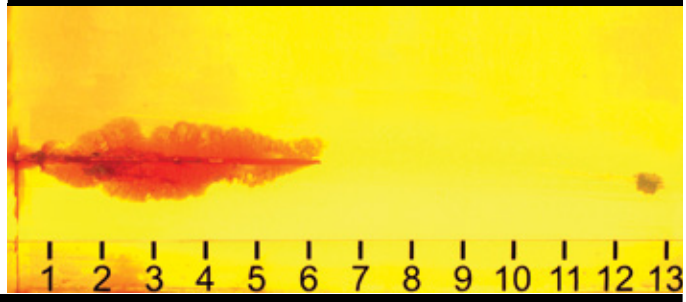
POWDER & PRIMER

- **Powder:** Temperature stable with flash suppressant
- **Primer:** Pistol primer

BALLISTICS: 1 7/8" BBL | SMITH & WESSON 637

Total Penetration	13.0"
Max Cavity	1.6"
Depth to Max Cavity	2.75"
Initial Penetration	0.25"
Retained Weight	110.0 gr.
Retained Weight %	100%
Expanded Diameter	0.50"
Velocity (fps)	1010

HEAVY CLOTHING



BALLISTIC DATA

	Muzzle	50 yds	100 yds
Velocity (fps)	1010	939	882

LOT NUMBERS

- Lot numbers on each box and case

PACKAGING

- Tray Number: 8418

- Gross Weight: 0.77 lbs
- 25 rounds per box with plastic tray

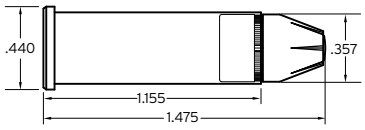
- Carton Number: 8453
- Carton Weight: 7.7 lbs
- Carton Dimensions: 2.875" x 5.25" x 10.75"
- 10 boxes per carton | 250 rounds per carton

CRITICAL DEFENSE®
38 SPECIAL +P 110 gr. FTX®

ITEM NO. 90311

Performance Characteristics:

- High retained weight
- Proven terminal performance
- MADE IN THE USA
- **Net Explosive Weight** (approx. per box): 0.0204 lbs / .0093 kg



SCALE 1:1

CASE: 38 SPECIAL +P

- Manufacturer's name (Hornady) and caliber designation (38 SPL +P) imprinted on case head
- **Characteristics:** Nickel-plated brass alloy

BULLET: FTX® (Flex Tip eXpanding)

- **Ballistic Coefficient:** .131
- **Sectional Density:** .123
- **Recommended Rifling Twist Rate:** Performance achieved in 1:18.75" twist
- **Push/Pull:** 120/175 minimum (lbs)

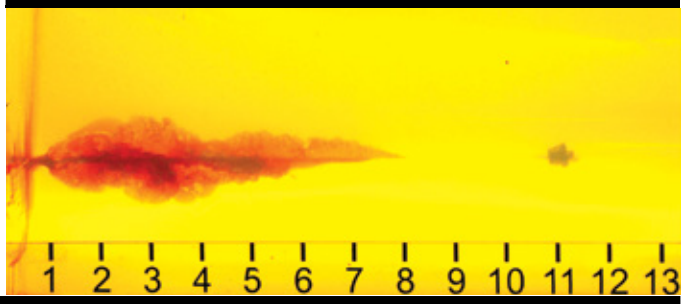
POWDER & PRIMER

- **Powder:** Temperature stable with flash suppressant
- **Primer:** Pistol primer

BALLISTICS: 1 7/8" BBL | SMITH & WESSON 637

Total Penetration	11.25"
Max Cavity	1.5"
Depth to Max Cavity	3.0"
Initial Penetration	0.5"
Retained Weight	109.0 gr.
Retained Weight %	99%
Expanded Diameter	0.54"
Velocity (fps)	1090

HEAVY CLOTHING



BALLISTIC DATA

	Muzzle	50 yds	100 yds
Velocity (fps)	1090	996	928

LOT NUMBERS

- Lot numbers on each box and case

PACKAGING

- Tray Number: 8418

- Gross Weight: 0.76 lbs
- 25 rounds per box with plastic tray

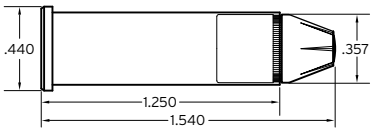
- Carton Number: 8453
- Carton Weight: 7.6 lbs
- Carton Dimensions: 2.875" x 5.25" x 10.75"
- 10 boxes per carton | 250 rounds per carton

CRITICAL DEFENSE®
357 MAG 125 gr. FTX®

ITEM NO. 90500

Performance Characteristics:

- High retained weight
- Proven terminal performance
- MADE IN THE USA
- **Net Explosive Weight** (approx. per box): 0.0364 lbs / .0165 kg



CASE: 357 MAG

- Manufacturer's name (Hornady) and caliber designation (357 MAG) imprinted on case head
- **Characteristics:** Nickel-plated brass alloy

BULLET: FTX® (Flex Tip eXpanding)

- **Ballistic Coefficient:** .150
- **Sectional Density:** .140
- **Recommended Rifling Twist Rate:** Performance achieved in 1:18.75" twist
- **Push/Pull:** 150/150 minimum (lbs)

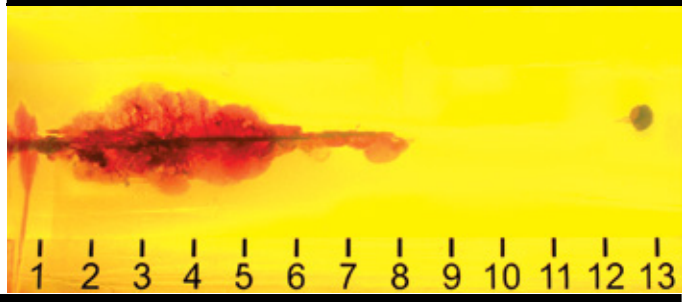
POWDER & PRIMER

- **Powder:** Temperature stable with flash suppressant
- **Primer:** Pistol primer

BALLISTICS: 3" BBL | SMITH & WESSON 686

Total Penetration	13.0"
Max Cavity	2.25"
Depth to Max Cavity	3.25"
Initial Penetration	0.25"
Retained Weight	125.0 gr.
Retained Weight %	100%
Expanded Diameter	0.61"
Velocity (fps)	1500

HEAVY CLOTHING



BALLISTIC DATA

	Muzzle	50 yds	100 yds
Velocity (fps)	1500	1312	1163

LOT NUMBERS

- Lot numbers on each box and case

PACKAGING

- Tray Number: 8418

- Gross Weight: 0.88 lbs
- 25 rounds per box with plastic tray

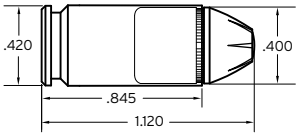
- Carton Number: 8453
- Carton Weight: 8.8 lbs
- Carton Dimensions: 2.875" x 5.25" x 10.75"
- 10 boxes per carton | 250 rounds per carton

CRITICAL DEFENSE®
40 S&W 165 gr. FTX®

ITEM NO. 91340

Performance Characteristics:

- High retained weight
- Proven terminal performance
- MADE IN THE USA
- **Net Explosive Weight** (approx. per box): 0.0217 lbs / .0098 kg



SCALE 1:1

CASE: 40 S&W

- Manufacturer's name (Hornady) and caliber designation (40 S&W) imprinted on case head
- **Characteristics:** Nickel-plated brass alloy

BULLET: FTX® (Flex Tip eXpanding)

- **Ballistic Coefficient:** .145
- **Sectional Density:** .147
- **Recommended Rifling Twist Rate:** Performance achieved in 1:16" twist
- **Push/Pull:** 100/100 minimum (lbs)

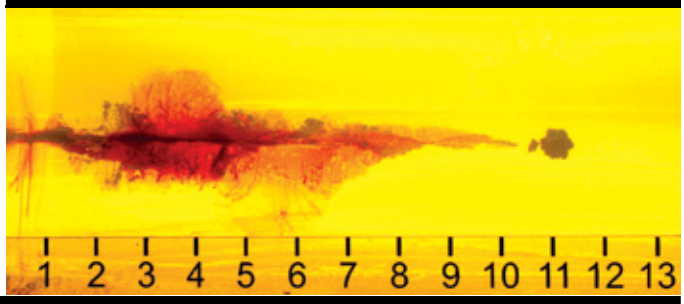
POWDER & PRIMER

- **Powder:** Temperature stable with flash suppressant
- **Primer:** Pistol primer

BALLISTICS: 3" BBL | SPRINGFIELD XD 40C

Total Penetration	11.5"
Max Cavity	2.75"
Depth to Max Cavity	3.5"
Initial Penetration	0.75"
Retained Weight	165.0 gr.
Retained Weight %	100%
Expanded Diameter	0.68"
Velocity (fps)	1045

HEAVY CLOTHING



BALLISTIC DATA

	Muzzle	50 yds	100 yds
Velocity (fps)	1170	1059	981

LOT NUMBERS

- Lot numbers on each box and case

PACKAGING

- Tray Number: 8409

- Gross Weight: 0.80 lbs
- 20 rounds per box with plastic tray

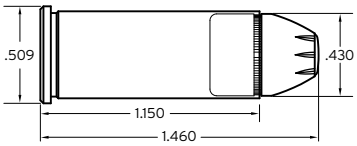
- Carton Number: 8454
- Carton Weight: 8.0 lbs
- Carton Dimensions: 3.375" x 5.310" x 10.75"
- 10 boxes per carton | 200 rounds per carton

CRITICAL DEFENSE®
44 SPECIAL 165 gr. FTX®

ITEM NO. 90700

Performance Characteristics:

- High retained weight
- Proven terminal performance
- MADE IN THE USA
- **Net Explosive Weight** (approx. per box): 0.0286 lbs / .0130 kg



SCALE 1:1

CASE: 44 SPECIAL

- Manufacturer's name (Hornady) and caliber designation (44 SPL) imprinted on case head
- **Characteristics:** Nickel-plated brass alloy

BULLET: FTX® (Flex Tip eXpanding)

- **Ballistic Coefficient:** .125
- **Sectional Density:** .128
- **Recommended Rifling Twist Rate:** Performance achieved in 1:20" twist
- **Push/Pull:** 100/100 minimum (lbs)

POWDER & PRIMER

- **Powder:** Temperature stable with flash suppressant
- **Primer:** Pistol primer

BALLISTICS: 2½" BBL | SMITH & WESSON 329 PD

Total Penetration	9.75"
Max Cavity	2.0"
Depth to Max Cavity	3.0"
Initial Penetration	0.5"
Retained Weight	164.0 gr.
Retained Weight %	99%
Expanded Diameter	0.70"
Velocity (fps)	900

HEAVY CLOTHING

BALLISTIC DATA

	Muzzle	50 yds	100 yds
Velocity (fps)	1160	1038	956

LOT NUMBERS

- Lot numbers on each box and case

PACKAGING

- Tray Number: 8409

- Gross Weight: 0.91 lbs
- 20 rounds per box with plastic tray

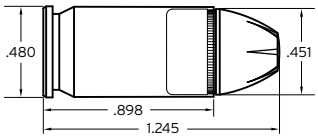
- Carton Number: 8454
- Carton Weight: 9.1 lbs
- Carton Dimensions: 3.375" x 5.310" x 10.75"
- 10 boxes per carton | 200 rounds per carton

CRITICAL DEFENSE®
45 AUTO 185 gr. FTX®

ITEM NO. 90900

Performance Characteristics:

- High retained weight
- Proven terminal performance
- MADE IN THE USA
- **Net Explosive Weight** (approx. per box): 0.0217 lbs / .0098 kg



SCALE 1:1

CASE: 45 AUTO

- Manufacturer's name (Hornady) and caliber designation (45 AUTO) imprinted on case head
- **Characteristics:** Nickel-plated brass alloy

BULLET: FTX® (Flex Tip eXpanding)

- **Ballistic Coefficient:** .140
- **Sectional Density:** .130
- **Recommended Rifling Twist Rate:** Performance achieved in 1:16" twist
- **Push/Pull:** 75/75 minimum (lbs)

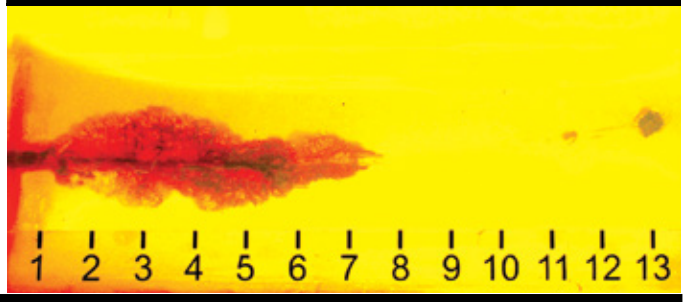
POWDER & PRIMER

- **Powder:** Temperature stable with flash suppressant
- **Primer:** Pistol primer

BALLISTICS: 3" BBL | SPRINGFIELD EMP

Total Penetration	13.75"
Max Cavity	2.25"
Depth to Max Cavity	3.5"
Initial Penetration	0.75"
Retained Weight	184.0 gr.
Retained Weight %	99%
Expanded Diameter	0.66"
Velocity (fps)	1000

HEAVY CLOTHING



BALLISTIC DATA

	Muzzle	50 yds	100 yds
Velocity (fps)	1000	935	883

LOT NUMBERS

- Lot numbers on each box and case

PACKAGING

- Tray Number: 8409

- Gross Weight: 0.88 lbs
- 20 rounds per box with plastic tray

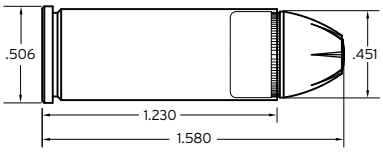
- Carton Number: 8454
- Carton Weight: 8.8 lbs
- Carton Dimensions: 3.375" x 5.310" x 10.75"
- 10 boxes per carton | 200 rounds per carton

CRITICAL DEFENSE®
45 COLT 185 gr. FTX®

ITEM NO. 92790

Performance Characteristics:

- High retained weight
- Proven terminal performance
- MADE IN THE US
- **Net Explosive Weight** (approx. per box): 0.0277 lbs / .0126 kg



SCALE 1:1

CASE: 45 COLT

- Manufacturer's name (Hornady) and caliber designation (45 COLT) imprinted on case head
- **Characteristics:** Nickel-plated brass alloy

BULLET: FTX® (Flex Tip eXpanding)

- **Ballistic Coefficient:** .140
- **Sectional Density:** .130
- **Recommended Rifling Twist Rate:** Performance achieved in 1:16" twist
- **Push/Pull:** 150/100 minimum (lbs)

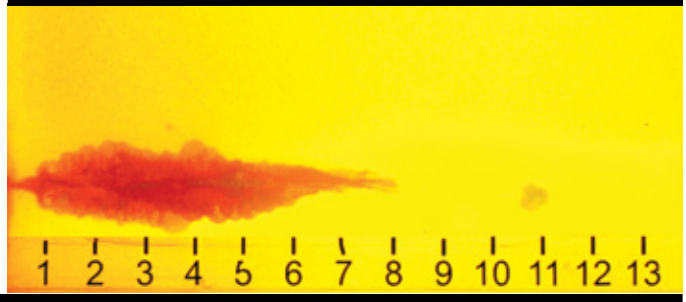
POWDER & PRIMER

- **Powder:** Temperature stable with flash suppressant
- **Primer:** Pistol primer

BALLISTICS: 3" BBL | TAURUS JUDGE

Total Penetration	11.25"
Max Cavity	2.0"
Depth to Max Cavity	3.5"
Initial Penetration	0.75"
Retained Weight	184.0 gr.
Retained Weight %	99%
Expanded Diameter	0.74"
Velocity (fps)	910

HEAVY CLOTHING



BALLISTIC DATA

	Muzzle	50 yds	100 yds
Velocity (fps)	1160	1049	972

LOT NUMBERS

- Lot numbers on each box and case

PACKAGING

- Tray Number: 8409

- Gross Weight: 1.0 lbs
- 20 rounds per box with plastic tray

- Carton Number: 8454
- Carton Weight: 10.0 lbs
- Carton Dimensions: 3.375" x 5.310" x 10.75"
- 10 boxes per carton | 200 rounds per carton

223

223 Remington

53 gr. TAP PATROL®

#80295

Polymer Tipped Copper Alloy Bullet | B.C. = .170

TAP Patrol® is specifically designed to provide consistent and reliable performance through the FBI protocol when fired with 14.5" to 16" barreled 1:7 to 1:9" twist patrol rifles. The lead free bullet features a flat polymer tip, which allows it to provide "barrier blind" performance ensuring consistent penetration depths. The flat tip design ensures the bullet will not plug with material from the barriers and ensures feeding through the wide variety of patrol rifle platforms. TAP Patrol® ammunition is loaded with temperature stable, low flash propellant designed to work when you do.

55 gr. TAP URBAN®

#83276

Polymer Tipped Spitzer Flat Base Bullet | B.C. = .255

The Hornady® 223 Rem 55 gr. TAP Urban® is the preferred choice for use in SBRs, carbines, and rifles when the probability for barrier penetration is low. Rapid expansion provides dramatic wound cavities, massive fragmentation, and prevents over penetration on non-barrier engagements. These factors make this bullet a great choice when collateral risk is high.

60 gr. TAP URBAN®

#83286

Polymer Tipped Spitzer Flat Base Bullet | B.C. = .265

The Hornady® 223 Rem 60 gr. TAP Urban® offers high velocity and performance similar to that of polymer tipped Hornady® 223 bullets. The 60 gr. bullet offers similar retained weight and penetration to the 55 gr. TAP Urban, and is the heaviest polymer tipped bullet acceptable for 1:12" twist firearms. The heavier 60 gr. bullet transfers more energy to the target for enhanced terminal performance.

62 gr. TAP® BARRIER™

#83285

Spire Point Heavy Jacketed Bullet | B.C. = .264

TAP® Barrier™ turns cover into concealment. Hornady® originally developed this ammunition to meet the requirement for a high-speed, barrier penetrating bullet that could be used for nuclear power plant security. The design of the TAP® Barrier™ round allows the projectile to maintain its structural integrity while punching through barriers, yet still initiate expansion in soft tissue.

75 gr. BTHP TAP®

#80265

Boat Tail Hollow Point Bullet | B.C. = .395

This match accurate load is our heavy TAP® offering in 223 Rem. This load is suitable for a short barreled rifle that has either a 223 Rem or 5.56 NATO chamber. The 75 gr. bullet offers deeper penetration than the 55 gr. and 60 gr. TAP Urban® bullets. The 75 gr. BTHP penetrates with minimal deflection and provides rapid fragmentation, thus delivering more energy to the target. This bullet generates very large and consistent wound cavities, serving as an ideal choice for 223 Rem precision rifle applications.

Hornady Product Summary

Hornady® 223 Rem TAP® loads are a unique offering to law enforcement professionals that combine reliable functioning with consistent performance, low muzzle signature, and exceptional accuracy in cannelured and crimped 55, 60 and 62 gr. bullets, and a 75 gr. load offering match accuracy. This ammunition features clean burning propellants and enhanced terminal performance, with rapid expansion and bullet fragmentation. These highly effective bullets will penetrate soft body armor making them an excellent choice for patrol rifle programs and SWAT teams.

This line of ammunition is intended for Law Enforcement sales ONLY.

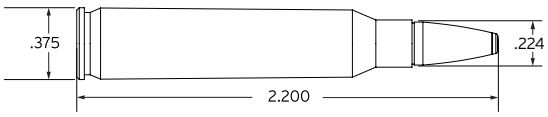
B.C. = Ballistic Coefficient

223 REM
53 gr. TAP PATROL®

ITEM NO. 80295

Performance Characteristics:

- Meets FBI Protocol penetration requirements
- Large wound cavities
- "Barrier blind"
- Lead free
- MADE IN THE USA
- **Net Explosive Weight** (approx. per box): 0.0783 lbs / .0355 kg



SCALE 1:1

CASE: 223 REM

- Manufacturer's name (Hornady) and caliber designation (223 REM) imprinted on case head
- **Characteristics:** High quality annealed brass alloy

BULLET: TAP PATROL®

- **Ballistic Coefficient:** .170
- **Sectional Density:** .151
- **Bullet Length:** 0.815"
- **Recommended Rifling Twist Rate:** 1:7" to 1:10"
- **Characteristics:** Tipped, copper alloy with cannelure
- **Push/Pull:** 50/50 minimum (lbs)

POWDER & PRIMER

- **Powder:** Temperature stable with flash suppressant
- **Primer:** Small rifle, staked primer pocket, lead free

LOT NUMBERS

- Lot numbers on each box and case

BALLISTIC DATA

	Muzzle	100 yds	200 yds	300 yds	400 yds	500 yds
Velocity (fps)	3335	2757	2248	1797	1418	1141
Energy (ft lbs)	1309	895	595	380	237	153
Trajectory (in)	-1.5	0	-3.1	-13.3	-34.4	-73.1

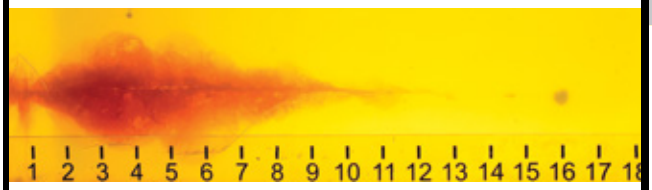
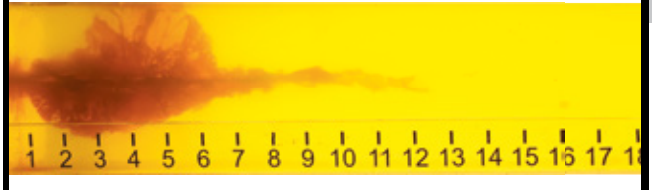
PACKAGING

- Tray: Item No. 8407

- Gross Weight: 0.62 lbs
- 20 rounds per box with plastic tray

- Carton: Item No. 8420
- Carton Weight: 6.2 lbs
- Carton Dimensions: 5.0" x 5.25" x 7.0"
- 10 boxes per carton | 200 rounds per carton

223 REM | 53 gr. TAP PATROL®
16" BBL | 1:7" Twist | Colt 6920
ITEM NO. 80295

	Total Penetration	Max Cavity	Depth to Max Cavity	Initial Penetration	Retained Weight	Retained Weight %	Expanded Diameter	Velocity (fps)	
	16.0"	5.0"	3.0"	0.5"	52.0 gr	98%	0.50"	3010	BARE GELATIN
	16.5"	4.0"	3.0"	.50"	49.0 gr.	89%	0.46"	3045	HVY CLOTHING
	15.0"	4.5"	4.0"	0.0"	50.4 gr.	92%	0.33"	3027	STEEL
	16.0"	4.5"	4.0"	0.0"	50.1 gr.	91%	0.48"	3030	WALLBOARD
	16.0"	4.5"	4.0"	0.0"	22.0 gr.	40%	0.28"	3014	PLYWOOD
	13.25"	4.0"	2.0"	0.0"	39.4 gr.	72%	0.42"	3025	AUTO GLASS

223 REM
53 gr. TAP PATROL®

Item #80295						
14.5" Colt® M4 Carbine 1:7"	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	2959	2427	1954	1546	1227	1032
Energy (ft lbs)	1030	693	449	281	177	125
Trajectory (inches)	-2.5	0.0	-3.5	-16.3	-43.9	-94.7
16" Colt® Law Enforcement Carbine 1:7"	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	3025	2485	2006	1590	1258	1049
Energy (ft lbs)	1077	727	474	297	186	129
Trajectory (inches)	-2.5	0.0	-3.2	-15.3	-51.4	-89.6
16" Daniel Defense 1:7"	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	2945	2414	1943	1537	1220	1029
Energy (ft lbs)	1021	686	444	278	175	125
Trajectory (inches)	-2.5	0.0	-3.6	-16.5	-44.5	-95.9
***24" SAAMI 223 Rem. Test Barrel 1:12"**	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	3335	2757	2248	1797	1418	1141
Energy (ft lbs)	1309	895	595	380	237	153
Trajectory (inches)	-1.5	0.0	-3.1	-13.3	-34.4	-73.1

***Test data used on packaging label**

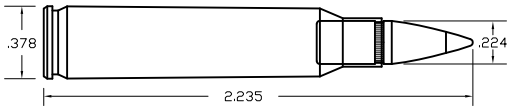
NOTES:

223 REM
55 gr. TAP URBAN®

ITEM NO. 83276

Performance Characteristics:

- Match accurate
- Rapid fragmentation
- Optimum for entry/CQB use to mitigate over penetration
- MADE IN THE USA
- **Net Explosive Weight** (approx. per box): 0.0706 lbs / .0320 kg



CASE: 223 REMINGTON

- Manufacturer's name (Hornady) and caliber designation (223 REM) imprinted on case head
- **Characteristics:** High quality annealed brass alloy

BULLET: TAP URBAN®

- **Ballistic Coefficient:** .255
- **Sectional Density:** .157
- **Bullet Length:** 0.813"
- **Recommended Rifling Twist Rate:** 1:7" to 1:12"
- **Characteristics:** Polymer tipped, frangible with cannelure
- **Push/Pull:** 50/60 minimum (lbs)

POWDER & PRIMER

- **Powder:** Temperature stable with flash suppressant
- **Primer:** Small rifle, staked primer pocket

LOT NUMBERS

- Lot numbers on each box and case

BALLISTIC DATA

	Muzzle	100 yds	200 yds	300 yds	400 yds	500 yds
Velocity (fps)	3220	2837	2485	2159	1859	1589
1589	1266	983	754	569	422	308
Trajectory (in)	-1.5	0	-2.9	-11.4	-27.5	-53.7

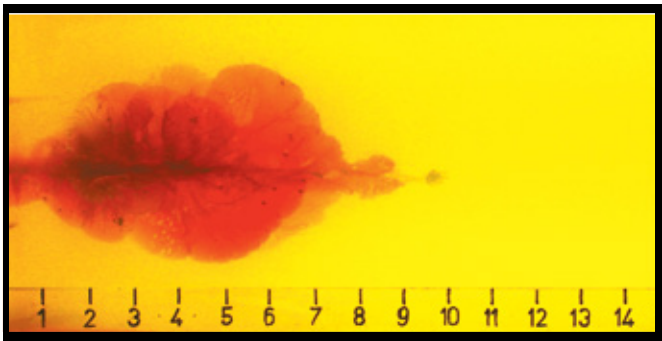
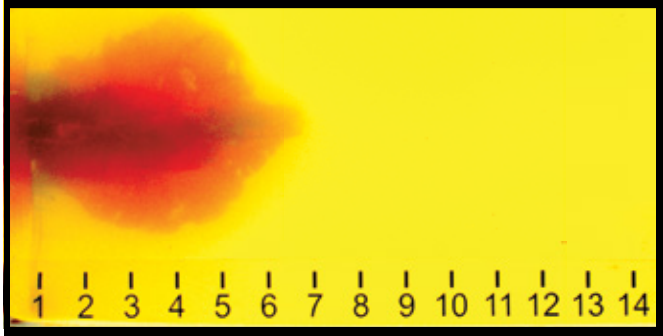
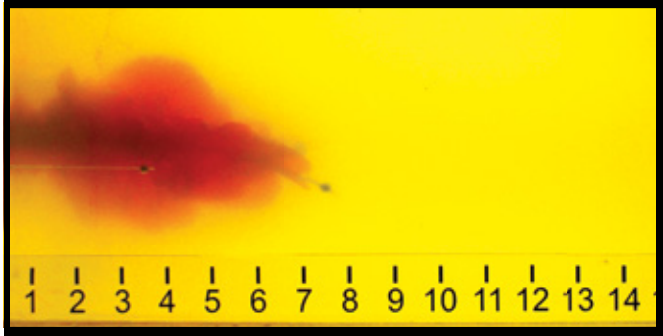
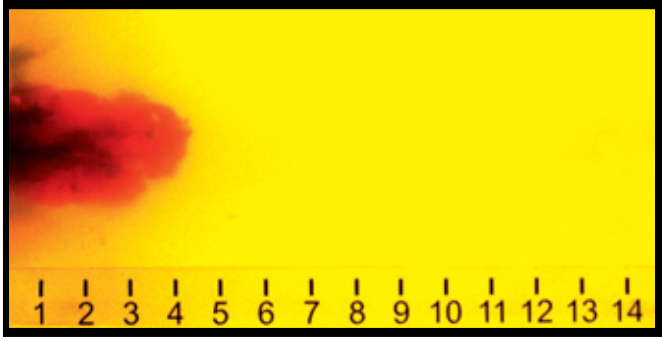
PACKAGING

- Tray: Item No. 8407

- Gross Weight: 0.60 lbs
- 20 rounds per box with plastic tray

- Carton: Item No. 8420
- Carton Weight: 6.0 lbs
- Carton Dimensions: 5.0" x 5.25" x 7.0"
- 10 boxes per carton | 200 rounds per carton

223 REM | 55 gr. TAP URBAN®
16" BBL | 1:9" Twist | DPMS AR-15
ITEM NO. 83276

	Total Penetration	Max Cavity	Depth to Max Cavity	Initial Penetration	Retained Weight	Retained Weight %	Expanded Diameter	Velocity (fps)	
	10.0"	4.5"	5.0"	0.5"	24.1 gr.	44%	0.37"	2981	BARE GELATIN
	6.0"	4.0"	3.5"	0.0"	0.0 gr.	0%	0.0"	2955	STEEL
	7.5"	3.5"	3.5"	0.75"	16.6 gr.	30%	0.49"	2993	WALLBOARD
	10.0"	3.75"	3.5"	0.0"	22.5 gr.	41%	0.37"	2901	PLYWOOD
	4.0"	3.5"	2.0"	0.0"	0.0 gr.	0%	0.0"	2945	AUTO GLASS

This bullet fragments completely when encountering this barrier.

This bullet fragments completely when encountering this barrier.

223 REM
55 gr. TAP URBAN®

Item #83276						
10.5" Noveske® CQB 1:7"	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	2656	2317	2004	1719	1466	1257
Energy (ft lbs)	861	656	491	361	263	193
Trajectory (inches)	-2.5	2.0	0.0	-10.7	-33.3	-72.3
11.5" Bushmaster® XM15-E2S 1:9"	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	2773	2426	2104	1809	1545	1320
Energy (ft lbs)	939	718	541	400	292	213
Trajectory (inches)	-2.5	1.7	0.0	-9.7	-30.0	-65.1
14.5" Colt® M4 Carbine 1:7"	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	2852	2499	2172	1871	1600	1365
Energy (ft lbs)	993	762	576	427	312	228
Trajectory (inches)	-2.5	1.6	0.0	-9.0	-28.0	-60.7
16" DPMS® AP4 Panther™ Carbine 1:9"	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	2983	2619	2284	1973	1691	1443
Energy (ft lbs)	1087	838	637	476	349	254
Trajectory (inches)	-2.5	1.3	0.0	-8.0	-25.1	-54.4
18.5" Ruger® Mini 14® 1:9"	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	3045	2676	2337	2022	1735	1480
Energy (ft lbs)	1132	875	667	499	367	268
Trajectory (inches)	-1.0	2.0	0.0	-8.3	-25.3	-53.9
20" Bushmaster® XM15-E2S 1:7"	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	3062	2692	2351	2035	1747	1491
Energy (ft lbs)	1145	885	675	506	373	271
Trajectory (inches)	-2.5	1.2	0.0	-7.5	-23.5	-50.9
***24" SAAMI 223 Rem. Test Barrel 1:12"**	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	3220	2837	2485	2159	1859	1589
Energy (ft lbs)	1266	983	754	569	422	308
Trajectory (inches)	-1.5	0	-2.9	-11.4	-27.5	-53.7

***Test data used on packaging label**

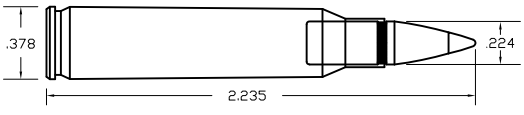
NOTES:

223 REM
60 gr. TAP URBAN®

ITEM NO. 83286

Performance Characteristics:

- Low retained weight
- Match accurate
- Rapid fragmentation
- Great option for entry/CQB use to mitigate over penetration
- MADE IN THE USA
- **Net Explosive Weight** (approx. per box): 0.0729 lbs / .0330 kg



SCALE 1:1

CASE: 223 REMINGTON

- Manufacturer's name (Hornady) and caliber designation (223 REM) imprinted on case head
- **Characteristics:** High quality annealed brass alloy

BULLET: TAP URBAN®

- **Ballistic Coefficient:** .265
- **Sectional Density:** .171
- **Bullet Length:** 0.873"
- **Recommended Rifling Twist Rate:** 1:7" to 1:12"
- **Characteristics:** Match grade, polymer tipped, frangible with cannelure
- **Push/Pull:** 50/60 minimum (lbs)

POWDER & PRIMER

- **Powder:** Temperature stable with flash suppressant
- **Primer:** Small rifle, staked primer pocket

LOT NUMBERS

- Lot numbers on each box and case

BALLISTIC DATA

	Muzzle	100 yds	200 yds	300 yds	400 yds	500 yds
Velocity (fps)	3110	2749	2417	2108	1823	1867
Energy (ft lbs)	1289	1007	778	592	443	327
Trajectory (in)	-1.5	0	-3.1	-12.3	-29.3	-56.8

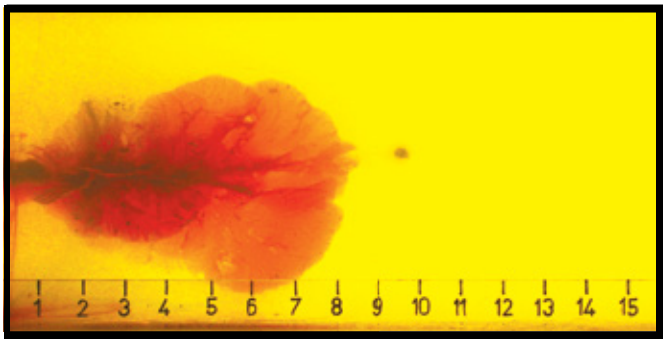
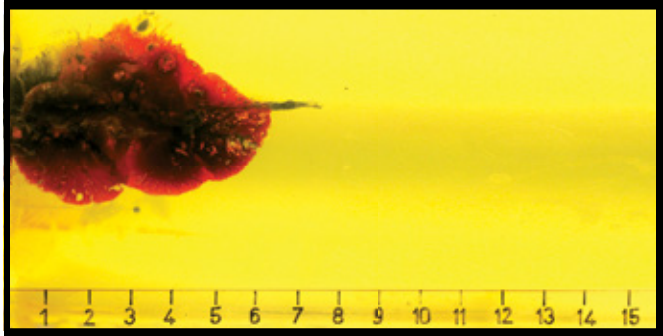
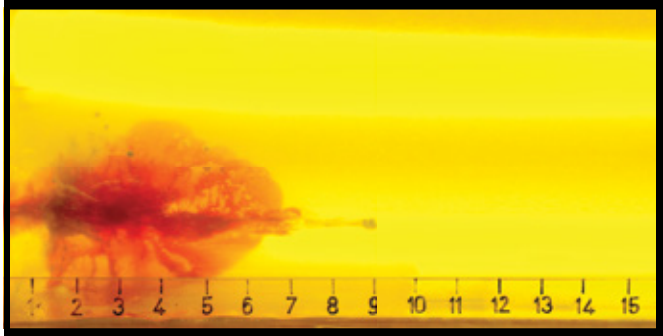
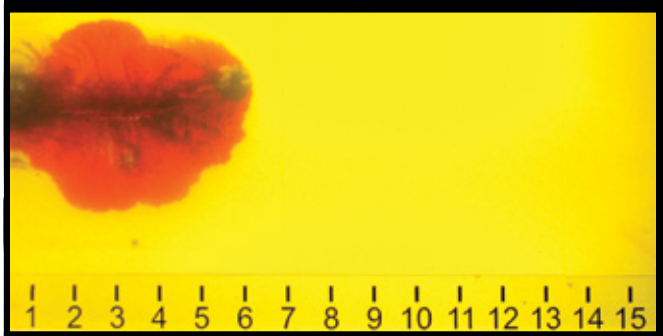
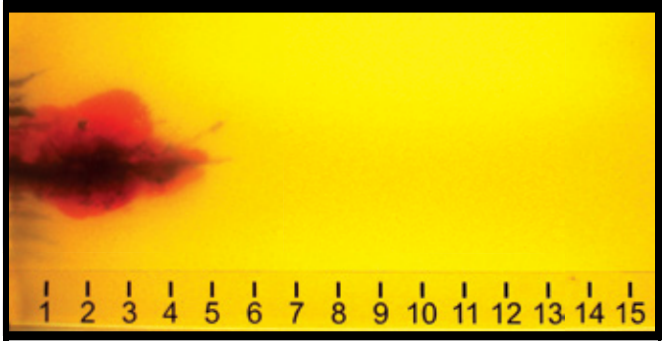
PACKAGING

- Tray: Item No. 8407

- Gross Weight: 0.62 lbs
- 20 rounds per box with plastic tray

- Carton: Item No. 8420
- Carton Weight: 6.2 lbs
- Carton Dimensions: 5.0" x 5.25" x 7.0"
- 10 boxes per carton | 200 rounds per carton

223 REM | 60 gr. TAP URBAN®
16" BBL | 1:9" Twist | DPMS AR-15
ITEM NO. 83286

	Total Penetration	Max Cavity	Depth to Max Cavity	Initial Penetration	Retained Weight	Retained Weight %	Expanded Diameter	Velocity (fps)	
	9.75"	5.25"	6.25"	0.0"	20.2 gr.	34%	0.44"	2892	BARE GELATIN
	7.5"	4.0"	2.75"	0.25"	0.0 gr.	0%	0.0"	2831	STEEL
	This bullet fragments completely when encountering this barrier.								
	9.75"	3.0"	1.25"	0.5"	22.3 gr.	37%	0.43"	2851	WALLBOARD
	6.0"	4.25"	2.0"	0.0"	0.0 gr.	0%	0.0"	2839	PLYWOOD
	This bullet fragments completely when encountering this barrier.								
	5.5"	3.0"	2.5"	0.0"	0.0 gr.	0%	0.0"	2816	AUTO GLASS
	This bullet fragments completely when encountering this barrier.								

223 REM
60 gr. TAP URBAN®

Item #83286						
10.5" Noveske® CQB 1:7"	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	2623	2299	1999	1724	1480	1274
Energy (ft lbs)	917	704	532	396	292	216
Trajectory (inches)	-2.5	2.1	0.0	-10.8	-33.5	-72.1
11.5" Bushmaster® XM15-E2S 1:9"	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	2661	2334	2031	1753	1506	1295
Energy (ft lbs)	943	726	550	410	302	223
Trajectory (inches)	-2.5	2.0	0.0	-10.5	-32.3	-69.7
14.5" Colt® M4 Carbine 1:7"	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	2758	2424	2115	1829	1572	1350
Energy (ft lbs)	1013	783	596	446	329	243
Trajectory (inches)	-2.5	1.7	0.0	-9.6	-29.6	-63.8
16" DPMS® AP4 Panther™ Carbine 1:9"	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	2872	2530	2213	1919	1652	1418
Energy (ft lbs)	1099	853	652	491	364	268
Trajectory (inches)	-2.5	1.5	0.0	-8.6	-26.8	-57.8
18.5" Ruger® Mini 14® 1:9"	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	2891	2548	2229	1934	1666	1430
Energy (ft lbs)	1113	865	662	498	370	272
Trajectory (inches)	-1.0	2.2	0.0	-9.2	-27.9	-59.1
20" Bushmaster® XM15-E2S 1:7"	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	2965	2616	2293	1993	1719	1475
Energy (ft lbs)	1171	912	700	529	394	290
Trajectory (inches)	-2.5	1.3	0.0	-8	-24.8	-53.4
***24" SAAMI 223 Rem. Test Barrel 1:12"**	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	3110	2749	2417	2108	1823	1567
Energy (ft lbs)	1289	1007	778	592	443	327
Trajectory (inches)	-1.5	0	-3.1	-12.3	-29.3	-56.8

***Test data used on packaging label**

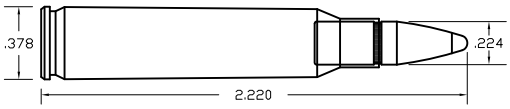
NOTES:

223 REM
62 gr. TAP® BARRIER™

ITEM NO. 83285

Performance Characteristics:

- Large wound cavities
- High weight retention
- Designed for effective use in penetrating fire doors and steel barriers
- Accurate in all 223 REM & 5.56 NATO twist rates
- MADE IN THE USA
- **Net Explosive Weight** (approx. per box): 0.1786 lbs / .0810 kg



SCALE 1:1

CASE: 223 REMINGTON

- Manufacturer's name (Hornady) and caliber designation (223 REM) imprinted on case head
- **Characteristics:** High quality annealed brass alloy

BULLET: TAP® BARRIER™

- **Ballistic Coefficient:** .264
- **Sectional Density:** .176
- **Bullet Length:** 0.795"
- **Recommended Rifling Twist Rate:** 1:7" to 1:12"
- **Characteristics:** Spire point with cannelure
- **Push/Pull:** 50/50 minimum (lbs)

POWDER & PRIMER

- **Powder:** Temperature stable with flash suppressant
- **Primer:** Small rifle, staked primer pocket

LOT NUMBERS

- Lot numbers on each box and case

BALLISTIC DATA

	Muzzle	100 yds	200 yds	300 yds	400 yds	500 yds
Velocity (fps)	3050	2699	2375	2073	1796	1546
Energy (ft lbs)	1239	971	751	573	430	319
Trajectory (in)	-1.5	0	-3.3	-12.8	-30.5	-59.0

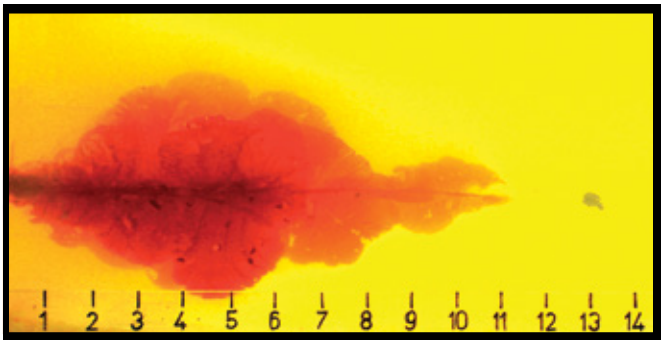
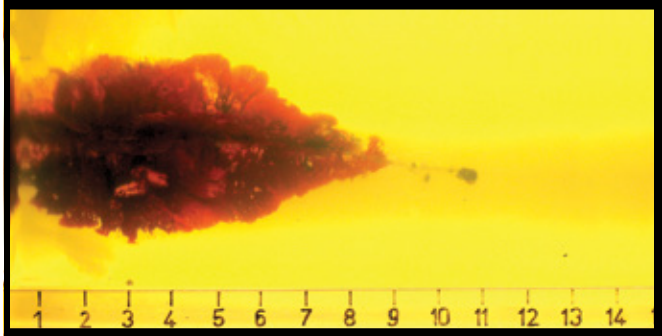
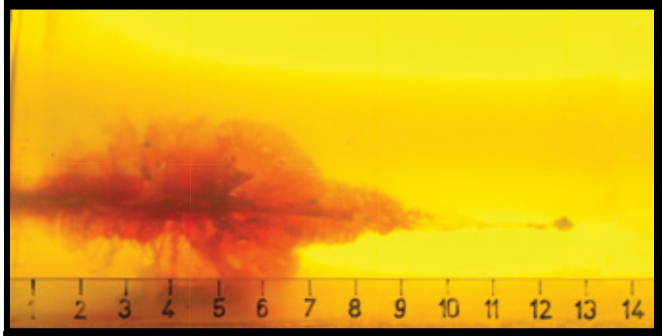
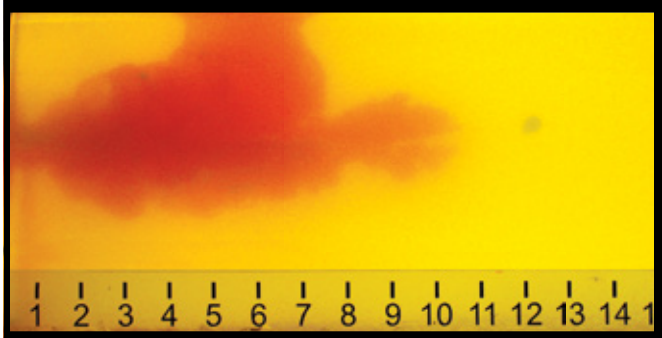
PACKAGING

- Tray: Item No. 8407

- Gross Weight: 0.62 lbs
- 20 rounds per box with plastic tray

- Carton: Item No. 8420
- Carton Weight: 6.2 lbs
- Carton Dimensions: 5.0" x 5.25" x 7.0"
- 10 boxes per carton | 200 rounds per carton

223 REM | 62 gr. TAP® BARRIER™
16" BBL | 1:9" Twist | DPMS AR-15
ITEM NO. 83285

	Total Penetration	Max Cavity	Depth to Max Cavity	Initial Penetration	Retained Weight	Retained Weight %	Expanded Diameter	Velocity (fps)	
	13.75"	4.5"	4.75"	0.25"	43.6 gr.	70%	0.46"	2840	BARE GELATIN
	11.0"	4.0"	3.5"	0.0"	39.8 gr.	72%	0.49"	2852	STEEL
	12.75"	4.0"	4.0"	0.75"	36.9 gr.	60%	0.43"	2871	WALLBOARD
	12.5"	5.0"	5.0"	0.5"	52.7 gr.	85%	0.45"	2833	PLYWOOD
	6.0"	3.25"	2.75"	0.0"	20.4 gr.	33%	0.60"	2810	AUTO GLASS

223 REM
62 gr. TAP® BARRIER™

Item #83285						
10.5" Noveske® CQB 1:7"	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	2486	2170	1879	1616	1386	1201
Energy (ft lbs)	851	648	486	359	264	198
Trajectory (inches)	-2.5	2.5	0.0	-12.4	-38.2	-82.2
11.5" Bushmaster® XM15-E2S 1:9"	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	2600	2276	1977	1703	1461	1259
Energy (ft lbs)	931	713	538	399	294	218
Trajectory (inches)	-2.5	2.1	0.0	-11.1	-34.3	-73.9
14.5" Colt® M4 Carbine 1:7"	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	2655	2327	2024	1746	1498	1288
Energy (ft lbs)	970	746	564	419	309	228
Trajectory (inches)	-2.5	2.0	0.0	-10.5	-32.6	-70.2
16" DPMS® AP4 Panther™ Carbine 1:9"	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	2738	2404	2095	1811	1555	1335
Energy (ft lbs)	1032	796	604	451	333	245
Trajectory (inches)	-2.5	1.8	0.0	-9.8	-30.2	-65.2
18.5" Ruger® Mini 14® 1:9"	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	2783	2446	2134	1846	1586	1361
Energy (ft lbs)	1066	824	627	469	346	255
Trajectory (inches)	-1.0	2.4	0.0	-10.1	-30.5	-64.8
20" Bushmaster® XM15-E2S 1:7"	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	2882	2538	2219	1924	1656	1420
Energy (ft lbs)	1143	887	678	510	377	278
Trajectory (inches)	-2.5	1.5	0.0	-8.6	-26.7	-57.5
***24" SAAMI 223 Rem. Test Barrel 1:12"**	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	3050	2699	2375	2073	1796	1546
Energy (ft lbs)	1239	971	751	573	430	319
Trajectory (inches)	-1.5	0.0	-3.3	-12.8	-30.5	-59.0

***Test data used on packaging label**

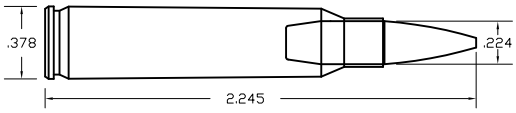
NOTES:

223 REM
75 gr. BTHP TAP®

ITEM NO. 80265

Performance Characteristics:

- Match accurate
- Perfect for sniper use
- Large wound cavities
- Max fragmentation for low retained weight
- MADE IN THE USA
- **Net Explosive Weight** (approx. per box): 0.1714 lbs / 30777 kg



SCALE 1:1

CASE: 223 REMINGTON

- Manufacturer's name (Hornady) and caliber designation (223 REM) imprinted on case head
- **Characteristics:** High quality annealed brass alloy

BULLET: TAP® BARRIER™

- **Ballistic Coefficient:** .395
- **Sectional Density:** .214
- **Bullet Length:** 0.983"
- **Recommended Rifling Twist Rate:** 1:7" to 1:9"
- **Characteristics:** Boat tail hollow point with cannelure
- **Push/Pull:** 75/60 minimum (lbs)

POWDER & PRIMER

- **Powder:** Temperature stable with flash suppressant
- **Primer:** Small rifle, staked primer pocket

LOT NUMBERS

- Lot numbers on each box and case

BALLISTIC DATA

	Muzzle	100 yds	200 yds	300 yds	400 yds	500 yds
Velocity (fps)	2785	2557	2340	2134	1939	1755
Energy (ft lbs)	1292	1089	912	759	626	513
Trajectory (in)	-1.5	0	-3.8	-14.1	-31.9	-59.1

PACKAGING

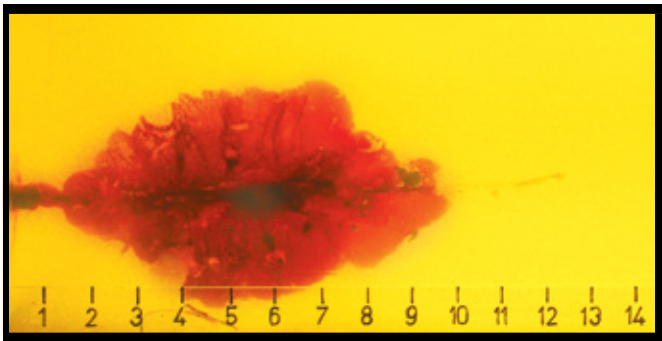
- Tray: Item No. 8407

- Gross Weight: 0.66 lbs
- 20 rounds per box with plastic tray

- Carton: Item No. 8420
- Carton Weight: 6.6 lbs
- Carton Dimensions: 5.0" x 5.25" x 7.0"
- 10 boxes per carton | 200 rounds per carton

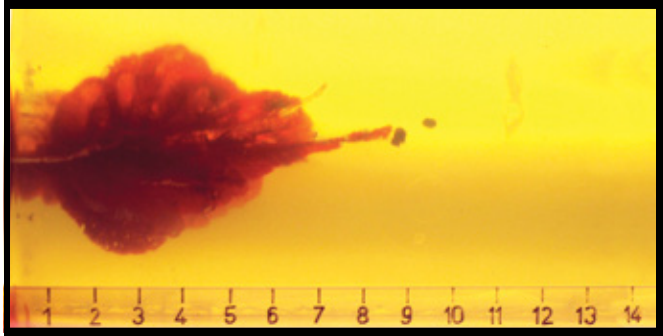
223 REM | 75 gr. BTHP TAP®
16" BBL | 1:9" Twist | DPMS AR-15
ITEM NO. 80265

BARE GELATIN



Total Penetration	Max Cavity	Depth to Max Cavity	Initial Penetration	Retained Weight	Retained Weight %	Expanded Diameter	Velocity (fps)
12.5"	5.25"	5.0"	1.0"	27.0 gr.	36%	0.45"	2542

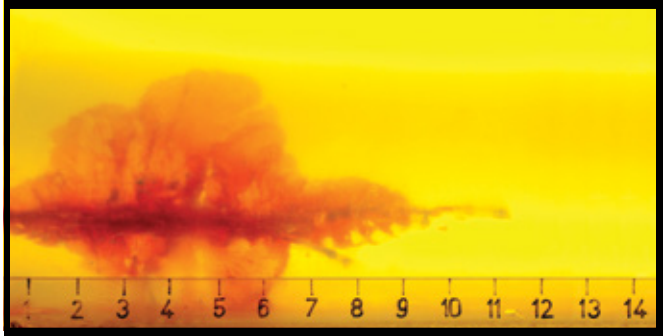
STEEL



Total Penetration	Max Cavity	Depth to Max Cavity	Initial Penetration	Retained Weight	Retained Weight %	Expanded Diameter	Velocity (fps)
9.75"	3.25"	3.25"	0.0"	0.0 gr.	0%	0.0"	2563

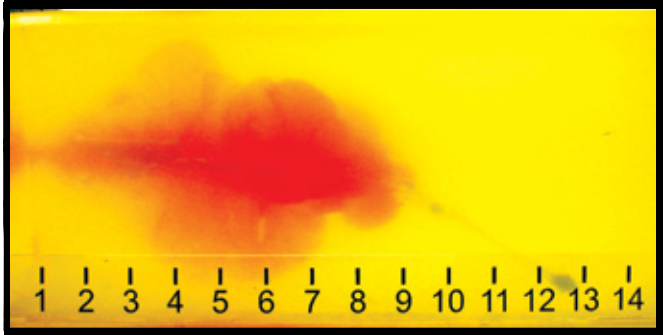
This bullet fragments completely when encountering this barrier.

WALLBOARD



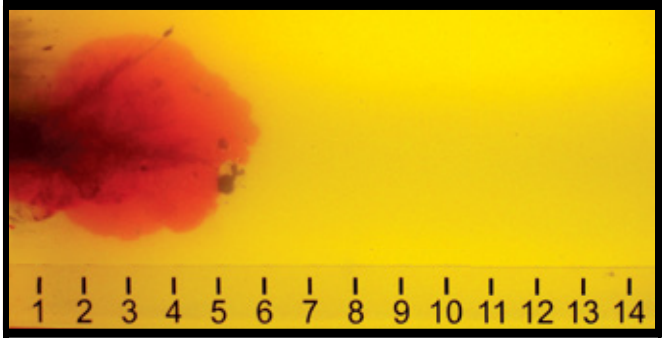
Total Penetration	Max Cavity	Depth to Max Cavity	Initial Penetration	Retained Weight	Retained Weight %	Expanded Diameter	Velocity (fps)
11.75"	4.0"	3.75"	1.0"	33.0 gr.	44%	0.42"	2578

PLYWOOD



Total Penetration	Max Cavity	Depth to Max Cavity	Initial Penetration	Retained Weight	Retained Weight %	Expanded Diameter	Velocity (fps)
13.0"	5.0"	6.25"	0.75"	38.4 gr.	51%	0.47"	2544

AUTO GLASS



Total Penetration	Max Cavity	Depth to Max Cavity	Initial Penetration	Retained Weight	Retained Weight %	Expanded Diameter	Velocity (fps)
5.5"	4.5"	2.5"	0.0"	0.0 gr.	0%	0.0"	2569

This bullet fragments completely when encountering this barrier.

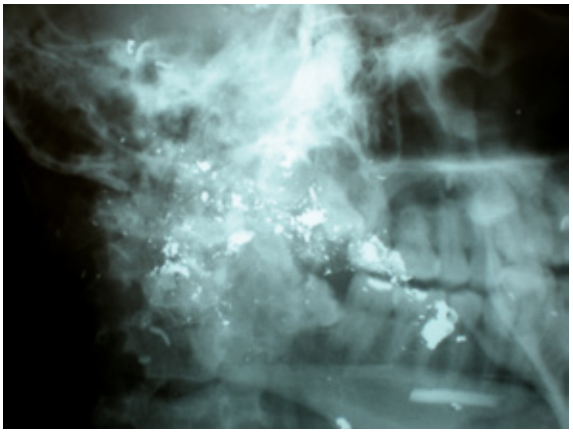
223 REM
75 gr. BTHP TAP®

Item #80265						
10.5" Noveske® CQB 1:7"	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	2348	2141	1945	1761	1591	1436
Energy (ft lbs)	918	763	630	517	421	343
Trajectory (inches)	-2.5	2.6	0.0	-11.8	-34.8	-71.6
11.5" Bushmaster® XM15-E2S 1:9"	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	2385	2176	1979	1792	1619	1461
Energy (ft lbs)	947	789	652	535	437	356
Trajectory (inches)	-2.5	2.4	0.0	-11.3	-33.5	-69.1
14.5" Colt® M4 Carbine 1:7"	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	2466	2253	2052	1861	1683	1519
Energy (ft lbs)	1013	846	701	577	472	384
Trajectory (inches)	-2.5	2.2	0.0	-10.5	-31.0	-63.9
16" DPMS® AP4 Panther™ Carbine 1:9"	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	2514	2299	2095	1902	1721	1554
Energy (ft lbs)	1052	880	731	602	493	402
Trajectory (inches)	-2.5	2.1	0.0	-10.0	-29.6	-61.1
18.5" Ruger® Mini 14® 1:9"	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	2576	2358	2151	1955	1770	1599
Energy (ft lbs)	1105	926	771	636	522	426
Trajectory (inches)	-1.0	2.6	0.0	-10.2	-29.5	-59.9
20" Bushmaster® XM15-E2S 1:7"	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	2676	2453	2242	2041	1851	1673
Energy (ft lbs)	1192	1002	837	693	570	466
Trajectory (inches)	-2.5	1.7	0.0	-8.6	-25.5	-52.7
***24" SAAMI 223 Rem. Test Barrel 1:12"**	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	2785	2557	2340	2134	1939	1755
Energy (ft lbs)	1292	912	759	626	513	516
Trajectory (inches)	-1.5	0.0	-3.8	-14.1	-31.9	-59.1

***Test data used on packaging label**

223 REM
75 gr. BTHP TAP®

These x-rays reflect the damage upon impact at close range.
(Information provided by Medical Examiner)



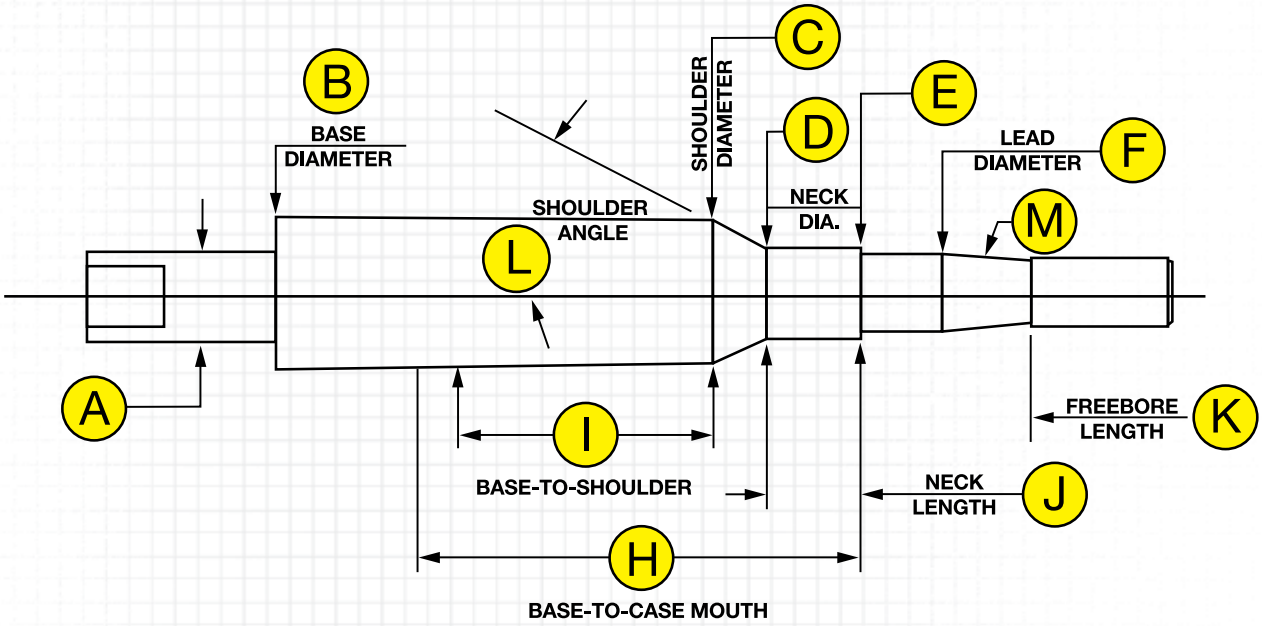
223 REM vs 5.56 NATO

While both cartridges are dimensionally similar, they were not intended to be interchangeable. The details below further outline the differences. In short, 5.56 NATO ammunition is NOT to be fired through a 223 Remington chamber. 223 Remington ammo can be fired from a 5.56 NATO chamber however, the user will typically experience a reduction in chamber pressure and velocity.

There are 2 major differences between 5.56 NATO and 223 Remington, the first is in throat length. The 5.56 NATO chamber can have as much as 0.077" longer throat than the commercial 223 Remington. Due to the shorter throat length, it is possible for a 5.56 NATO round to interfere with the rifling and prevent the breech mechanism from locking into battery. Firing a 5.56 NATO round in a commercial 223 Rem chamber may cause a sharp rise in pressure that could result in gas escaping around the primer, lost primers that may enter the firing mechanism, or worse, cause harm to the operator, the rifle, or both.

Firing a 223 Remington round in a 5.56 NATO chamber may result in a loss in velocity, due the throat length difference. As the bullet has a longer "jump" to the rifling, optimal chamber pressure will not be achieved, and muzzle velocity will be reduced. Depending on individual rifles and gas system lengths, minimum gas port pressure may not be achieved, disrupting extraction, ejection, and feeding.

The second major difference between the 223 Remington and 5.56 NATO is the maximum chamber pressure the cartridge may be loaded to. The Sporting Arms and Ammunition Manufacturers Institute (SAAMI) specifies a maximum average pressure (MAP) for 223 Rem to be no greater than 55,000 psi. There is no SAAMI standard set for 5.56 NATO ammunition, so Hornady uses guidelines set forth by US DoD and NATO which sets a max pressure of 62,366psi measured at the case mouth, (EPVAT), which nominally has been tested to be about 58,500psi when measured with a SAAMI-style conformal pressure transducer.



#	Item	223 Rem	5.56 NATO	Difference
A	Shank	0.4370	0.4370	0.0
B	Base Diameter	0.3804	0.3804	0.0
C	Shoulder Diameter	0.3553	0.3553	0.0
D	Neck-2	0.2550	0.2550	0.0
E	Neck-2/Case Mouth	0.2540	0.2540	0.0
F	Lead Diameter	0.2245	0.2265	0.002
H	Base-to-Case Mouth	1.7720	1.7720	0.0
I	Base-to-Shoulder	1.4338	1.4338	0.0
J	Neck Length	0.2200	0.2200	0.0
K	Freebore Length	0.046	0.176	0.130
L	Shoulder Angle (Degrees)	23.0	23.0	0.0
M	Throat Angle (Degrees)	3.1	1.2	1.9

The dimensions above are from Pacific Tool and Gauge and SAAMI. Dimensions in inches unless noted. The main differences between the two are the freebore length, lead diameter and throat angle.

5.56

5.56 x 45mm NATO

53 gr. TAP PATROL®

Polymer Tipped Copper Alloy Bullet | B.C. = .170

#81275

TAP Patrol® is specifically designed to provide consistent and reliable performance through the FBI protocol when fired through 14.5" – 16" barreled 1:7 – 1:9" twist patrol rifles. The lead free bullet features a flat polymer tip, which allows it to provide "barrier blind" performance ensuring consistent penetration depths. The flat tip design ensures the bullet will not plug with material from the barriers and ensures feeding through the wide variety of patrol rifle platforms. TAP Patrol® ammunition is loaded with temperature stable, low flash propellant designed to work when you do.

62 gr. TAP® BARRIER™

Spire Point Heavy Jacketed Bullet | B.C. = .264

8125C

TAP® Barrier™ turns cover into concealment. The design of the 5.56 62 gr. TAP® Barrier™ bullet allows the projectile to maintain its structural integrity while punching through barriers, yet initiates expansion in soft tissue. Your 5.56 NATO chambered rifle was designed to take advantage of the higher pressure of the 5.56 NATO cartridge — which translates to higher velocity, higher energy and harder-hitting performance.

70 gr. CX™ TAP® BARRIER™

Monolithic Boat Tail Hollow Point Bullet | B.C. = .350

#81265

TAP® Barrier™ turns cover into concealment. The 5.56 NATO 70 gr. CX™ Barrier™ round is a fantastic option for tactical situations that require deep penetration and terminal performance after contact with any FBI established urban barriers. The 70 gr. CX™ is a monolithic solid bullet constructed entirely from a premium copper alloy that will deliver high weight retention and deep penetration. This bullet is well suited for guns with faster twist rates and is extremely reliable for patrol carbine use or any other situation that may involve vehicles or barricades.

(For use in 1:7" twist SBRs, carbines and rifles or 1:8" twist carbines and rifles.)

75 gr. TAP SBR®

Spire Point Heavy Jacketed Bullet | B.C. = .230

#81295

TAP SBR® is designed specifically for 10.5"-11.5" short-barreled rifles by using proprietary propellant technology and a bullet designed with technology from industry leading Critical Duty® FlexLock® bullets. TAP SBR® provides exceptional ammunition performance in suppressed or unsuppressed SBR's. With virtually no flash or residue, TAP SBR® dramatically reduces sound signature, will not foul or overheat suppressors, delivers uniform velocity and accuracy, and provides controllable rate of fire in automatic platforms. Designed to meet the requirements of the FBI protocol, TAP SBR®is the optimum choice for 10.5"-11.5" barreled 5.56 rifles.

75 gr. BTHP T2 TAP®

Boat Tail Hollow Point Bullet | B.C. = .355

#8126N

The T2 bullet profile is specifically designed to optimize function and feeding in M16/M4 variant guns. The cartridge's propellant technology is custom designed to enhance firearm operation, and delivers phenomenal temperature stability. The 75 gr. BTHP T2 bullet is designed to deliver rapid incapacitation upon impact.

NOTE: NOT for use in 223 REM chambered guns.

Hornady Product Summary

Many rifles chambered in 5.56 NATO are not realizing their full potential because departments are shooting 223 Rem ammo. To get all the advantage your 5.56 NATO can deliver, you need a Hornady® 5.56 NATO load. Tailored to maximize performance.

Your 5.56 NATO chambered rifle was designed to take advantage of the higher pressure of the 5.56 NATO cartridge — higher pressure translates to increased velocity, higher energy and harder-hitting performance.

This line of ammunition is intended for Law Enforcement sales ONLY.

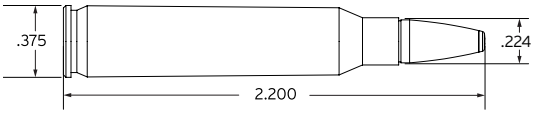
B.C. = Ballistic Coefficient

5.56 NATO
53 gr. TAP PATROL®

ITEM NO. 81275

Performance Characteristics:

- Meets FBI Protocol penetration requirements
- Large wound cavities
- "Barrier blind"
- Lead Free
- MADE IN THE USA
- **Net Explosive Weight** (approx. per box): 0.0783 lbs / .0355



SCALE 1:1

CASE: 5.56 NATO

- Manufacturer's name (Hornady) and caliber designation (5.56 NATO) imprinted on case head
- **Characteristics:** High quality annealed brass alloy

BULLET: TAP PATROL®

- **Ballistic Coefficient:** .170
- **Sectional Density:** .151
- **Bullet Length:** 0.815"
- **Recommended Rifling Twist Rate:** 1:7" to 1:10"
- **Characteristics:** Tipped, copper alloy with cannelure
- **Push/Pull:** 50/75 minimum (lbs)

POWDER & PRIMER

- **Powder:** Loaded to NATO specifications, temperature stable, flash suppressant
- **Primer:** Small rifle milspec primer, staked primer pocket, lead free

LOT NUMBERS

- Lot numbers on each box and case

BALLISTIC DATA

	Muzzle	100 yds	200 yds	300 yds	400 yds	500 yds
Velocity (fps)	3310	2736	2229	1781	1404	1133
Energy (ft lbs)	1289	881	585	373	232	151
Trajectory (in)	-1.5	0	-3.2	-13.6	-35.1	-74.5

PACKAGING

- Tray: Item No. 8407

- Gross Weight: 0.62 lbs
- 20 rounds per box with plastic tray

- Carton: Item No. 8420
- Carton Weight: 6.2 lbs
- Carton Dimensions: 5.0" x 5.25" x 7.0"
- 10 boxes per carton | 200 rounds per carton

5.56 NATO | 53 gr. TAP PATROL®
16" BBL | 1:7" Twist | Colt 6920
ITEM NO. 81275

	Total Penetration	Max Cavity	Depth to Max Cavity	Initial Penetration	Retained Weight	Retained Weight %	Expanded Diameter	Velocity (fps)	
	16.0"	4.0"	4.0"	0.5"	51.2 gr.	97%	0.48"	3169	BARE GELATIN
	16.25"	4.5"	4.25"	.50"	51.0 gr	96%	.48"	3136	HVY CLOTHING
	15.25"	5.0"	4.25"	0.0"	49.8 gr.	94%	0.36"	3143	STEEL
	13.5"	4.75"	3.5"	0.0"	23.1 gr.	44%	0.42"	3161	WALLBOARD
	14.0"	4.5"	3.0"	0.0"	26.3 gr.	50%	0.36"	3170	PLYWOOD
	15.0"	3.0"	2.5"	0.0"	43.8 gr.	80%	0.40"	3156	AUTO GLASS

5.56 NATO
53 gr. TAP PATROL®

Item #81275						
11.5" Colt 1:9"	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	2888	2364	1899	1500	1195	1015
Energy (ft lbs)	982	658	424	265	168	121
Trajectory (inches)	-2.5	0.0	-3.8	-17.5	-46.9	-100.7
14.5" Colt® M4 Carbine 1:7"	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	3096	2548	2062	1637	1293	1068
Energy (ft lbs)	1128	764	500	315	197	134
Trajectory (inches)	-2.5	0.0	-3.0	-14.2	-38.8	-84.3
16" Colt® Law Enforcement Carbine 1:7"	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	3157	2602	2110	1677	1324	1085
Energy (ft lbs)	1173	796	524	331	206	139
Trajectory (inches)	-2.5	0.0	-2.7	-13.4	-36.7	-80.1
16" Daniel Defense 1:7"	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	3115	2565	2077	1649	1302	1073
Energy (ft lbs)	1142	774	507	320	200	136
Trajectory (inches)	-2.5	0.0	-2.9	-14.0	-38.1	-82.9
***20" 5.56x45mm NATO Test Barrel 1:7"**	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	3310	2736	2229	1781	1404	1133
Energy (ft lbs)	1289	881	585	373	232	151
Trajectory (inches)	-1.5	0.0	-3.2	-13.6	-35.1	-74.5

***Test data used on packaging label**

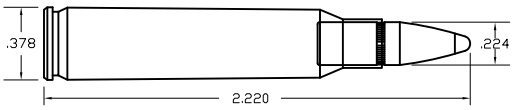
NOTES:

5.56 NATO
62 gr. TAP® BARRIER™

ITEM NO. 8125C

Performance Characteristics:

- Large wound cavities
- High weight retention
- Designed for effective use in penetrating fire doors and steel barriers
- Accurate in all 5.56 NATO twist rates
- MADE IN THE USA
- **Net Explosive Weight** (approx. per box): 0.1929 lbs / .0875 kg



SCALE 1:1

CASE: 5.56 NATO

- Manufacturer's name (Hornady) and caliber designation (5.56 NATO) imprinted on case head
- **Characteristics:** High quality annealed brass alloy

BULLET: TAP® BARRIER™

- **Ballistic Coefficient:** .264
- **Sectional Density:** .176
- **Bullet Length:** 0.795"
- **Recommended Rifling Twist Rate:** 1:7" to 1:12"
- **Characteristics:** Spire point with cannelure
- **Push/Pull:** 100/70 minimum (lbs)

POWDER & PRIMER

- **Powder:** Loaded to NATO specifications, temperature stable, flash suppressant
- **Primer:** Small rifle milspec primer, staked primer pocket

LOT NUMBERS

- Lot numbers on each box and case

BALLISTIC DATA

	Muzzle	100 yds	200 yds	300 yds	400 yds	500 yds
Velocity (fps)	3085	2725	2393	2085	1801	1546
1801	1310	1022	788	598	446	329
788	-1.5	0	-3.2	-12.6	-30.0	-58.2

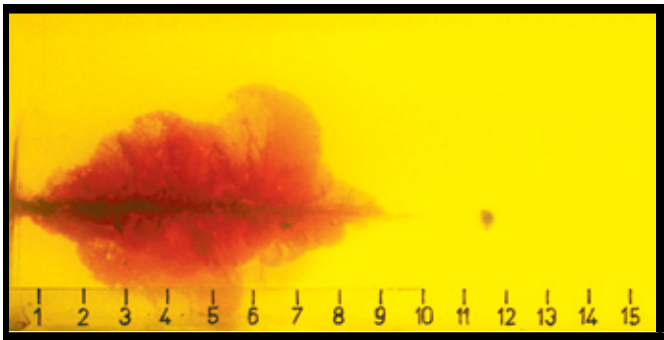
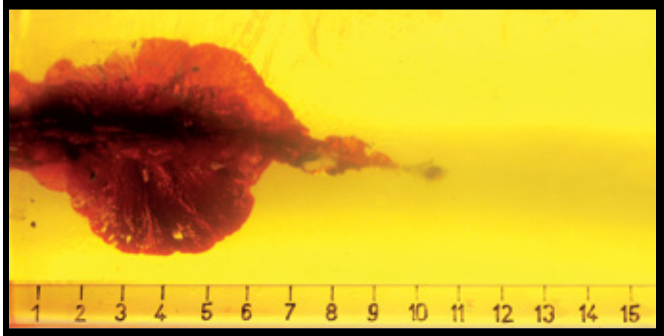
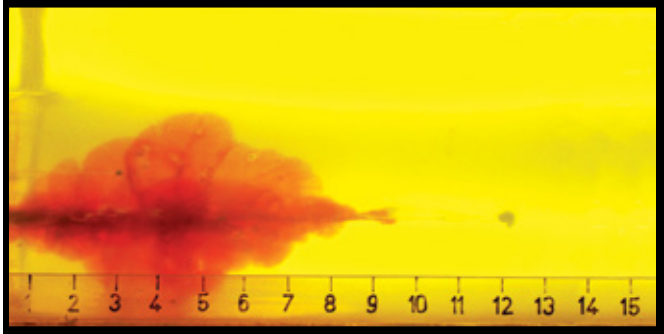
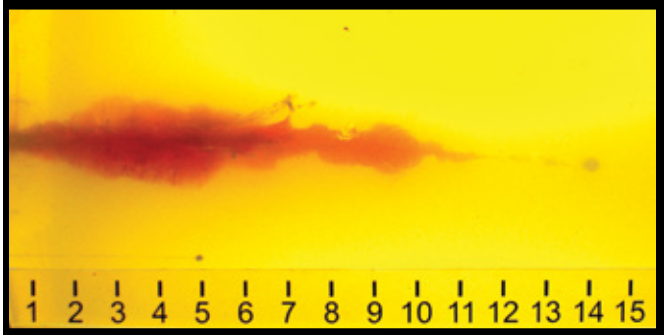
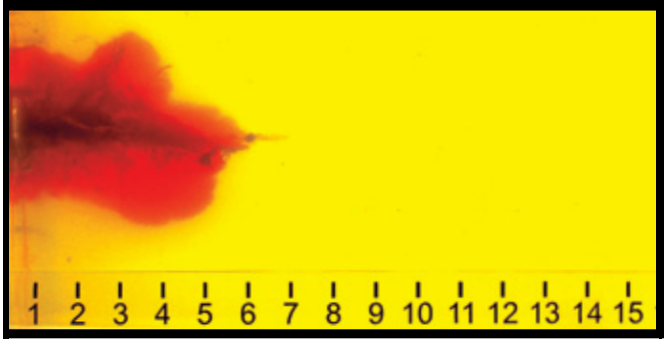
PACKAGING

- Tray: Item No. 5701

- Gross Weight: 1.47 lbs
- 50 rounds per box with plastic tray

- Carton: Item No. 5747
- Carton Weight: 14.7 lbs
- Carton Dimensions: 5.625" x 5.937" x 14.75"
- 10 boxes per carton | 500 rounds per carton

5.56 NATO | 62 gr. TAP® BARRIER™
16" BBL | 1:9" Twist | DPMS AR-15
ITEM NO. 8125C

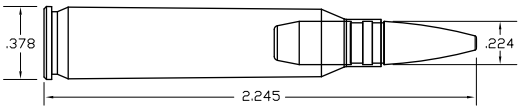
	Total Penetration	Max Cavity	Depth to Max Cavity	Initial Penetration	Retained Weight	Retained Weight %	Expanded Diameter	Velocity (fps)	
	11.75"	5.5"	4.75"	.75"	45.1 gr.	73%	.54"	2910	BARE GELATIN
	11.0"	4.5"	4.0"	0.0"	34.7 gr.	56%	0.43"	2969	STEEL
	12.75"	3.75"	4.5"	.75"	42.1 gr.	68%	0.48"	2970	WALLBOARD
	15.0"	2.5"	4.5"	0.0"	33.4 gr.	54%	0.41"	2975	PLYWOOD
	6.5"	4.0"	3.0"	0.0"	17.7 gr.	29%	0.40"	2911	AUTO GLASS

5.56 NATO
70 gr. CX™ TAP® BARRIER™

ITEM NO. 81265

Performance Characteristics:

- High weight retention
- Large wound cavities
- Barrier blind
- Meets FBI Protocol penetration requirements
- MADE IN THE USA
- **Net Explosive Weight** (approx. per box): 0.0757 lbs / .0343 kg



SCALE 1:1

CASE: 5.56 NATO

- Manufacturer's name (Hornady) and caliber designation (5.56 NATO) imprinted on case head
- **Characteristics:** High quality annealed brass alloy

BULLET: CX™

- **Ballistic Coefficient:** .350
- **Sectional Density:** .199
- **Bullet Length:** 1.050"
- **Recommended Rifling Twist Rate:** For use in 1:7" twist SBR's, carbines & rifles or 1:8" twist carbines & rifles.
- **Characteristics:** Hollow point, copper alloy with cannelure
- **Push/Pull:** 75/75 minimum (lbs)

POWDER & PRIMER

- **Powder:** Loaded to NATO specifications, temperature stable, flash suppressant
- **Primer:** Small rifle milspec primer, staked primer pocket

LOT NUMBERS

- Lot numbers on each box and case

BALLISTIC DATA

	Muzzle	100 yds	200 yds	300 yds	400 yds	500 yds
Velocity (fps)	2900	2637	2389	2154	1934	1728
Energy (ft lbs)	1307	1081	887	721	581	464
Trajectory (in)	-1.5	0	-3.5	-13.1	-30.3	-56.8

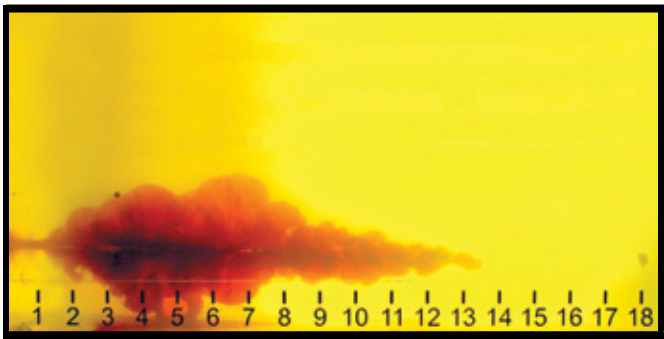
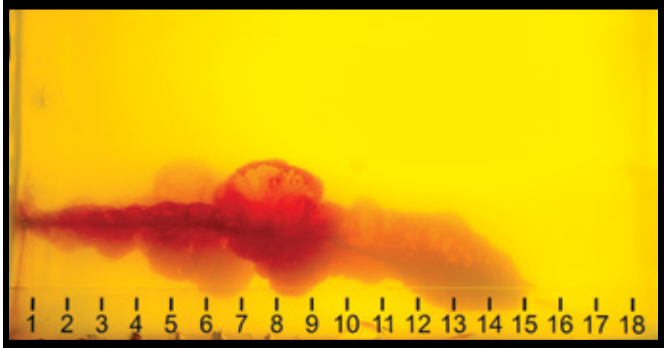
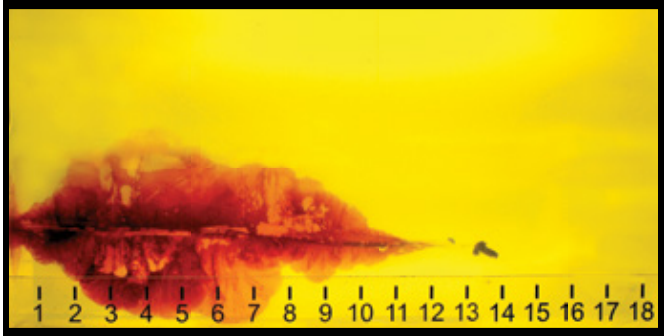
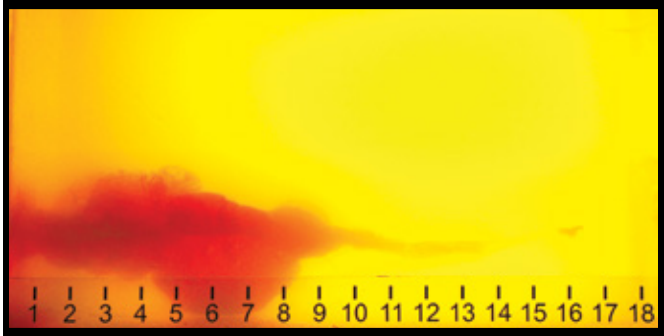
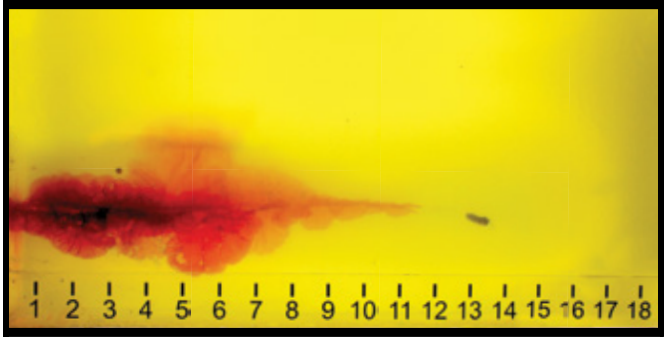
PACKAGING

- Tray: Item No. 8407

- Gross Weight: 0.66 lbs
- 20 rounds per box with plastic tray

- Carton: Item No. 8420
- Carton Weight: 6.6 lbs
- Carton Dimensions: 5.0" x 5.25" x 7.0"
- 10 boxes per carton | 200 rounds per carton

5.56 NATO | 70 gr. CX™ TAP® BARRIER™
16" BBL | 1:7" Twist | COLT M4
ITEM NO. 81265

	Total Penetration	Max Cavity	Depth to Max Cavity	Initial Penetration	Retained Weight	Retained Weight %	Expanded Diameter	Velocity (fps)	
	18.0"	4.0"	4.5"	0.5"	67.6 gr.	97%	0.47"	2652	BARE GELATIN
	16.5"	5.5"	6.0"	0.5"	69.9 gr.	100%	0.22"	2649	STEEL
	14.25"	5.0"	3.5"	0.5"	66.7 gr.	95%	0.49"	2660	WALLBOARD
	16.75"	4.25"	5.5"	0.75"	64.1 gr.	92%	0.36"	2659	PLYWOOD
	13.75"	4.0"	5.5"	0.5"	63.8 gr.	91%	0.34"	2657	AUTO GLASS

5.56 NATO
70 gr. CX™ TAP® BARRIER™

Item #81265						
10.4" Heckler & Koch HK416 1:7"	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	2383	2148	1928	1722	1535	1367
Energy (ft lbs)	883	717	578	461	366	291
Trajectory (inches)	-2.5	2.5	0.0	-11.9	-35.6	-74.2
11.5" Bushmaster® XM15-E2S 1:9"	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	2571	2326	2095	1878	1676	1493
Energy (ft lbs)	1027	841	682	548	437	347
Trajectory (inches)	-2.5	2.0	0.0	-9.9	-29.8	-62.0
14.5" Colt® M4 Carbine 1:7"	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	2658	2409	2173	1951	1744	1554
Energy (ft lbs)	1098	902	734	591	473	375
Trajectory (inches)	-2.5	1.8	0.0	-9.2	-27.3	-57.3
16" Colt® Law Enforcement Carbine 1:7"	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	2715	2462	2224	1999	1788	1594
Energy (ft lbs)	1146	942	769	621	497	395
Trajectory (inches)	-2.5	1.6	0.0	-8.7	-26.1	-54.5
18.5" Ruger® Mini 14® 1:9"	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	2787	2530	2288	2059	1844	1646
Energy (ft lbs)	1207	995	814	659	529	421
Trajectory (inches)	-1.0	2.2	0.0	-8.9	-26.0	-53.4
20" Bushmaster® XM15-E2S 1:7"	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	2934	2669	2419	2183	1960	1753
Energy (ft lbs)	1338	1107	910	741	597	477
Trajectory (inches)	-2.5	1.2	0.0	-7.2	-21.6	-45.2
***20" 5.56x45mm NATO Test Barrel 1:7"**	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	2900	2637	2389	2154	1934	1728
Energy (ft lbs)	1307	1081	887	721	581	464
Trajectory (inches)	-1.5	0.0	-3.5	-13.1	-30.3	-56.8

***Test data used on packaging label**

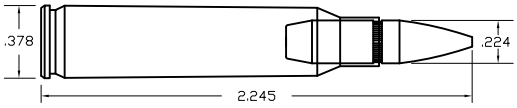
NOTES:

5.56 NATO
75 gr. BTHP T2 TAP®

ITEM NO. 8126N

Performance Characteristics:

- Match accurate
- Large wound cavities
- Bullet profile optimized for feed/function in M4/M16
- Max fragmentation for low retained weight
- MADE IN THE USA
- **Net Explosive Weight** (approx. per box): 0.0757 lbs / .0343 kg



SCALE 1:1

CASE: 5.56 NATO

- Manufacturer's name (Hornady) and caliber designation (5.56 NATO) imprinted on case head
- **Characteristics:** High quality annealed brass alloy

BULLET: MATCH™

- **Ballistic Coefficient:** .355
- **Sectional Density:** .214
- **Bullet Length:** 0.970"
- **Recommended Rifling Twist Rate:** 1:7" to 1:9"
- **Characteristics:** Boat tail hollow point with cannelure
- **Push/Pull:** 50/60 minimum (lbs)

POWDER & PRIMER

- **Powder:** Loaded to NATO specifications, temperature stable, flash suppressant
- **Primer:** Small rifle milspec primer, staked primer pocket

LOT NUMBERS

- Lot numbers on each box and case

BALLISTIC DATA

	Muzzle	100 yds	200 yds	300 yds	400 yds	500 yds
Velocity (fps)	2885	2626	2382	2151	1934	1731
Energy (ft lbs)	1386	1149	945	771	623	499
Trajectory (in)	-1.5	0	-3.6	-13.3	-30.5	-57.1

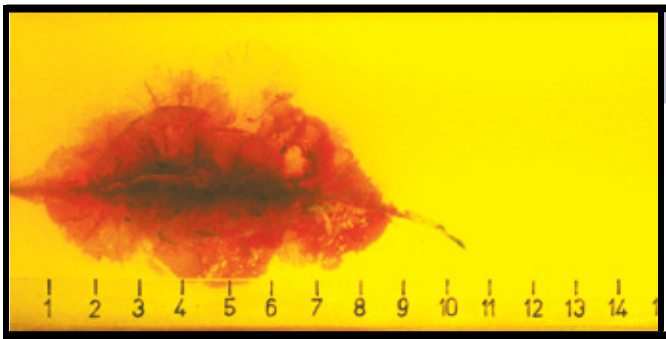
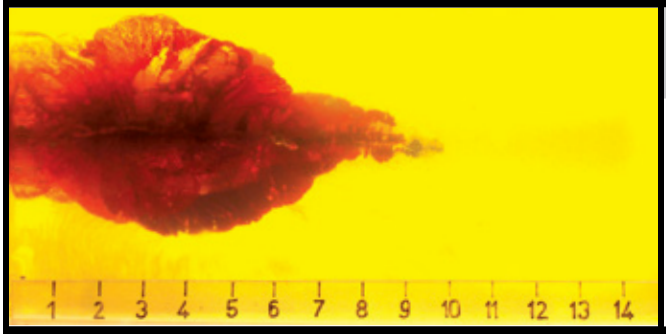
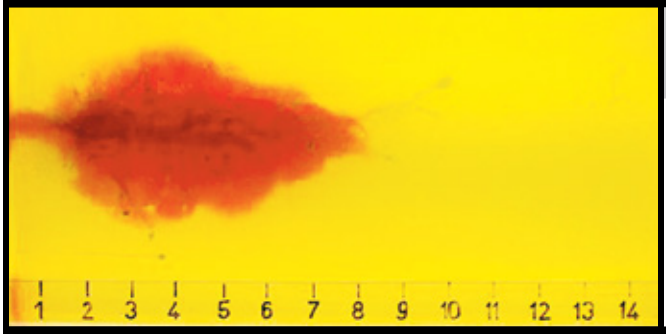
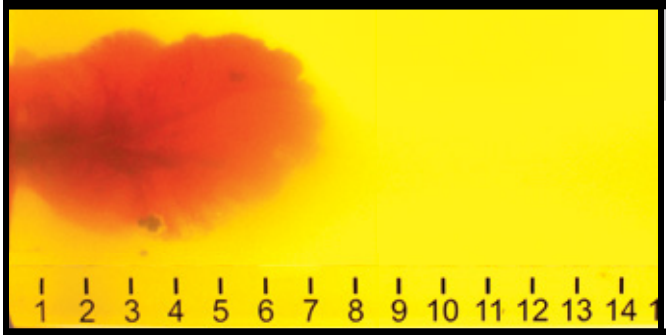
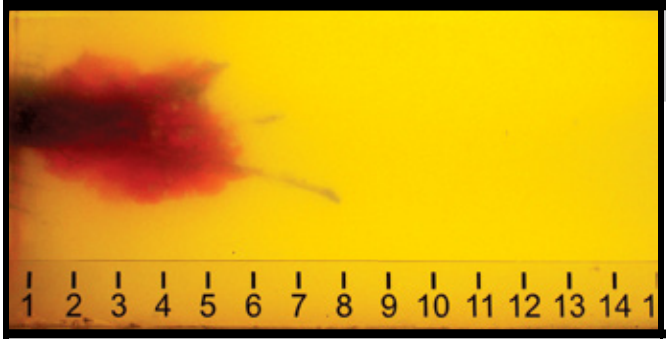
PACKAGING

- Tray: Item No. 8407

- Gross Weight: 0.66 lbs
- 20 rounds per box with plastic tray

- Carton: Item No. 8420
- Carton Weight: 6.6 lbs
- Carton Dimensions: 5.0" x 5.25" x 7.0"
- 10 boxes per carton | 200 rounds per carton

5.56 NATO | 75 gr. BTHP T2 TAP®
16" BBL | 1:9" Twist | DPMS AR-15
ITEM NO. 8126N

	Total Penetration	Max Cavity	Depth to Max Cavity	Initial Penetration	Retained Weight	Retained Weight %	Expanded Diameter	Velocity (fps)	
	10.5"	5.5"	5.5"	0.75"	31.5 gr.	42%	0.50"	2747	BARE GELATIN
	10.0"	6.0"	1.5"	0.0"	0.0 gr.	0%	0.0"	2813	STEEL
	10.0"	3.5"	3.0"	1.75"	19.4 gr.	26%	0.46"	2787	WALLBOARD
	7.0"	5.5"	2.75"	0.0"	0.0 gr.	0%	0.0"	2764	PLYWOOD
	7.5"	3.75"	2.5"	0.0"	0.0 gr.	0%	0.0"	2646	AUTO GLASS

This bullet fragments completely when encountering this barrier.

5.56 NATO
75 gr. BTHP T2 TAP®

Item #8126N						
10.5" Noveske® CQB 1:7"	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	2449	2214	1993	1785	1594	1422
Energy (ft lbs)	999	816	661	531	423	337
Trajectory (inches)	-2.5	2.3	0.0	-11.1	-33.2	-69.0
11.5" Bushmaster® XM15-E2S 1:9"	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	2543	2303	2076	1863	1666	1486
Energy (ft lbs)	1077	883	718	578	462	368
Trajectory (inches)	-2.5	2.1	0.0	-10.1	-30.3	-63.1
14.5" Colt® M4 Carbine 1:7"	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	2643	2398	2166	1947	1743	1556
Energy (ft lbs)	1163	957	781	631	506	403
Trajectory (inches)	-2.5	1.8	0.0	-9.2	-27.7	-57.6
16" DPMS® AP4 Panther™ Carbine 1:9"	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	2752	2501	2264	2039	1829	1634
Energy (ft lbs)	1261	1042	853	692	557	445
Trajectory (inches)	-2.5	1.5	0.0	-8.4	-25.1	-52.3
18.5" Ruger® Mini 14® 1:9"	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	2780	2527	2289	2063	1851	1654
Energy (ft lbs)	1287	1064	872	709	570	456
Trajectory (inches)	-1.0	2.2	0.0	-8.9	-26.0	-53.3
20" Bushmaster® XM15-E2S 1:7"	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	2861	2604	2361	2131	1915	1713
Energy (ft lbs)	1363	1129	928	756	611	489
Trajectory (inches)	-2.5	1.3	0.0	-7.6	-22.9	-47.7
***20" 5.56×45mm NATO Test Barrel 1:7"**	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	2885	2626	2382	2151	1934	1731
Energy (ft lbs)	1386	1149	945	771	623	499
Trajectory (inches)	-1.5	0.0	-3.6	-13.3	-30.5	-57.1

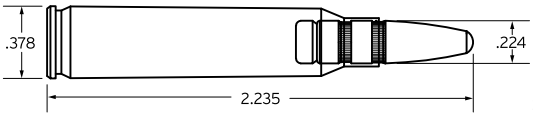
***Test data used on packaging label**

NOTES:

5.56 NATO
75 gr. TAP® SBR

ITEM NO. 81295

- **Performance Characteristics:**
- High weight retention
- Large wound cavities
- Barrier blind
- Meets FBI Protocol
- MADE IN THE USA
- **Net Explosive Weight** (approx. per box): 0.0660 lbs / .0299 kg



SCALE 1:1

CASE: 5.56 NATO

- Manufacturer's name (Hornady) and caliber designation (5.56 NATO) imprinted on case head
- **Characteristics:** High quality annealed brass alloy

BULLET: TAP® SBR

- **Ballistic Coefficient:** .230
- **Sectional Density:** .214
- **Bullet Length:** .930"
- **Recommended Rifling Twist Rate:** For use in 1:7" twist SBR's.
- **Characteristics:** Spire point, copper alloy with cannelure
- **Push/Pull:** 125/50 minimum (lbs)

POWDER & PRIMER

- **Powder:** Specifically designed for 10.5" - 11.5" barrels. Low flash and temperature stable
- **Primer:** Small rifle milspec primer, staked primer pocket

LOT NUMBERS

- Lot numbers on each box and case

BALLISTIC DATA

	Muzzle	100 yds	200 yds	300 yds	400 yds	500 yds
Velocity (fps)	2310	1965	1654	1388	1179	1042
Energy (ft lbs)	889	643	456	321	231	181
Trajectory (in)	-1.5	0	-7.6	-28.0	-66.7	-130.3

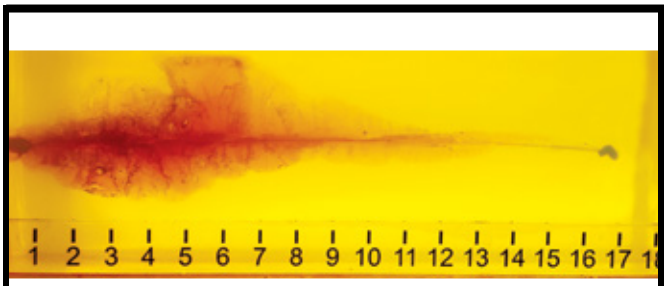
PACKAGING

- Tray: Item No. 8407

- Gross Weight: 0.68 lbs
- 20 rounds per box with plastic tray

- Carton: Item No. 8420
- Carton Weight: 6.8 lbs
- Carton Dimensions: 5.0" x 5.25" x 7.0"
- 10 boxes per carton | 200 rounds per carton

5.56 NATO | 75 gr. TAP® SBR
10.5" BBL | 1:7" Twist | LMT CQB
ITEM NO. 81295

	Total Penetration	Max Cavity	Depth to Max Cavity	Initial Penetration	Retained Weight	Retained Weight %	Expanded Diameter	Velocity (fps)	
	17.0"	4.5"	4.5"	.50"	69.5 gr.	93%	0.46"	2201	BARE GELATIN
	14.75"	3.75"	3.0"	.25"	64.7 gr.	86%	0.43"	2220	STEEL
	17.25"	3.0"	3.25"	.25"	63.4 gr.	85%	.52"	2207	WALLBOARD
	16.75"	5.0"	4.0"	.50"	46.1 gr.	62%	0.37"	2219	PLYWOOD
	15.25"	3.5"	3.0"	.75"	41.4 gr.	55%	0.32"	2227	AUTO GLASS

5.56 NATO
75 gr. TAP® SBR

Item #81295						
10.4" Heckler & Koch HK416 1:7"	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	2170	1838	1542	1296	1117	1004
Energy (ft lbs)	784	562	396	280	208	168
Trajectory (inches)	-2.5	4.0	0.0	-18.7	-58.2	-125.5
10.5" LMT CQB 1:7"	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	2201	1865	1566	1315	1129	1012
Energy (ft lbs)	806	579	408	288	212	170
Trajectory (inches)	-2.5	3.8	0.0	-18.1	-56.4	-122.0
11.5" Adams Arms 1:7"	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	2255	1914	1609	1350	1153	1027
Energy (ft lbs)	847	610	431	303	221	175
Trajectory (inches)	-2.5	3.5	0.0	-17.1	-53.4	-115.9
11.5" Superior Arms 1:7"	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	2264	1922	1616	1356	1157	1029
Energy (ft lbs)	853	615	435	306	223	176
Trajectory (inches)	-2.5	3.5	0.0	-17.0	-52.9	-114.9
11.5" COLT M4 1:7"	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	2270	1928	1621	1360	1160	1031
Energy (ft lbs)	858	619	438	308	224	177
Trajectory (inches)	-2.5	3.5	0.0	-16.8	-52.6	-114.2
***11.5" 5.56x45mm NATO Test Barrel 1:7"**	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	2310	1965	1654	1388	1179	1042
Energy (ft lbs)	889	643	456	321	231	181
Trajectory (inches)	-1.5	0.0	-7.6	-28.0	-66.7	-130.3

***Test data used on packaging label**

300 BLACKOUT

110 gr. TAP® URBAN

#80885

Polymer Tipped Spitzer Flat Base Bullet | B.C. = .290

The Hornady® 300 Blackout 110 gr. TAP Urban® is the preferred choice for use in SBRs, carbines, and rifles when the probability for barrier penetration is low. Rapid expansion provides dramatic wound cavities, massive fragmentation, and prevents over penetration on non-barrier engagements. These factors make this bullet a great choice when collateral risk is high.

111 gr. MONOFLEX® TAP® SBR®

#80865

Monolithic Bullet | B.C. = .177

The Hornady® 300 Blackout 111gr. Monoflex® TAP SBR® was specifically designed to meet FBI protocol and maximize performance in rifles and pistols with barrel lengths from 6.75" to 12.5" and twist rates of 1:5" to 1:8". The newly designed 111 Monoflex® TAP SBR® features a lead-free monolithic bullet with a large internal cavity and an elongated elastomer tip. This combination allows for expansion at velocities below 1200 FPS, which equates to an expansion distance that is 3 times longer than that of a traditional 5.56 SBR featuring a 10.5" – 12.5" barrel.

190 gr. SUB-X™ TAP®

#80895

Polymer Tipped Expanding Bullet | B.C. = .437

Hornady® 300 Blackout features the new patented 190 gr. Sub-X™ (Subsonic eXpanding) bullet with patented Flex Tip® technology. This new round is specifically designed to expand at subsonic velocities and meet FBI protocol for terminal performance. This cartridge is loaded with a powder that is optimized to provide flash suppression, yet function in short barreled or carbine length rifles. Meets FBI Protocol

Hornady Product Summary

Hornady® 300 Blackout is specifically developed for agencies that want the increased bullet weight and overall performance of the 300 Blackout over standard 5.56/223 loads. The polymer tip initiates expansion upon contact, allowing consistent expansion and penetration through the FBI protocol, making it the optimum choice for patrol rifle programs.

This line of ammunition is intended for Law Enforcement sales ONLY.

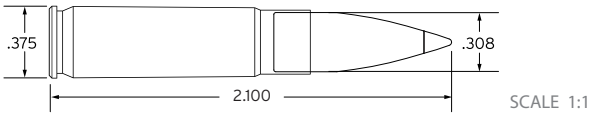
B.C. = Ballistic Coefficient

300 BLACKOUT
110 gr. TAP URBAN®

ITEM NO. 80885

Performance Characteristics:

- Match accuracy
- Large wound cavities
- MADE IN THE USA
- **Net Explosive Weight** (approx. per box): 0.0514 lbs / .0233 kg



CASE: 300 BLACKOUT

- Manufacturer's name (Hornady) and caliber designation (300 BLK) imprinted on case head
- **Characteristics:** High quality annealed brass alloy

BULLET: TAP URBAN®

- **Ballistic Coefficient:** .290
- **Sectional Density:** .166
- **Bullet Length:** 1.180"
- **Recommended Rifling Twist Rate:** 1:5" to 1:8"
- **Characteristics:** Polymer tipped
- **Push/Pull:** 60/60 minimum (lbs)

POWDER & PRIMER

- **Powder:** Temperature stable with flash suppressant
- **Primer:** Small rifle, staked primer pocket

LOT NUMBERS

- Lot numbers on each box and case

BALLISTIC DATA

	Muzzle	100 yds	200 yds	300 yds	400 yds	500 yds
Velocity (fps)	2370	2089	1830	1594	1386	1215
Energy (ft lbs)	1372	1066	818	620	469	361
Trajectory (in)	-1.5	0	-6.5	-23.5	-54.2	-103.2

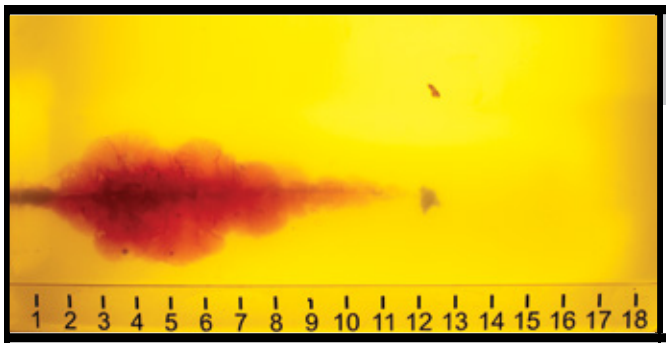
PACKAGING

- Tray: Item No. 8407

- Gross Weight: 1.07 lbs
- 20 rounds per box with plastic tray

- Carton: Item No. 8420
- Carton Weight: 10.7 lbs
- Carton Dimensions: 5.0" x 5.25" x 7.0"
- 10 boxes per carton | 200 rounds per carton

300 BLACKOUT
110 gr. TAP URBAN®
8" BBL | 1:8" Twist | MC6 PDW
ITEM NO. 80885



Total Penetration	Max Cavity	Depth to Max Cavity	Initial Penetration	Retained Weight	Retained Weight %	Expanded Diameter	Velocity (fps)
12.75"	4.0"	3.25"	0.5"	83.2gr.	75.6%	0.64"	2175

BARE GELATIN

300 BLACKOUT
110 gr. TAP URBAN®

Item #80885

*16" SAAMI Test Barrel	Muzzle	100 yds	200 yds	300 yds	400 yds	500 yds
Velocity (fps)	2370	2089	1830	1594	1386	1215
Energy (ft lbs)	1372	1066	818	620	469	361
Trajectory (inches)	-1.5	0.0	-6.5	-23.5	-54.2	-103.2

***Test data used on packaging label**

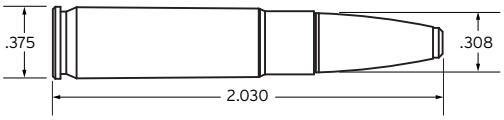
NOTES:

300 BLACKOUT
111 gr. MONOFLEX® TAP SBR®

ITEM NO. 80865

Performance Characteristics:

- Minimal deflection on glass
- Meets FBI barrier penetration protocol
- High Retained Weight
- Lead free
- MADE IN THE USA
- **Net Explosive Weight** (approx. per box): 0.0509 lbs / .0231 kg



SCALE 1:1

CASE: 300 BLACKOUT

- Manufacturer's name (Hornady) and caliber designation (300 BLK) imprinted on case head
- **Characteristics:** High quality annealed brass alloy

BULLET: MONOFLEX®

- **Ballistic Coefficient:** .177
- **Sectional Density:** .167
- **Bullet Length:** 1.090"
- **Recommended Rifling Twist Rate:** 1:5" - 1:8"
- **Characteristics:** Lead Free, Polymer Tipped, Expanding
- **Push/Pull:** 60/60 minimum (lbs)

POWDER & PRIMER

- **Powder:** Temperature stable, flash suppressant
- **Primer:** Lead free small rifle, staked primer pocket, sealed case mouth and primer.

LOT NUMBERS

- Lot numbers on each box and case

BALLISTIC DATA

16" Test BBL	Muzzle	100 yds	200 yds	300 yds	400 yds	500 yds
Velocity (fps)	2135	1714	1365	1117	977	887
Energy (ft lbs)	1123	724	459	307	235	194
Trajectory (in)	-1.5	0	-10.5	-40.0	-97.2	-190.8

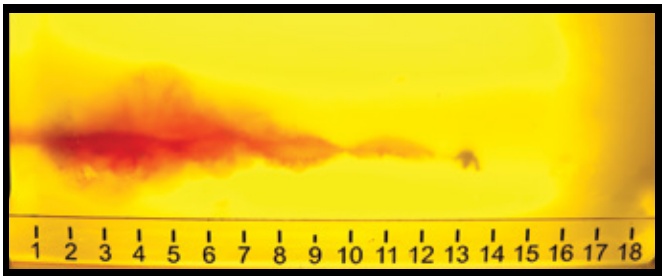
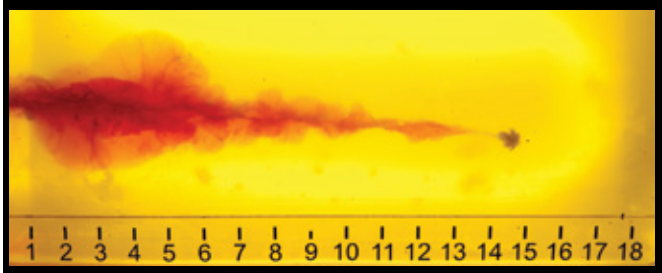
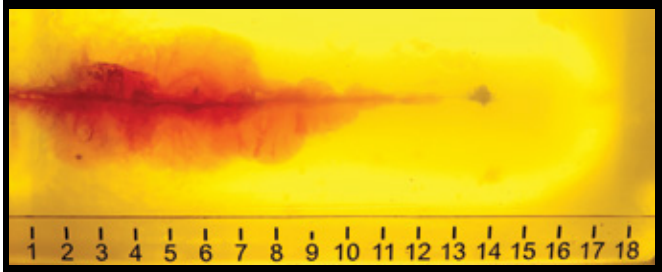
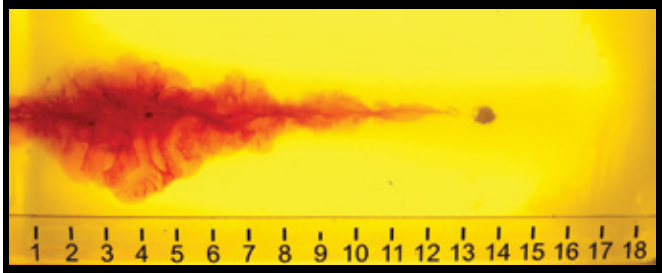
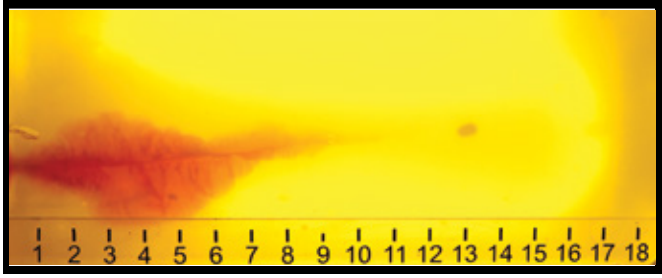
PACKAGING

- Tray: Item No. 8407

- Gross Weight: 0.710 lbs
- 20 rounds per box with plastic tray

- Carton: Item No. 8420
- Carton Weight: 7.10 lbs
- Carton Dimensions: 5.25" x 5.50" x 7.0"
- 10 boxes per carton | 200 rounds per carton

300 BLACKOUT
111 gr. MONOFLEX® TAP SBR®
6.75" BBL | 1:8" Twist | SIG MCX
ITEM NO. 80865

	Total Penetration	Max Cavity	Depth to Max Cavity	Initial Penetration	Retained Weight	Retained Weight %	Expanded Diameter	Velocity (fps)	
	14.0"	4.0"	4.25"	1.0"	98.7 gr.	89%	0.73"	1893	BARE GELATIN
	15.0"	4.0"	4.25"	0.0"	102.1 gr.	92%	0.63"	1875	STEEL
	14.25"	4.5"	5.25"	0.5"	95.2 gr.	86%	0.66"	1893	WALLBOARD
	14.25"	4.25"	4.0"	0.75"	105.2 gr.	95%	0.65"	1888	PLYWOOD
	14.25	3.5"	3.75"	0.0"	70.8 gr.	64%	0.44"	1893	AUTO GLASS

300 BLACKOUT

111 gr. MONOFLEX® TAP® SBR®

Item #80865						
5.5" SIG MCX 1:5"	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	1773	1411	1145	993	899	827
Energy (ft lbs)	775	491	323	243	199	169
Trajectory (inches)	-1.5	0.0	-16.2	-58.9	-136.7	-257.5
6.75" SIG MCX 1:5"	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	1874	1493	1200	1023	919	844
Energy (ft lbs)	866	550	355	258	208	176
Trajectory (inches)	-1.5	0.0	-14.4	-52.9	-124.5	-237.3
9" SIG MCX 1:5"	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	1988	1589	1268	1061	944	863
Energy (ft lbs)	974	622	396	277	219	183
Trajectory (inches)	-1.5	0.0	-12.5	-46.8	-111.9	-215.9
***16" SAAMI Test Barrel**	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	2135	1714	1365	1117	977	887
Energy (ft lbs)	1123	724	459	307	235	194
Trajectory (inches)	-1.5	0.0	-10.5	-40.0	-97.2	-190.8

***Test data used on packaging label**

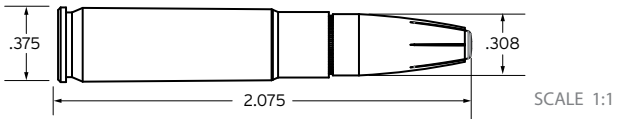
NOTES:

300 BLACKOUT SUBSONIC
190 gr. SUB-X™ TAP®

ITEM NO. 80895

Performance Characteristics:

- Minimal deflection on glass
- Meets FBI barrier penetration protocol
- High Retained Weight
- MADE IN THE USA
- **Net Explosive Weight** (approx. per box): 0.0393 lbs / .0178 kg



CASE: 300 BLACKOUT

- Manufacturer's name (Hornady) and caliber designation (300 BLK) imprinted on case head
- **Characteristics:** High quality annealed brass alloy

BULLET: SUB-X™ TAP®

- **Ballistic Coefficient:** .437
- **Sectional Density:** .286
- **Bullet Length:** 1.328"
- **Recommended Rifling Twist Rate:** 1:8"
- **Characteristics:** Polymer tipped, expanding
- **Push/Pull:** 60/60 minimum (lbs)

POWDER & PRIMER

- **Powder:** Temperature stable with flash suppressant
- **Primer:** Small rifle, staked primer pocket

LOT NUMBERS

- Lot numbers on each box and case

BALLISTIC DATA

	Muzzle	100 yds	200 yds	300 yds	400 yds	500 yds
Velocity (fps)	1050	998	955	918	885	856
Energy (ft lbs)	465	420	384	355	331	309
Trajectory (in)	-1.5	0	-33.4	-104.9	-217.7	-375.1

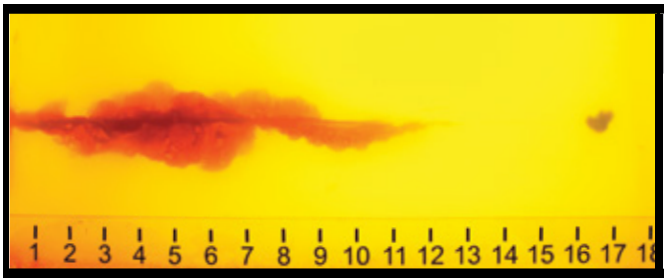
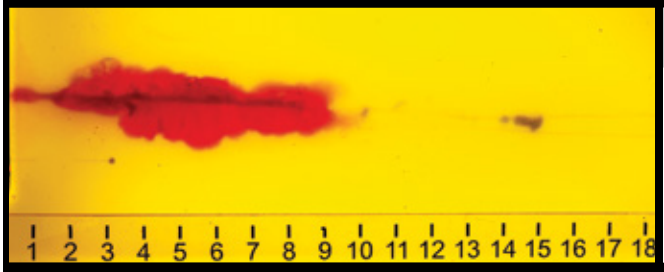
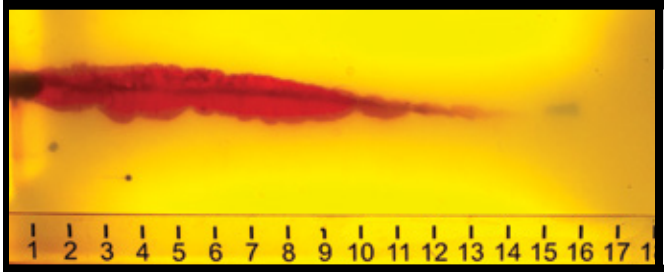
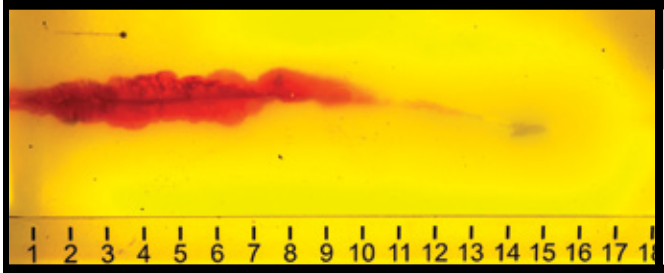
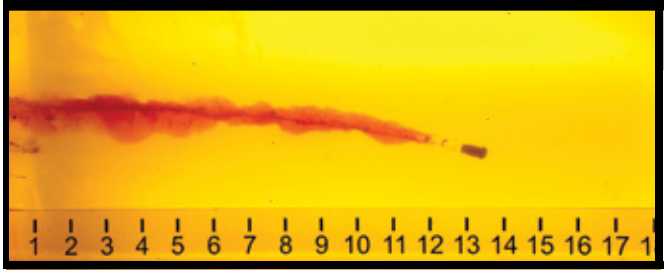
PACKAGING

- Tray: Item No. 8407

- Gross Weight: 1.27 lbs
- 20 rounds per box with plastic tray

- Carton: Item No. 8420
- Carton Weight: 12.7 lbs
- Carton Dimensions: 5.0" x 5.25" x 7.0"
- 10 boxes per carton | 200 rounds per carton

300 BLACKOUT
190 gr. SUB-X™ TAP®
8" BBL | 1:8" Twist | MC6 PDW
ITEM NO. 80895

	Total Penetration	Max Cavity	Depth to Max Cavity	Initial Penetration	Retained Weight	Retained Weight %	Expanded Diameter	Velocity (fps)	
	17.0"	3.5"	5.0"	0.5"	174.0 gr.	92%	0.57"	998	BARE GELATIN
	15.5"	2.5"	4.0"	0.75"	171.6 gr.	90%	0.59"	978	HVY CLOTHING
	16.5"	1.75"	2.75"	0.0"	189.9 gr.	100%	0.49"	977	STEEL
	16.0"	1.75"	4.0"	0.0"	186.7 gr.	98%	0.42"	997	WALLBOARD
	16.5"	1.75"	5.0"	0.25"	190.0 gr.	100%	0.52"	992	PLYWOOD
	14.0"	1.5"	3.5"	0.0"	128.3 gr.	68%	0.41"	985	AUTO GLASS

300 BLACKOUT SUBSONIC

190 gr. SUB-X™ TAP®

Item #80895						
8" LMT 1:8"	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	1041	991	949	913	881	852
Energy (ft lbs)	457	414	380	352	328	306
Trajectory (inches)	-1.5	0.0	-33.8	-106.5	-220.4	-379.4
9" AAC 1:8"	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	1050	998	956	919	886	856
Energy (ft lbs)	465	420	385	356	331	309
10.5" Noveske® 1:8"	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	1047	996	954	917	884	855
Energy (ft lbs)	462	418	384	355	330	308
Trajectory (inches)	-1.5	0.0	-33.5	-105.2	-218.3	-375.9

***Test data used on packaging label**

106 gr. TAP®

Polymer Tipped Spitzer Boat Tail Bullet | B.C. = .580

#81605

This cartridge was designed as an "Advanced Rifle Cartridge" for its ability to provide open air and barrier blind performance equal to that of a precision 308 Winchester but in a smaller and lighter package. The 106 gr. ELD® bullet features a Heat Shield® tip which provides excellent terminal performance in open air and standard barrier situations, while providing consistent down range performance. Featuring an exceptionally high-for-class BC, it demonstrates 100" less drop and 33" less wind drift at 1000 yards than a 308 WIN. These factors provide an increased hit probability for Designated Marksman, Sniper and Special Response applications.

6mm ARC

Hornady Product Summary

Tested, selected and fielded by a specialized group within the U.S. DoD for its multipurpose combat rifle program, the versatile 6mm ARC does much of what larger cartridges can and everything that smaller cartridges can't. Designed to meet the needs of the world's toughest critics, the 6mm ARC utilizes efficient, high-BC bullets to deliver unprecedented performance from the AR-15 platform.

This line of ammunition is intended for Law Enforcement sales ONLY.

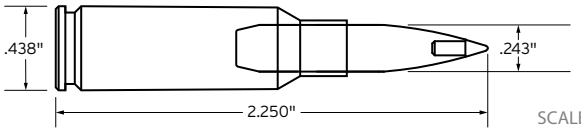
B.C. = Ballistic Coefficient

6mm ARC
106 gr. TAP®

ITEM NO. 81605

Performance Characteristics:

- Match accuracy
- Minimal deflection on glass
- Large wound cavities
- MADE IN THE USA
- **Net Explosive Weight** (approx. per box): 0.2243 lbs / .1017 kg



SCALE 1:1

CASE: 6MM ARC

- Manufacturer's name (Hornady) and caliber designation (6mm ARC) imprinted on case head
- **Characteristics:** Match grade annealed brass alloy

BULLET: ELD® MATCH

- **Ballistic Coefficient:** .580
- **Sectional Density:** .256
- **Bullet Length:** 1.310"
- **Recommended Rifling Twist Rate:** 1:7.5"
- **Characteristics:** Heat Shield® Tipped Match Grade
- **Push/Pull:** 50/50 minimum (lbs)

POWDER & PRIMER

- **Powder:** Temperature stable with flash suppressant
- **Primer:** Small rifle

LOT NUMBERS

- Lot numbers on each box and case

BALLISTIC DATA

	Muzzle	100 yds	200 yds	300 yds	400 yds	500 yds
Velocity (fps)	2610	2459	2314	2173	2038	1907
Energy (ft lbs)	1603	1424	1260	1112	977	856
Trajectory (in)	-1.5	0	-4.3	-15.0	-33.2	-59.7

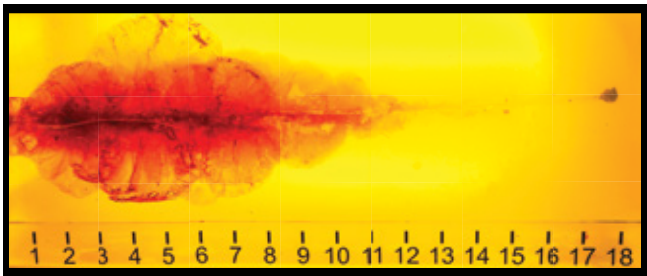
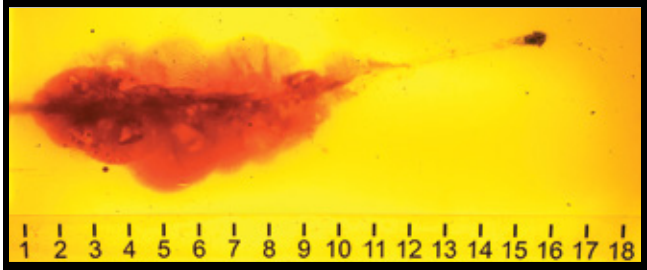
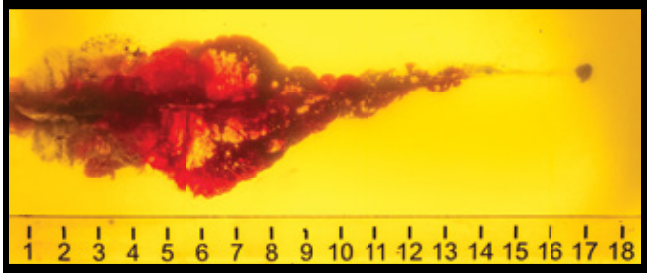
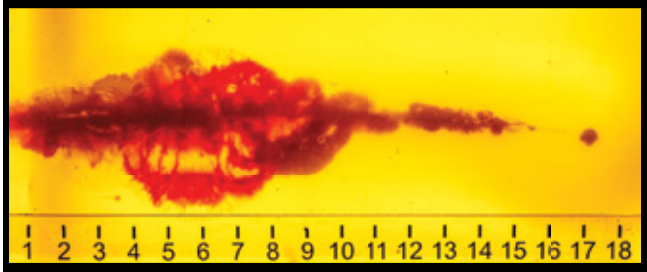
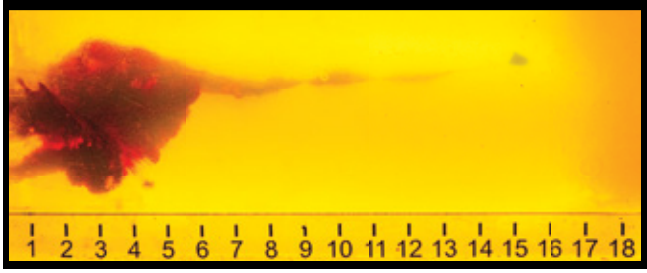
PACKAGING

- Tray: Item No. 8408L

- Gross Weight: .90 lbs
- 20 rounds per box with plastic tray

- Carton: Item No. 84511
- Carton Weight: 9.0 lbs
- Carton Dimensions: 5.875" x 6.437" x 8.0"
- 10 boxes per carton | 200 rounds per carton

6mm ARC | 106 gr. TAP®
18" BBL | 1:7.5" Twist
NOVESKE PROOF BARREL
ITEM NO. 81605

	Total Penetration	Max Cavity	Depth to Max Cavity	Initial Penetration	Retained Weight	Retained Weight %	Expanded Diameter	Velocity (fps)	
	18.0"	6.0"	5.5"	0.5"	76.8 gr	73%	0.53"	2647	BARE GELATIN
	16.5"	6.0"	3.5"	.25"	65.3 gr.	62%	0.44"	2661	HVY CLOTHING
	17.5"	5.0"	4.0"	0.0"	70.4 gr.	66%	0.40"	2667	STEEL
	17.5"	5.0"	4.5"	0.0"	75.4 gr.	71%	0.48"	2653	WALLBOARD
	15.0"	4.0"	4.5"	0.0"	70.7 gr.	67%	0.45"	2645	PLYWOOD
	15.5"	4.0"	3.0"	0.0"	41.2 gr.	39%	0.35"	2655	AUTO GLASS

NOTES:

6.5 CREEDMOOR

140gr CX™ TAP® HEAVY BARRIER™

#81485

Polymer Tipped Copper Alloy Bullet | B.C. = .350

TAP® Heavy Barrier™ turns cover into concealment. The CX™ TAP® Heavy Barrier™ bullet is constructed of a monolithic copper alloy that shoots cleaner and fouls less than pure copper bullets. This load meets the FBI Protocol penetration requirement (12"-18") through heavy barriers (1" laminated glass, 1 ½" Lexan and 5/8" subway glass) with high weight retention. Featuring different tip geometry than TAP Precision® ammunition, this offering is loaded in a nickel-plated cartridge case making it easy to distinguish heavy barrier ammunition from other ammunition options.

NOTE: Not recommended for use where over-penetration may be a concern.

147gr ELD® MATCH TAP PRECISION®

#81505

Polymer Tipped Spitzer Boat Tail Bullet | B.C. = .697

Hornady 6.5 Creedmoor TAP Precision is specifically designed to meet FBI protocol and provide superior external ballistics when compared to standard 308 WIN offerings. The 147 gr. ELD Match bullet with Heat Shield tip delivers excellent terminal performance and results in higher retained velocities, less drop, less wind drift, and more energy on target.

Hornady Product Summary

Featuring inherently high Ballistic Coefficient (BC) 6.5mm bullets that also deliver high Sectional Density (SD), the 6.5 Creedmoor provides superior external ballistics and shootability with comparable terminal ballistic performance to that of the venerable 308 Winchester. Originally designed by Hornady® as a true match cartridge, the 6.5 Creedmoor is an exceptional choice for all LE/Military applications where the 308 Win had been the only option in the past.

This line of ammunition is intended for Law Enforcement sales ONLY.

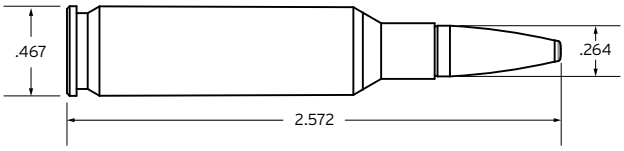
B.C. = Ballistic Coefficient

6.5 CREEDMOOR
140 gr. CX™ TAP® HEAVY BARRIER™

ITEM NO. 81485

Performance Characteristics:

- Minimal deflection on glass
- Meets FBI barrier penetration protocol
- High Retained Weight
- MADE IN THE USA
- Not recommended for use where over-penetration may be a concern
- **Net Explosive Weight** (approx. per box): 0.1288 lbs / .0584 kg



CASE: 6.5 CREEDMOOR

- Manufacturer's name (Hornady) and caliber designation (6.5 CREEDMOOR) imprinted on case head
- **Characteristics:** Match grade nickel-plated annealed brass alloy

BULLET: CX™

- **Ballistic Coefficient:** .350
- **Sectional Density:** .287
- **Bullet Length:** 1.45"
- **Recommended Rifling Twist Rate:** 1:8"
- **Characteristics:** Lead free, expanding
- **Push/Pull:** 70/70 minimum (lbs)

POWDER & PRIMER

- **Powder:** Temperature stable with flash suppressant
- **Primer:** Large rifle, staked primer pocket

LOT NUMBERS

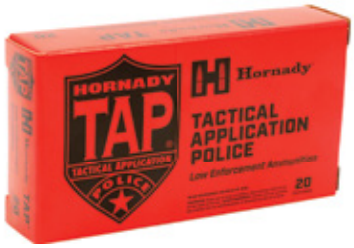
- Lot numbers on each box and case

BALLISTIC DATA

	Muzzle	100 yds	200 yds	300 yds	400 yds	500 yds
Velocity (fps)	2675	2425	2188	1965	1757	1566
Energy (ft lbs)	2224	1827	1488	1200	959	762
Trajectory (in)	-1.5	0	-4.4	-16.2	-37.0	-69.1

PACKAGING

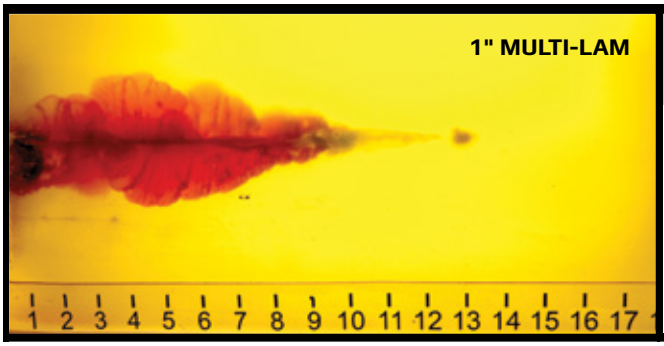
- Tray: Item No. 8408



- Gross Weight: 1.120 lbs
- 20 rounds per box with plastic tray

- Carton Weight: 11.2 lbs
- Carton Dimensions: 5.88" x 6.44" x 8.25"
- 10 boxes per carton | 200 rounds per carton

6.5 CREEDMOOR
147 gr. CX™ TAP® HEAVY BARRIER™
26" BBL | 1:8" Twist | REMINGTON 700
ITEM NO. 81485



Total Penetration	Max Cavity	Depth to Max Cavity	Initial Penetration	Retained Weight	Retained Weight %	Expanded Diameter	Velocity (fps)
13.75"	4.0"	4.5"	0.0"	67.7 gr.	48%	0.53"	2650

HEAVY GLASS

6.5 CREEDMOOR

140 gr. CX™ TAP® HEAVY BARRIER™

Item #81485						
24" Thompson Center Icon Custom 1:7"	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	2670	2542	2418	2298	2181	2067
Energy (ft lbs)	2327	2110	1909	1723	1552	1394
Trajectory (inches)	-1.5	0.0	-3.9	-13.7	-30.2	-53.9
24" Remington 700 Custom Proof Carbon Fiber 1:8"	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	2796	2665	2537	2414	2293	2176
Energy (ft lbs)	2551	2317	2101	1901	1716	1545
Trajectory (inches)	-1.5	0.0	-3.4	-12.2	-27.0	-48.4
24" Remington® 700 Custom 1:8"	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	2693	2565	2440	2319	2201	2087
Energy (ft lbs)	2367	2147	1943	1755	1581	1421
Trajectory (inches)	-1.5	0.0	-3.8	-13.4	-29.5	-52.8
24" Ruger Precision Rifle 1:8"	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	2685	2557	2433	2313	2195	2081
Energy (ft lbs)	2353	2134	1932	1746	1573	1414
Trajectory (inches)	-1.5	0.0	-3.8	-13.5	-29.8	-53.2
***26" SAAMI Test Barrel 1:8"**	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	2675	2425	2188	1965	1757	1566
Energy (ft lbs)	2224	1827	1488	1200	959	762
Trajectory (inches)	-1.5	0.0	-4.4	-16.2	-37.0	-69.1

***Test data used on packaging label**

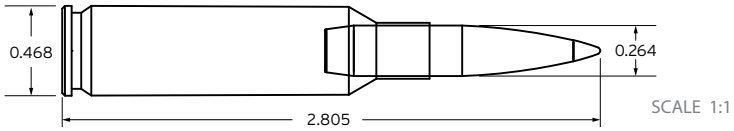
NOTES:

6.5 CREEDMOOR
147 gr. ELD® MATCH
TAP PRECISION®

ITEM NO. 81505

Performance Characteristics:

- Match accuracy
- Minimal deflection on glass
- Large wound cavities
- Meets FBI barrier penetration protocol
- High Retained Weight
- MADE IN THE USA
- **Net Explosive Weight** (approx. per box): 0.1274 lbs / .0558 kg



CASE: 6.5 CREEDMOOR

- Manufacturer's name (Hornady) and caliber designation (6.5 CREEDMOOR) imprinted on case head
- **Characteristics:** Match grade annealed brass alloy

BULLET: ELD® MATCH

- **Ballistic Coefficient:** .697
- **Sectional Density:** .301
- **Bullet Length:** 1.435"
- **Recommended Rifling Twist Rate:** 1:7 to 1:8"
- **Characteristics:** Polymer tipped, Match grade
- **Push/Pull:** 70/70 minimum (lbs)

POWDER & PRIMER

- **Powder:** Temperature stable with flash suppressant
- **Primer:** Large rifle, staked primer pocket

LOT NUMBERS

- Lot numbers on each box and case

BALLISTIC DATA

	Muzzle	100 yds	200 yds	300 yds	400 yds	500 yds
Velocity (fps)	2695	2567	2443	2323	2206	2092
Energy (ft lbs)	2370	2151	1948	1761	1587	1428
Trajectory (in)	-1.5	0	-3.8	-13.4	-29.5	-52.7

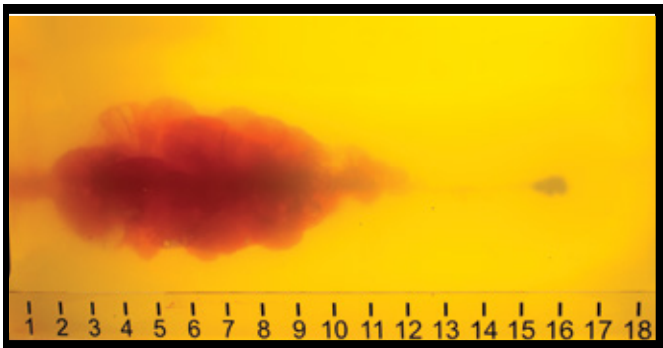
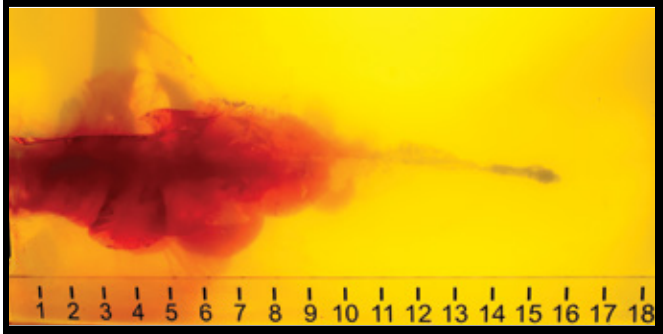
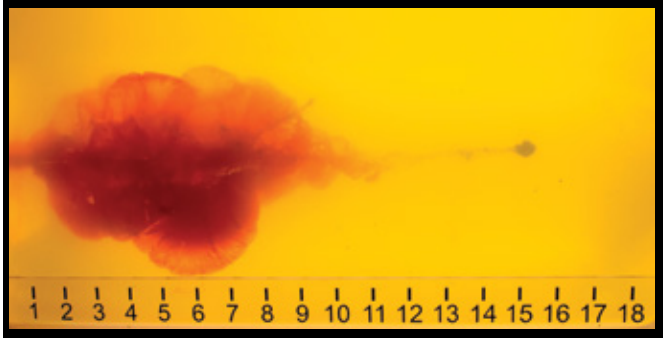
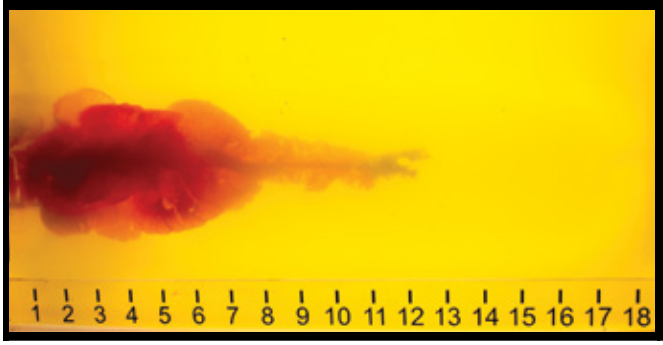
PACKAGING

- Tray: Item No. 8408

- Gross Weight: 1.07 lbs
- 20 rounds per box with plastic tray

- Carton: Item No. 84511
- Carton Weight: 10.7 lbs
- Carton Dimensions: 5.875" x 6.437" x 8.0"
- 10 boxes per carton | 200 rounds per carton

6.5 CREEDMOOR
147 gr. ELD® MATCH TAP PRECISION®
24" BBL | 1:8" Twist | REMINGTON 700
ITEM NO. 81505

	Total Penetration	Max Cavity	Depth to Max Cavity	Initial Penetration	Retained Weight	Retained Weight %	Expanded Diameter	Velocity (fps)	
	16.0"	5.5"	2.5"	1.0"	68.4 gr.	47%	0.61"	2646	BARE GELATIN
	14.5"	6.5"	4.5"	0.0"	75.9 gr.	52%	0.63"	2657	STEEL
	15.5"	6.0"	3.0"	0.0"	77.5 gr.	53%	0.76"	2664	WALLBOARD
	15.5"	6.0"	5.5"	0.0"	80.3 gr.	55%	0.65"	2676	PLYWOOD
	12.5"	4.75"	2.0"	0.0"	51.6 gr.	35%	0.64"	2633	AUTO GLASS

6.5 CREEDMOOR

147 gr. ELD® MATCH TAP PRECISION®

Item #81505						
24" Thompson Center Icon Custom 1:7"	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	2670	2542	2418	2298	2181	2067
Energy (ft lbs)	2327	2110	1909	1723	1552	1394
Trajectory (inches)	-1.5	0.0	-3.9	-13.7	-30.2	-53.9
24" Remington 700 Custom Proof Carbon Fiber 1:8"	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	2796	2665	2537	2414	2293	2176
Energy (ft lbs)	2551	2317	2101	1901	1716	1545
Trajectory (inches)	-1.5	0.0	-3.4	-12.2	-27.0	-48.4
24" Remington® 700 Custom 1:8"	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	2693	2565	2440	2319	2201	2087
Energy (ft lbs)	2367	2147	1943	1755	1581	1421
Trajectory (inches)	-1.5	0.0	-3.8	-13.4	-29.5	-52.8
24" Ruger Precision Rifle 1:8"	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	2685	2557	2433	2313	2195	2081
Energy (ft lbs)	2353	2134	1932	1746	1573	1414
Trajectory (inches)	-1.5	0.0	-3.8	-13.5	-29.8	-53.2
***24" SAAMI Test Barrel 1:8"**	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	2695	2567	2443	2323	2206	2092
Energy (ft lbs)	2370	2151	1948	1761	1587	1428
Trajectory (inches)	-1.5	0.0	-3.8	-13.4	-29.5	-52.7

***Test data used on packaging label**

308

Winchester/ 7.62 mm NATO

110 gr. TAP URBAN®

#80896

Polymer Tipped Spitzer Flat Base Bullet | B.C. = .290

This cartridge provides the police marksman a unique bullet that demonstrates rapid expansion, fragmentation and low retained weight. The 110 gr. TAP Urban® bullet offers the least penetration in ballistic gelatin and lower felt recoil as compared to heavier TAP® loads. The 110 gr. bullet demonstrates similar penetration to the 223 Rem 75 gr. BTHP bullet, but with substantially more temporary and permanent cavity and fragmentation, proving itself an excellent choice for high collateral risk environments. **NOTE: A superb choice for the M14 and its variants.**

155 gr. ELD® MATCH TAP PRECISION®

#80905

Polymer Tipped Spitzer Boat Tail Bullet | B.C. = .461

Hornady® 308 WIN 155 gr. ELD® Match TAP Precision® ammunition was designed as an improvement on the 155 gr. A-MAX TAP Precision® load by incorporating the new ELD® Match bullet. The 155 gr. ELD® Match bullet with Heat Shield® tip delivers the excellent terminal performance TAP Precision® is known for, but features a resilient, heat resistant polymer tip that improves the ballistic coefficient, resulting in higher impact velocities, less drop, less wind drift, and more energy on target.

165 gr. CX™ TAP® HEAVY BARRIER

#80985

Polymer Tipped Copper Alloy Bullet | B.C. = .447

TAP® Heavy Barrier™ turns cover into concealment. The 165 gr. CX™ TAP® Heavy Barrier™ is constructed of a monolithic copper alloy. It shoots cleaner than pure copper, fouls less and delivers devastating terminal performance. The CX™ bullet penetrates heavy barriers such as 1" laminated glass with exceptional weight retention while still delivering superior terminal performance. **NOTE: Maximum penetration - Not for use where over-penetration is a concern.**

168 gr. A-MAX® TAP PRECISION®

#80965

Polymer Tipped Spitzer Boat Tail Bullet | B.C. = .475

The 168 gr. A-MAX® bullet is a traditional match grade bullet with the performance advantages of a polymer tip. This bullet demonstrates an increase in penetration and retained weight over the 155 gr. A-MAX® bullet. Standard barrier performance is exemplary and this load demonstrates controlled and impressive soft tissue expansion without over penetration. The Hornady® 168 gr. A-MAX® TAP Precision® offers industry leading all-around performance for law enforcement precision marksmen providing the ability to stop a threat.

168 gr. ELD® MATCH TAP PRECISION®

#80725

Polymer Tipped Spitzer Boat Tail Bullet | B.C. = .523

Hornady® 308 WIN 168 gr. ELD® MATCH TAP PRECISION® ammunition was designed as an improvement on the 168 gr. A-MAX TAP PRECISION® load by incorporating the new ELD® Match bullet. The 168 gr. ELD® Match bullet with Heat Shield® tip delivers the excellent terminal performance TAP Precision® is known for, but features a resilient, heat resistant polymer tip that improves the ballistic coefficient, resulting in higher impact velocities, less drop, less wind drift, and more energy on target.

168 gr. ELD® MATCH TAP® AR™

#80715

Polymer Tipped Spitzer Boat Tail Bullet | B.C. = .523

Hornady® 308 WIN TAP® AR™ ammunition is the first TAP® offering loaded with the new ELD® Match bullet. The 168 gr. ELD® Match bullet with Heat Shield® tip delivers the excellent terminal performance TAP Precision® is known for, but features a resilient, heat resistant polymer tip that improves the ballistic coefficient, resulting in higher impact velocities, less drop, less wind drift, and more energy on target. Designed specifically for the 308 AR-10 platform and its variants, the resilient tip of the ELD-X® bullet aids in reliable feed and function, and the propellant is specifically tailored to efficiently operate in the AR-10.

Hornady Product Summary

Hornady® 308 Win TAP® ammunition is specifically developed for the police marksman who requires the increased bullet weight and barrier penetration of the 308 Win cartridge. Hornady® Match Grade TAP® 308 Win loads offer reliable functioning and consistent performance that delivers when it counts. With a low muzzle signature and superior terminal performance, Hornady 308 Win TAP® loads provide performance in any situation from eliminating the risk of over penetration to standard and heavy barricade engagements. The polymer tips have high ballistic coefficients, making them an excellent choice for SWAT precision marksmen.

This line of ammunition is intended for Law Enforcement sales ONLY.

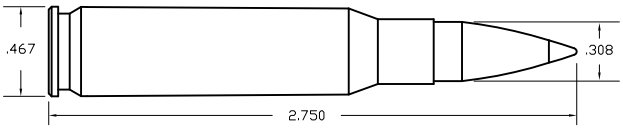
B.C. = Ballistic Coefficient

308 WIN
110 gr. TAP URBAN®

ITEM NO. 80896

Performance Characteristics:

- Rapid expansion
- Complete fragmentation
- Low felt recoil
- Devastating permanent cavity
- Low penetration
- MADE IN THE USA
- **Net Explosive Weight** (approx. per box): 0.1129 lbs / .0512 kg



SCALE 1:1

CASE: 308 WINCHESTER

- Manufacturer's name (Hornady) and caliber designation (308 WIN) imprinted on case head
- **Characteristics:** High quality annealed brass alloy

BULLET: TAP URBAN®

- **Ballistic Coefficient:** .290
- **Sectional Density:** .166
- **Bullet Length:** 0.927"
- **Recommended Rifling Twist Rate:** 1:8" to 1:12"
- **Characteristics:** Polymer tipped
- **Push/Pull:** 50/50 minimum (lbs)

This bullet is designed to fragment entirely.

POWDER & PRIMER

- **Powder:** Temperature stable with flash suppressant
- **Primer:** Large rifle, staked primer pocket

LOT NUMBERS

- Lot numbers on each box and case

BALLISTIC DATA

	Muzzle	100 yds	200 yds	300 yds	400 yds	500 yds
Velocity (fps)	3160	2826	2516	2226	1956	1707
Energy (ft lbs)	2439	1950	1546	1210	934	712
Trajectory (in)	-1.5	0	-2.9	-11.3	-26.8	-51.4

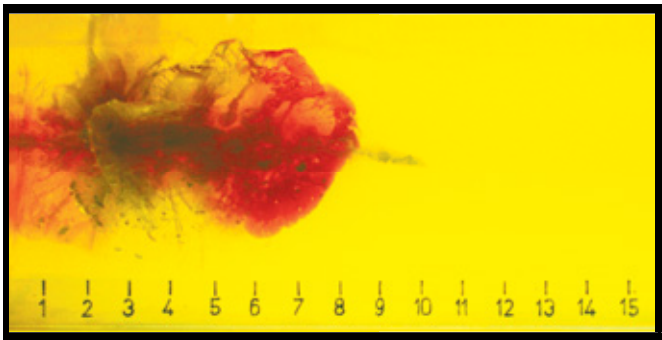
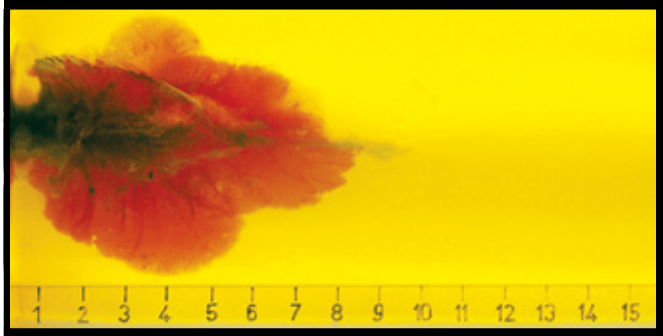
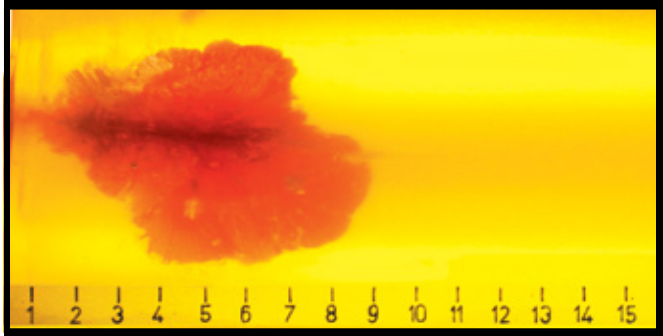
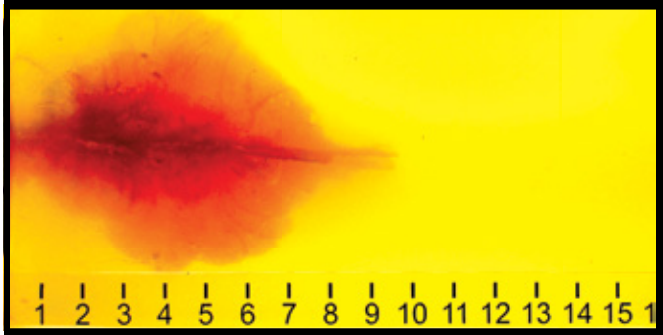
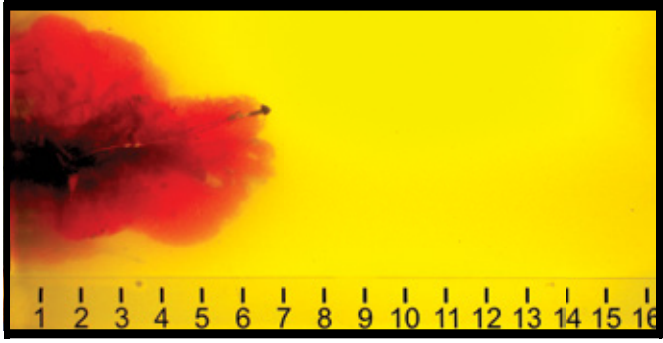
PACKAGING

- Tray: Item No. 8407

- Box Weight: `.0 lbs
- Gross Weight: 1.07 lbs
- 20 rounds per box with plastic tray

- Carton: Item No. 84511
- Carton Weight: 10.7 lbs
- Carton Dimensions: 5.875" x 6.437" x 8.0"
- 10 boxes per carton | 200 rounds per carton

308 WIN | 110 gr. TAP URBAN®
20" BBL | 1:12" Twist | Remington 700LTR
ITEM NO. 80896

	Total Penetration	Max Cavity	Depth to Max Cavity	Initial Penetration	Retained Weight	Retained Weight %	Expanded Diameter	Velocity (fps)	
	10.0"	6.0"	4.5"	0.0"	5.6 gr.	5%	0.31"	2998	BARE GELATIN
	This bullet fragments completely when encountering this barrier.								
	9.75"	3.75"	0.75"	0.0"	0.0 gr.	0%	0.0"	3002	STEEL
	This bullet fragments completely when encountering this barrier.								
	8.5"	5.0"	2.25"	0.0"	36.0 gr.	33%	0.51"	2993	WALLBOARD
									
	10.0"	6.0"	3.5"	0.0"	0.0"	0%	0.0"	2954	PLYWOOD
	This bullet fragments completely when encountering this barrier.								
	6.75"	6.5"	0.75"	0.0"	0.0 gr.	0%	0.0"	3007	AUTO GLASS
	This bullet fragments completely when encountering this barrier.								

308 WIN
110 gr. TAP URBAN®

Item #80896						
16" DPMS® Panther™ LR-AP4 1:10"	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	2857	2544	2253	1981	1730	1505
Energy (ft lbs)	1994	1581	1240	958	731	553
Trajectory (inches)	-2.5	1.5	0.0	-8.3	-25.6	-54.6
20" Remington® 700 Police LTR 1:12"	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	3014	2690	2389	2108	1847	1609
Energy (ft lbs)	2219	1768	1394	1085	833	632
Trajectory (inches)	-1.5	1.7	0.0	-7.8	-23.4	-49.4
22" Springfield Armory® M1A™ 1:11"	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	2999	2677	2376	2096	1836	1599
Energy (ft lbs)	2197	1750	1379	1073	823	624
Trajectory (inches)	-1.1	1.9	0.0	-8.1	-24.1	-50.6
24" Remington® M24 1:11.25"	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	3153	2819	2510	2220	1951	1703
Energy (ft lbs)	2428	1941	1538	1204	929	708
Trajectory (inches)	-1.5	1.5	0.0	-7.0	-21.1	-44.4
***24" SAAMI 308 Win. Test Barrel 1:12"**	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	3160	2826	2516	2226	1956	1707
Energy (ft lbs)	2439	1950	546	1210	934	712
Trajectory (inches)	-1.5	0	-2.9	-11.3	-26.8	-51.4
26" Remington® 700 Police 1:12"	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	3159	2825	2515	2225	1955	1707
Energy (ft lbs)	2437	1949	1545	1209	934	711
Trajectory (inches)	-1.5	1.4	0.0	-7.0	-21.0	-44.2

***Test data used on packaging label**

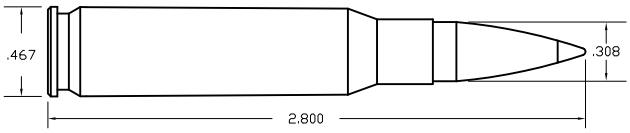
NOTES:

308 WIN
155 gr. ELD® MATCH TAP PRECISION®

ITEM NO. 80905

Performance Characteristics:

- Match accuracy
- Minimal deflection on glass
- Large wound cavities
- Meets FBI barrier penetration protocol
- Endorsed by the American Sniper Association
- MADE IN THE USA
- Net Explosive Weight (approx. per box): 0.1625 lbs / .0737 kg



SCALE 1:1

CASE: 308 WINCHESTER

- Manufacturer's name (Hornady) and caliber designation (308 WIN) imprinted on case head
- **Characteristics:** Match grade annealed brass alloy

BULLET: ELD® MATCH

- **Ballistic Coefficient:** .461
- **Sectional Density:** .233
- **Bullet Length:** 1.196"
- **Recommended Rifling Twist Rate:** 1:8 to 1:12"
- **Characteristics:** Polymer tipped, Match grade
- **Push/Pull:** 50/80 minimum (lbs)

POWDER & PRIMER

- **Powder:** Temperature stable with flash suppressant
- **Primer:** Large rifle, staked primer pocket

LOT NUMBERS

- Lot numbers on each box and case

BALLISTIC DATA

	Muzzle	100 yds	200 yds	300 yds	400 yds	500 yds
Velocity (fps)	2785	2589	2401	2222	2050	1886
Energy (ft lbs)	2669	2307	1985	1699	1446	1224
Trajectory (in)	-1.5	0.0	-3.7	-13.4	-30.2	-55.4

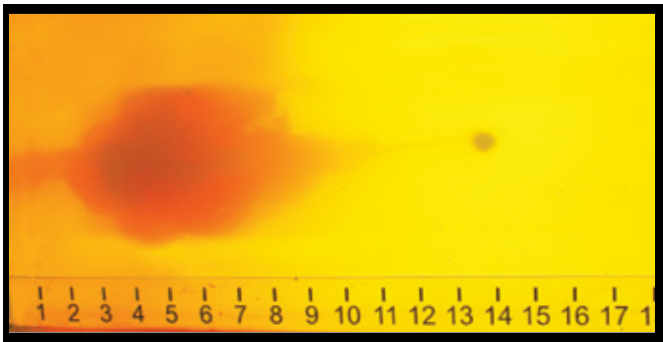
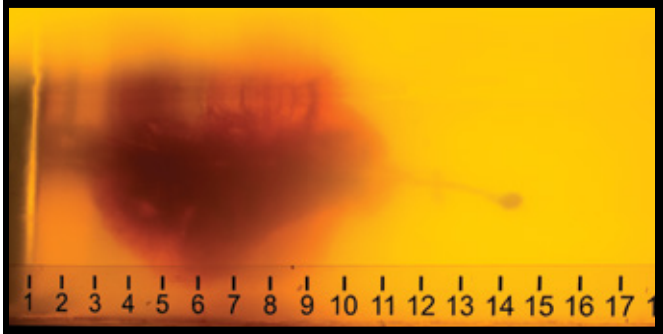
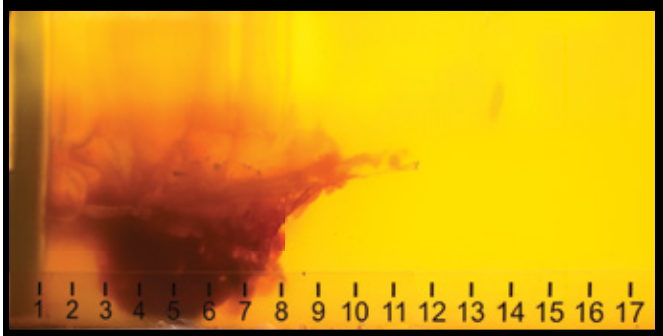
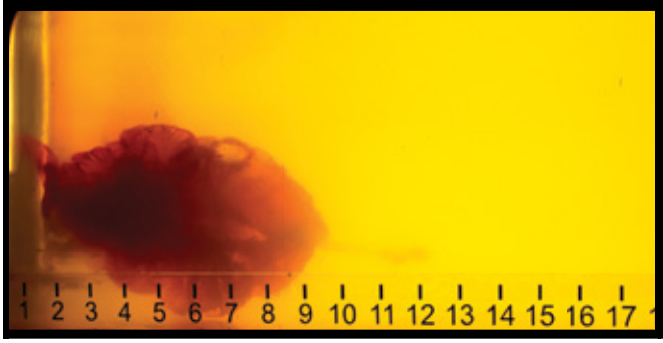
PACKAGING

- Tray: Item No. 8408

- Gross Weight: 1.18 lbs
- 20 rounds per box with plastic tray

- Carton: Item No. 84511
- Carton Weight: 11.8 lbs
- Carton Dimensions: 5.875" x 6.437" x 8.0"
- 10 boxes per carton | 200 rounds per carton

308 WIN | 155 gr. ELD® MATCH
TAP PRECISION®
26" BBL | 1:12" Twist | Remington 700P
ITEM NO. 80905

	Total Penetration	Max Cavity	Depth to Max Cavity	Initial Penetration	Retained Weight	Retained Weight %	Expanded Diameter	Velocity (fps)	
	13.75"	6.0"	3.0"	.50"	72.5 gr.	47%	0..57"	2856	BARE GELATIN
	12.0"	8.5"	3.0"	0.0"	82.0 gr.	53%	0.55"	2858	STEEL
	13.5"	7.5"	4.0"	0.0"	81.0 gr.	52%	0.51"	2856	WALLBOARD
	13.75"	8.5"	2.5"	0.0"	84.4 gr.	30%	0.49"	2865	PLYWOOD
	12.0"	7.0"	2.0"	0.0"	62.2 gr.	40%	0.54"	2855	AUTO GLASS

308 WIN
155 gr. ELD® MATCH TAP PRECISION®

Item #80905						
20" Remington® 700 LTR 1:12"	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	2680	2488	2304	2128	1960	1800
Energy (ft lbs)	2472	2130	1827	1558	1322	1115
Trajectory (inches)	-1.5	0.0	-4.1	-14.8	-33.2	-60.6
24" Remington ®700 M24 1:11.25"	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	2815	2617	2428	2247	2073	1907
Energy (ft lbs)	2727	2357	2029	1737	1479	1252
Trajectory (inches)	-1.5	0.0	-3.6	-13.1	-29.5	-54.0
26" Remington® 700P 1:12"	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	2789	2592	2404	2224	2051	1887
Energy (ft lbs)	2677	2313	1989	1702	1448	1225
Trajectory (inches)	-1.5	0.0	-3.7	-13.4	-30.1	-55.2

***Test data used on packaging label**

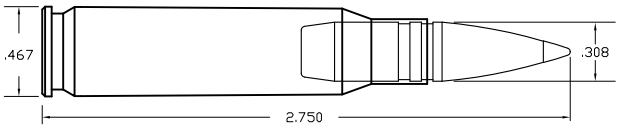
NOTES:

308 WIN
165 gr. CX™ TAP®
HEAVY BARRIER

ITEM NO. 80985

Performance Characteristics:

- Nearly 100% weight retention on all FBI barriers
- Large wound cavities
- Extremely deep penetration
- Ideal for defeating hard barriers and glass
- MADE IN THE USA
- **Net Explosive Weight** (approx. per box): 0.1351 lbs / .0612 kg



SCALE 1:1

CASE: 308 WINCHESTER

- Manufacturer's name (Hornady) and caliber designation (308 WIN) imprinted on case head
- **Characteristics:** High quality annealed brass alloy

BULLET: CX™

- **Ballistic Coefficient:** .447
- **Sectional Density:** .248
- **Bullet Length:** 1.418"
- **Recommended Rifling Twist Rate:** 1:8" to 1:12"
- **Characteristics:** Polymer tipped, copper alloy, double cannelured
- **Push/Pull:** 125/125 minimum (lbs)

POWDER & PRIMER

- **Powder:** Temperature stable with flash suppressant
- **Primer:** Large rifle, staked primer pocket

LOT NUMBERS

- Lot numbers on each box and case

BALLISTIC DATA

	Muzzle	100 yds	200 yds	300 yds	400 yds	500 yds
Velocity (fps)	2610	2413	2224	2044	1872	1711
Energy (ft lbs)	2496	2132	1812	1530	1284	1072
Trajectory (in)	-1.5	0	-4.5	-16.0	-35.9	-65.8

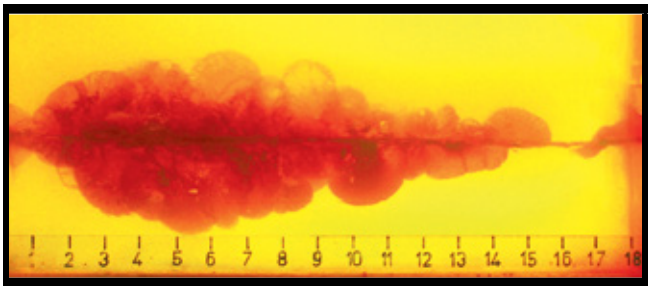
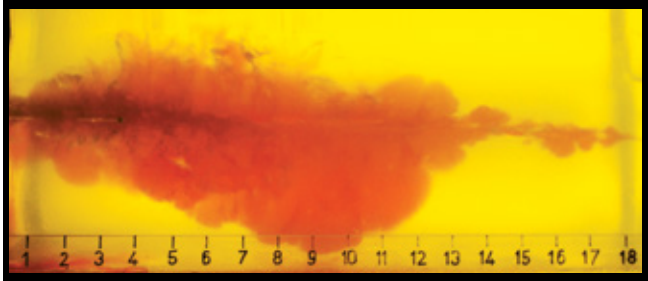
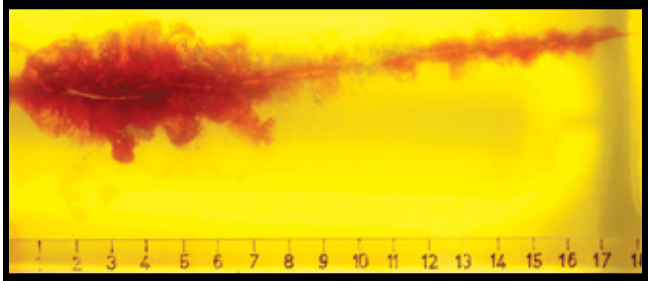
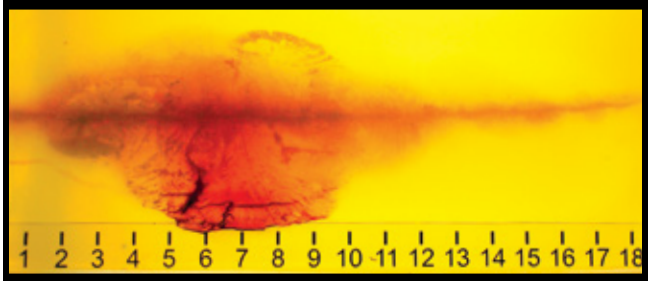
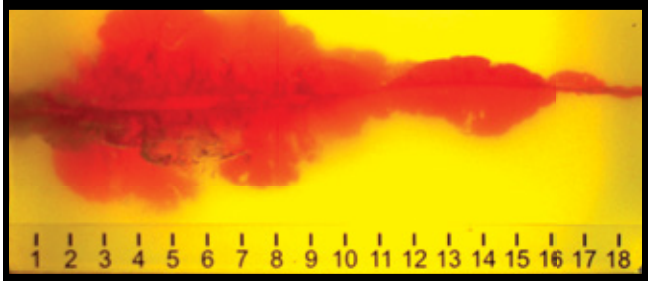
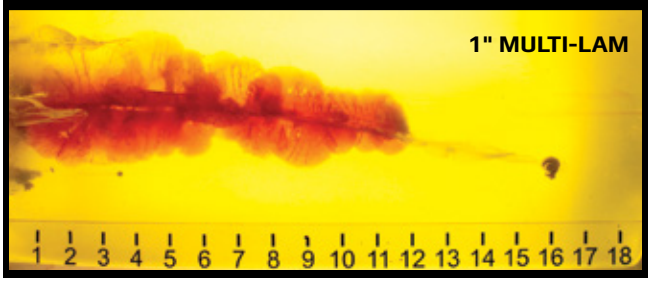
PACKAGING

- Tray: Item No. 8408

- Gross Weight: 1.24 lbs
- 20 rounds per box with plastic tray

- Carton: Item No. 84511
- Carton Weight: 12.4 lbs
- Carton Dimensions: 5.875" x 6.437" x 8.0"
- 10 boxes per carton | 200 rounds per carton

308 WIN | 165 gr. CX™ TAP® HEAVY BARRIER™
20" BBL | 1:12" Twist | Remington 700LTR
ITEM NO. 80985

	Total Penetration	Max Cavity	Depth to Max Cavity	Initial Penetration	Retained Weight	Retained Weight %	Expanded Diameter	Velocity (fps)	
	29.0"	5.0"	5.25"	0.5"	164.5 gr.	99%	0.53"	2735	BARE GELATIN
	22.75"	4.0"	5.0"	0.0"	160.5 gr.	97%	0.61"	2607	STEEL
	27.5"	4.0"	4.5"	0.5"	163.8 gr.	99%	0.59"	2595	WALLBOARD
	27.0"	7.0"	6.5"	1.0"	164.2 gr.	100%	0.58"	2583	PLYWOOD
	21.5"	6.5"	3.75"	0.0"	149.2 gr.	90%	0.62"	2613	AUTO GLASS
	16.25"	4.0"	3.5"	0.0"	116.5 gr.	71%	0.54"	2735	HEAVY GLASS

308 WIN
165 gr. CX™ TAP® HEAVY BARRIER

Item #80985						
16" DPMS® Panther™ LR-AP4 1:10"	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	2478	2289	2109	1937	1774	1622
Energy (ft lbs)	2250	1920	1629	1374	1153	963
Trajectory (inches)	-2.5	2.1	0.0	-9.9	-29.1	-59.4
20" Remington® 700 Police LTR 1:12"	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	2581	2388	2203	2027	1859	1701
Energy (ft lbs)	2441	2089	1778	1505	1266	1060
Trajectory (inches)	-1.5	2.3	0.0	-9.5	-27.4	-55.5
22" Springfield Armory® M1A™ 1:11"	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	2630	2435	2248	2069	1899	1739
Energy (ft lbs)	2534	2172	1851	1569	1322	1108
Trajectory (inches)	-1.1	2.4	0.0	-9.3	-26.7	-53.8
24" Remington® M24 1:11.25"	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	2651	2455	2267	2088	1917	1755
Energy (ft lbs)	2575	2208	1883	1597	1346	1129
Trajectory (inches)	-1.5	2.1	0.0	-8.9	-25.9	-52.3
***24" SAAMI 308 Win. Test Barrel 1:12"**	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	2610	2413	2224	2044	1872	1711
Energy (ft lbs)	2496	2132	1812	1530	1284	1072
Trajectory (inches)	-1.5	0.0	-4.5	-16.0	-35.9	-65.8
26" Remington® 700 Police 1:12"	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	2673	2476	2287	2107	1935	1772
Energy (ft lbs)	2618	2246	1917	1626	1372	1151
Trajectory (inches)	-1.5	2.1	0.0	-8.7	-25.3	-51.3

***Test data used on packaging label**

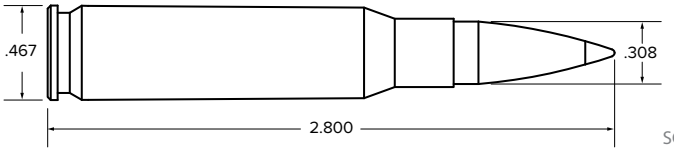
NOTES:

308 WIN
168 gr. A-MAX®
TAP PRECISION®

ITEM NO. 80965

Performance Characteristics:

- Match accuracy
- Minimal deflection on glass
- Large wound cavities
- Meets FBI barrier penetration protocol
- Endorsed by the American Sniper Association
- MADE IN THE USA
- N**et Explosive Weight** (approx. per box): 0.1263 lbs / .0573 kg



SCALE 1:1

CASE: 308 WINCHESTER

- Manufacturer's name (Hornady) and caliber designation (308 WIN) imprinted on case head
- **Characteristics:** Match grade annealed brass alloy

BULLET: A-MAX®

- **Ballistic Coefficient:** .475
- **Sectional Density:** .253
- **Bullet Length:** 1.275"
- **Recommended Rifling Twist Rate:** 1:8" to 1:12"
- **Characteristics:** Polymer tipped, Match grade
- **Push/Pull:** 60/60 minimum (lbs)

POWDER & PRIMER

- **Powder:** Temperature stable with flash suppressant
- **Primer:** Large rifle, staked primer pocket

LOT NUMBERS

- Lot numbers on each box and case

BALLISTIC DATA

	Muzzle	100 yds	200 yds	300 yds	400 yds	500 yds
Velocity (fps)	2680	2494	2316	2145	1981	1825
Energy (ft lbs)	2679	2320	2000	1715	1464	1242
Trajectory (in)	-1.5	0	-4.1	-14.7	-32.9	-59.9

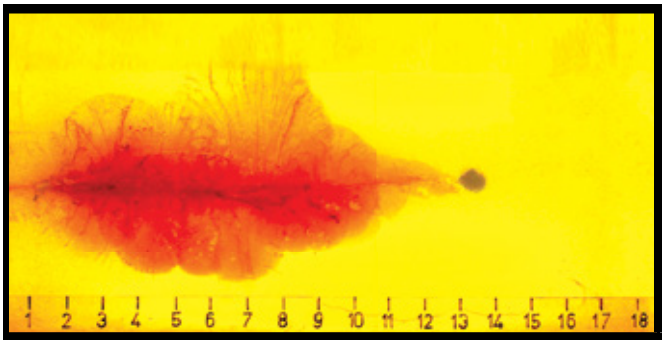
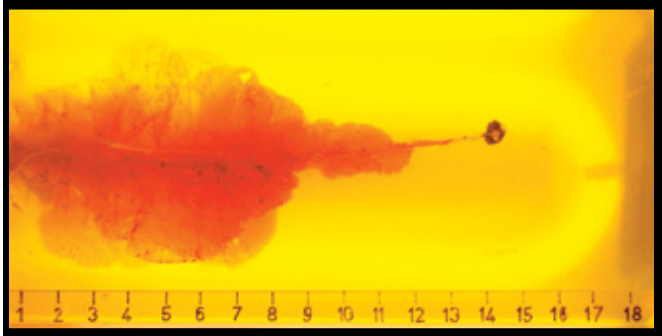
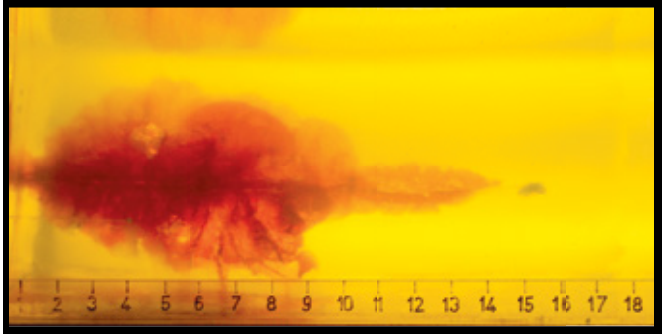
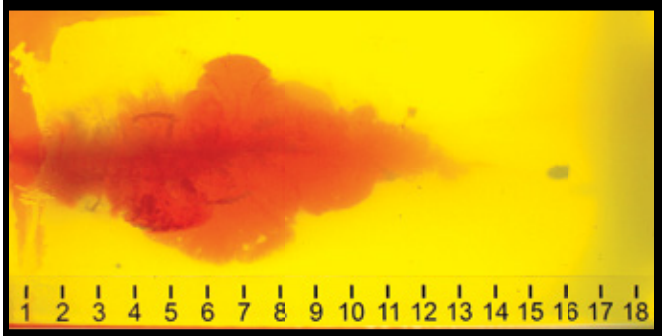
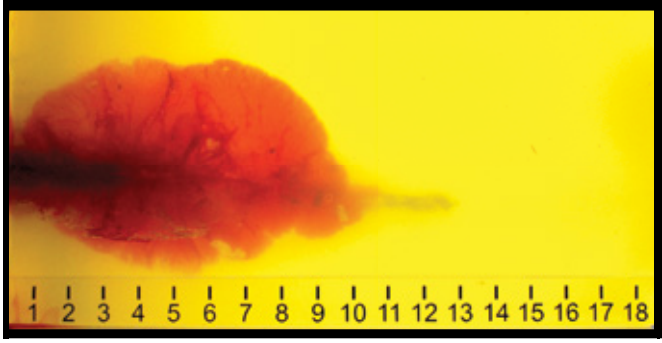
PACKAGING

- Tray: Item No. 8408

- Gross Weight: 1.26 lbs
- 20 rounds per box with plastic tray

- Carton: Item No. 84511
- Carton Weight: 12.6 lbs
- Carton Dimensions: 5.875" x 6.437" x 8.0"
- 10 boxes per carton | 200 rounds per carton

308 WIN | 168 gr. A-MAX® TAP PRECISION®
20" BBL | 1:12" Twist | Remington 700LTR
ITEM NO. 80965

	Total Penetration	Max Cavity	Depth to Max Cavity	Initial Penetration	Retained Weight	Retained Weight %	Expanded Diameter	Velocity (fps)	
	14.25"	6.5"	7.0"	0.5"	120.8 gr.	72%	0.94"	2537	BARE GELATIN
	14.5"	4.0"	3.0"	0.0"	103.0 gr.	61%	0.69"	2549	STEEL
	15.75"	4.0"	4.5"	1.0"	124.4 gr.	74%	0.83"	2584	WALLBOARD
	17.0"	6.5"	5.0"	0.0"	127.8 gr.	76%	0.79"	2562	PLYWOOD
	13.25"	6.5"	4.75"	0.0"	71.0 gr.	42%	0.67"	2554	AUTO GLASS

308 WIN
168 gr. A-MAX® TAP PRECISION®

Item #80965						
16" DPMS® Panther™ LR-AP4 1:10"	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	2398	2223	2056	1896	1745	1603
Energy (ft lbs)	2145	1844	1577	1342	1136	959
Trajectory (inches)	-2.5	2.3	0.0	-10.5	-30.7	-62.4
20" Remington® 700 Police LTR 1:12"	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	2552	2371	2198	2032	1873	1723
Energy (ft lbs)	2429	2097	1802	1540	1309	1108
Trajectory (inches)	-1.5	2.4	0.0	-9.5	-27.6	-55.5
22" Springfield Armory® M1A™ 1:11"	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	2570	2388	2214	2047	1888	1738
Energy (ft lbs)	2464	2128	1829	1564	1330	1126
Trajectory (inches)	-1.1	2.5	0.0	-9.6	-27.5	-55.2
24" Remington® M24 1:11.25"	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	2672	2486	2308	2137	1974	1819
Energy (ft lbs)	2663	2306	1987	1704	1454	1234
Trajectory (inches)	-1.5	2.1	0.0	-8.6	-24.9	-50.0
***24" SAAMI 308 Win. Test Barrel 1:12"**	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	2680	2494	2316	2145	1981	1825
Energy (ft lbs)	2679	2320	2000	1715	1464	1242
Trajectory (inches)	-1.5	0.0	-4.1	-14.7	-32.9	-59.9
26" Remington® 700 Police 1:12"	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	2666	2481	2303	2132	1969	1814
Energy (ft lbs)	2651	2295	1978	1696	1446	1227
Trajectory (inches)	-1.5	2.1	0.0	-8.7	-25.0	-50.3

***Test data used on packaging label**

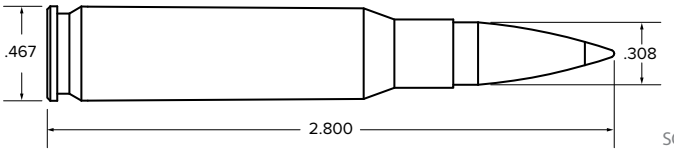
NOTES:

308 WIN
168 gr. ELD® MATCH TAP PRECISION®

ITEM NO. 80725

Performance Characteristics:

- Match accuracy
- Minimal deflection on glass
- Large wound cavities
- Meets FBI barrier penetration protocol
- Endorsed by the American Sniper Association
- MADE IN THE USA
- **Net Explosive Weight** (approx. per box): 0.1263 lbs / .0573 kg



SCALE 1:1

CASE: 308 WINCHESTER

- Manufacturer's name (Hornady) and caliber designation (308 WIN) imprinted on case head
- **Characteristics:** Match grade annealed brass alloy

BULLET: ELD® MATCH

- **Ballistic Coefficient:** .523
- **Sectional Density:** .253
- **Bullet Length:** 1.275"
- **Recommended Rifling Twist Rate:** 1:8" to 1:12"
- **Characteristics:** Polymer tipped, Match grade
- **Push/Pull:** 60/60 minimum (lbs)

POWDER & PRIMER

- **Powder:** Temperature stable with flash suppressant
- **Primer:** Large rifle, staked primer pocket

LOT NUMBERS

- Lot numbers on each box and case

BALLISTIC DATA

	Muzzle	100 yds	200 yds	300 yds	400 yds	500 yds
Velocity (fps)	2710	2540	2376	2218	2066	1920
Energy (ft lbs)	2739	2406	2105	1835	1592	1375
Trajectory (in)	-1.5	0	-3.9	-14.0	-31.1	-56.4

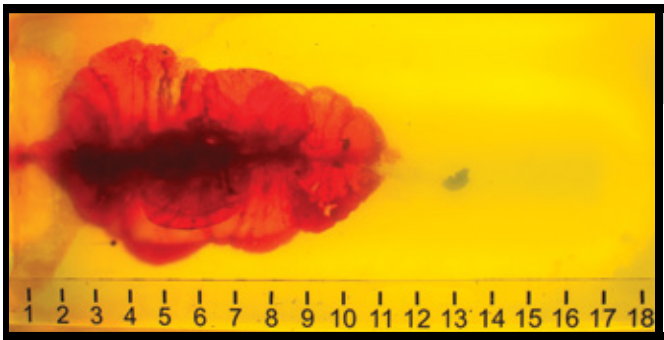
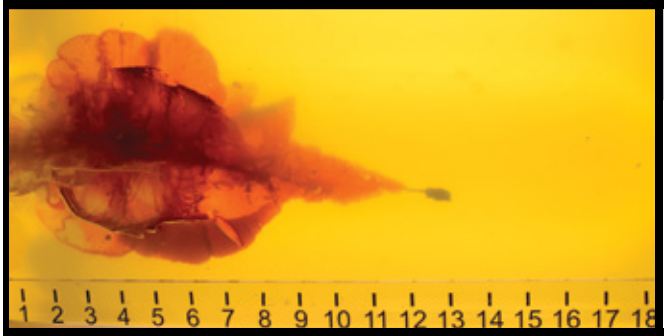
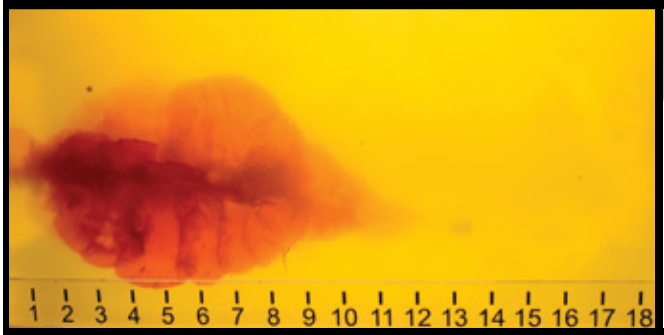
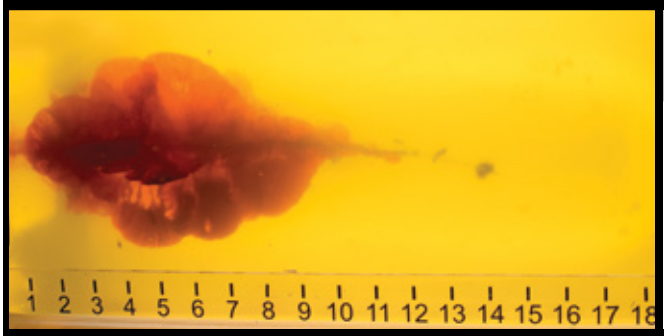
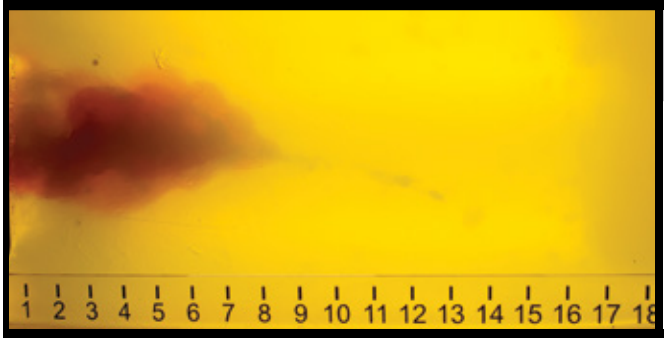
PACKAGING

- Tray: Item No. 8408

- Gross Weight: 1.26 lbs
- 20 rounds per box with plastic tray

- Carton: Item No. 84511
- Carton Weight: 12.6 lbs
- Carton Dimensions: 5.875" x 6.437" x 8.0"
- 10 boxes per carton | 200 rounds per carton

308 WIN | 168 gr. ELD® MATCH TAP PRECISION®
26" BBL | 1:12" Twist
REMINGTON 700P
ITEM NO. 80725

	Total Penetration	Max Cavity	Depth to Max Cavity	Initial Penetration	Retained Weight	Retained Weight %	Expanded Diameter	Velocity (fps)	
	13.25"	7.0"	4.0"	0.50"	125.5 gr.	75%	0.90"	2718	BARE GELATIN
	13.0"	7.0"	3.5"	0.0"	83.2 gr.	50%	0.70"	2695	STEEL
	13.5"	7.0"	4.0"	0.25"	98.9 gr.	59%	0.72"	2714	WALLBOARD
	14.0"	6.0"	3.5"	0.25"	80.2 gr.	48%	0.64"	2707	PLYWOOD
	12.75"	7.5"	2.5"	0.0"	70.2 gr.	42%	0.55"	2707	AUTO GLASS

308 WIN
168 gr. ELD® MATCH TAP PRECISION®

Item #80725						
20" Remington® 700 Police LTR 1:12"	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	2582	2407	2239	2077	1922	1775
Energy (ft lbs)	2487	2161	1869	1609	1378	1175
Trajectory (inches)	-1.5	0.0	-4.5	-16.0	-35.5	-64.5
22" Springfield Armory® M1A 1:11"	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	2593	2417	2249	2087	1931	1784
Energy (ft lbs)	2508	2180	1886	1624	1371	1187
Trajectory (inches)	-1.5	0.0	-4.5	-15.8	-35.1	-63.8
24" Remington® M24 1:11.25"	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	2698	2518	2346	2180	2020	1862
Energy (ft lbs)	2715	2365	2052	1772	1523	1302
Trajectory (inches)	-1.5	0.0	-4.0	-14.3	-32.0	-58.1
***24" SAAMI 308 Win. Test Barrel 1:12"**	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	2710	2540	2376	2218	2066	1920
Energy (ft lbs)	2739	2406	2105	1835	1592	1375
Trajectory (inches)	-1.5	0.0	-3.9	-14.0	-31.1	-56.4

***Test data used on packaging label**

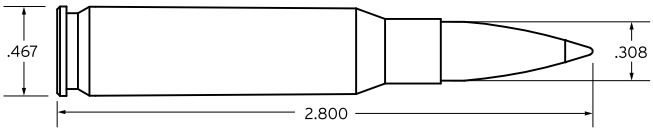
NOTES:

308 WIN TAP AR™
168 gr. ELD® MATCH

ITEM NO. 80715

Performance Characteristics:

- Match accuracy
- Minimal deflection on glass
- Large wound cavities
- Meets FBI barrier penetration protocol
- MADE IN THE USA
- **Net Explosive Weight** (approx. per box): 0.1149 lbs / .0521 kg



SCALE 1:1

CASE: 308 WINCHESTER

- Manufacturer's name (Hornady) and caliber designation (308 WIN) imprinted on case head
- **Characteristics:** Match grade annealed brass alloy

BULLET: ELD® MATCH

- **Ballistic Coefficient:** .523
- **Sectional Density:** .253
- **Bullet Length:** 1.275"
- **Recommended Rifling Twist Rate:** 1:8" to 1:12"
- **Characteristics:** Polymer tipped, Match grade
- **Push/Pull:** 60/60 minimum (lbs)

POWDER & PRIMER

- **Powder:** Temperature stable with flash suppressant
- **Primer:** Large rifle, staked primer pocket

LOT NUMBERS

- Lot numbers on each box and case

BALLISTIC DATA

	Muzzle	100 yds	200 yds	300 yds	400 yds	500 yds
Velocity (fps)	2670	2501	2339	2182	2031	1887
Energy (ft lbs)	2659	2333	2040	1776	1539	1329
Trajectory (in)	-1.5	0	-4.1	-14.5	-32.3	-58.5

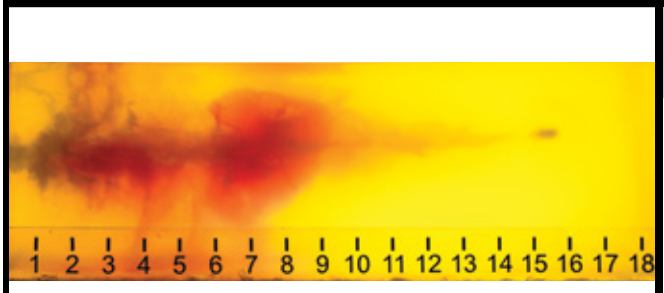
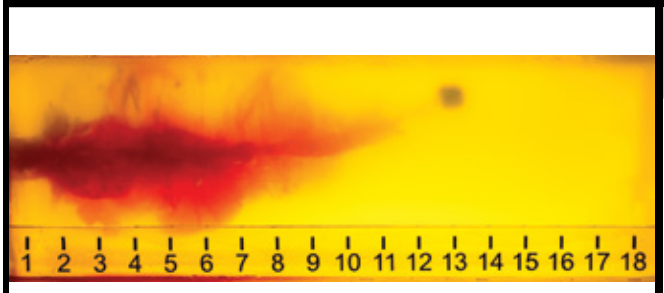
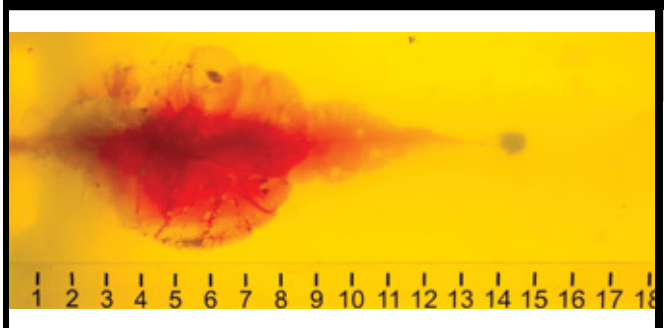
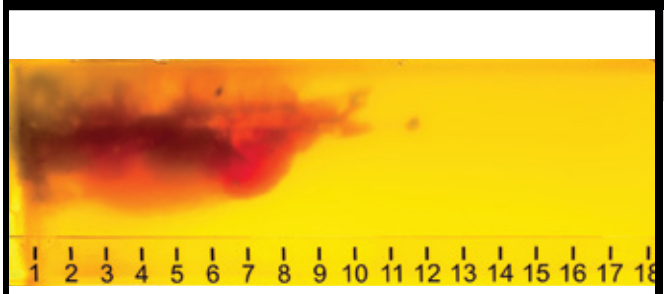
PACKAGING

- Tray: Item No. 8408

- Gross Weight: 1.26 lbs
- 20 rounds per box with plastic tray

- Carton: Item No. 84511
- Carton Weight: 12.6 lbs
- Carton Dimensions: 5.875" x 6.437" x 8.0"
- 10 boxes per carton | 200 rounds per carton

308 WIN TAP AR™ | 168 gr. ELD® MATCH
16" BBL | 1:8" Twist | TANGO 8 MSP
ITEM NO. 80715

	Total Penetration	Max Cavity	Depth to Max Cavity	Initial Penetration	Retained Weight	Retained Weight %	Expanded Diameter	Velocity (fps)	
	15.25"	5.0"	4.5"	0.50"	101.4 gr.	60%	0.78"	2542	BARE GELATIN
	14.75"	5.0"	3.5"	0.0"	104.2 gr.	62%	0.68"	2512	STEEL
	16.0"	4.0"	4.5"	0.25"	118.6 gr.	71%	0.80"	2513	WALLBOARD
	17.0	5.25"	4.5"	0.25"	123.5 gr.	74%	0.81"	2520	PLYWOOD
	12.0"	5.25"	4.0"	0.0"	70.0 gr.	42%	0.62"	2530	AUTO GLASS

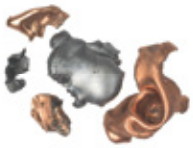
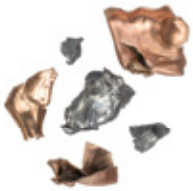
308 WIN TAP AR™
168 gr. ELD® MATCH

Item #80715						
16" Knight M110 1:10"	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	2528	2353	2185	2024	1871	1725
Energy (ft lbs)	2384	2065	1781	1528	1305	1110
Trajectory (inches)	-2.5	0.0	-3.8	-14.9	-34.4	-64.0
16" FN SCAR 17S 1:12"	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	2500	2326	2159	2000	1847	1703
Energy (ft lbs)	2331	2018	1739	1491	1272	1081
Trajectory (inches)	-2.5	0.0	-3.9	-15.3	-35.4	-65.8
16" DPMS PANTER LR-AP4 1:10"	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	2459	2287	2122	1963	1815	1670
Energy (ft lbs)	2255	1951	1679	1438	1229	1041
Trajectory (inches)	-2.5	0.0	-4.2	-16.1	-36.0	-68.5
16" H&K MR76ZA1 1:11"	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	2507	2333	2166	2006	1853	1708
Energy (ft lbs)	2344	2030	1750	1500	1281	1088
Trajectory (inches)	-2.5	0.0	-3.9	-15.2	-35.2	-65.3
16" NEMO TANGO 8 MSP 1:8"	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	2525	2350	2183	2022	1868	1722
Energy (ft lbs)	2378	2060	1777	1524	1302	1106
Trajectory (inches)	-2.5	0.0	-3.8	-14.9	-34.6	-64.2

***Test data used on packaging label**

168 gr. A-MAX vs. 168 gr. BTHP

The boat tail hollow point design was originally intended as a match bullet. In terminal media, this bullet style functions based on the bullet upsetting and tumbling to create wound cavitation. A bullet that functions based on tumbling becomes very inconsistent from shot to shot, barrier to barrier, and between different twist rates. One bullet may enter target media and begin to tumble at 4 inches, where the next shot may penetrate 8 inches before upsetting. Since nothing is consistently initiating the expansion or tumbling of the bullet, the consistency of the barrier or target media dictates when and how the bullet will upset. Using a faster twist rate such as a 1 in 10" instead of a 1 in 12" in a .308 Win, will cause the bullet to penetrate more before tumbling.

168 BTHP	BARE	STEEL	WALLBOARD	PLYWOOD	GLASS
					
	22"	24"	19.25"	16"	11.75"
168 A-MAX	**BARE**	**STEEL**	**WALLBOARD**	**PLYWOOD**	**GLASS**
					
	14.25"	14.5"	15.75"	17.0"	13.25"

The A-MAX bullet incorporates a polymer tip material that maintains match accuracy and initiates expansion across a broad range of target materials and media. When the polymer tip of the A-MAX bullet contacts the barrier or target media it is driven into the hollow point of the bullet nose forcing the bullet core and jacket to open outward. This mushrooming expansion is consistent due to the initiation by the polymer tip not found in the BTHP design. The consistency of the tip initiated expansion results in much more reliable penetration results across different barriers and target media.

ASA Sniper Ammunition Recommendation

The choice of ammunition for the police sniper is every bit as critical to mission success as is the selection of the proper rifle and optics. One must take into consideration what the sniper needs to accomplish when he pulls the trigger on an operation, and then choose the proper bullet for that application.

The ideal sniper round will be consistently accurate (when fired from an accurate rifle), give reliable terminal performance, and not over penetrate the human target. An added benefit would be the ability to penetrate all likely barriers. However, any round designed to defeat heavy intermediate barriers is probably going to consistently over penetrate tissue.

With these parameters in mind, the American Sniper Association recommends and endorses the Hornady TAP AMAX round, in either 155 or 168 grain bullet weights, as the ideal primary round for sniper deployments. This bullet has a proven record of sub-MOA accuracy, as well as a well-documented history of optimal terminal performance in actual tactical operations. The final choice of bullet weight should be determined after testing both rounds in your individual barrels to see which one provides the best accuracy.

Both rounds have been shown to work well against the most common barriers encountered by snipers on operations, such as windshields and residential windows. If the sniper expects to deal with a heavier barrier, the best solution is a round designed specifically for that purpose. This is usually achieved with some sort of bonded bullet.

If you have questions or want more documentation about sniper ammunition, feel free to contact the American Sniper Association, www.americansniper.org or 863-385-7835.

Excerpt taken from the "2013 Police Sniper Utilization Report," compiled and published by the American Sniper Association:

New for the 2013 Edition

During this reporting period, we found 15 incidents in which the Sierra BTHP Match King bullet was used. Twelve of those incidents resulted in through and through wounds. Most troubling about some of the torso wounds was the fact that the target survived, remained a deadly threat, and had to be shot again by SWAT personnel.

In one of the three incidents in which the round stayed in the target, the sniper involved noted in his after action report concern because the bullet broke up passing through a glass barrier. A portion of the round struck the target and was lethal, but other pieces missed.

Conversely, during the same period, we added eight shootings to the database utilizing ballistic-tipped ammunition (primarily Hornady AMAX ammunition). In all eight instances, the round stayed in the target. And all but one of the eight shootings was fatal.

Conclusion

The BTHP has been used by police snipers successfully many times. There is little to dispute its potential lethality when used against human targets. However, it has displayed three problems which cannot be ignored.

1. It will over penetrate human targets at an unacceptable rate. This puts hostages, innocent bystanders and teammates at risk.
2. Because of its inconsistent ballistic performance in tissue, some torso shots have proven ineffective. As a result, a number of incidents required additional shots to be fired to successfully neutralize the subject.
3. And last, but not least, it does not perform well when passing through glass barriers, often shedding its jacket. This results in multiple projectiles going downrange, possibly endangering hostages in close proximity.

Because of these documented issues, our recommendation for ammunition selection remains the same.

For the full report, contact the American Sniper Association, americansniper.org, 863-385-7835.

NOTES:

178 gr. ELD® Match TAP PRECISION®

Polymer Tipped Spitzer Boat Tail Bullet | B.C. = .547

#82045

Hornady® 308 WIN 178 gr. ELD® MATCH TAP PRECISION® ammunition was designed as an improvement on the 178 gr. A-MAX TAP PRECISION® load by incorporating the new ELD® Match bullet. Offering higher velocity and energy performance that law enforcement professionals may require over the standard 308 Win, makes this a great alternative to utilize in a variety of situations. The tip initiated expansion of the ELD® Match bullet ensures uniform expansion and penetration through a variety of situations and barriers, while mitigating liability due to over penetration.

300 Winchester Magnum

Hornady Product Summary

This line of ammunition is intended for Law Enforcement sales ONLY.

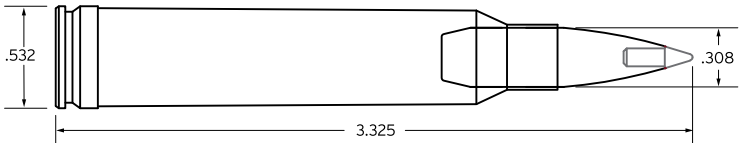
B.C. = Ballistic Coefficient

300 WIN MAG™
178 gr. ELD® MATCH TAP PRECISION®

ITEM NO. 82045

Performance Characteristics:

- Match accuracy
- Minimal deflection on glass
- Large wound cavities
- MADE IN THE USA
- **Net Explosive Weight** (approx. per box): 0.2100 lbs / .0953 kg



SCALE 1:1

CASE: 300 WINCHESTER

- Manufacturer's name (Hornady) and caliber designation (300 WIN MAG) imprinted on case head
- **Characteristics:** Match grade annealed brass alloy

BULLET: ELD® MATCH

- **Ballistic Coefficient:** .547
- **Sectional Density:** .268
- **Bullet Length:** 1.320"
- **Recommended Rifling Twist Rate:** 1:8" to 1:12"
- **Characteristics:** Polymer tipped, Match grade
- **Push/Pull:** 50/50 minimum (lbs)

POWDER & PRIMER

- **Powder:** Temperature stable with flash suppressant
- **Primer:** Large magnum rifle

LOT NUMBERS

- Lot numbers on each box and case

BALLISTIC DATA

	Muzzle	100 yds	200 yds	300 yds	400 yds	500 yds
Velocity (fps)	2960	2788	2622	2462	2308	2159
Energy (ft lbs)	3463	3071	2717	2396	2106	1843
Trajectory (in)	-1.5	0	-3.0	-11.0	-24.8	-45.2

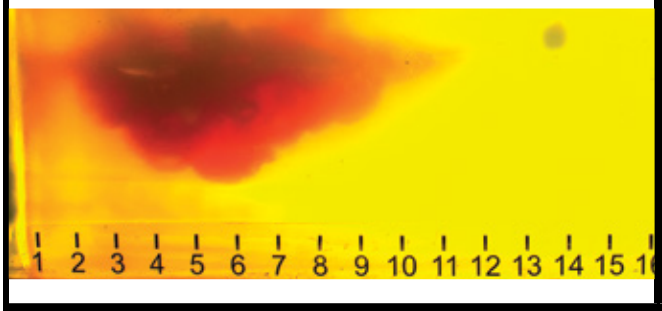
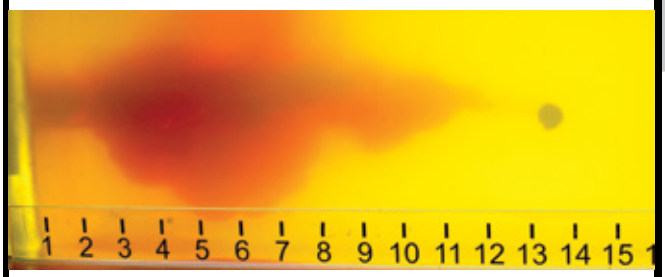
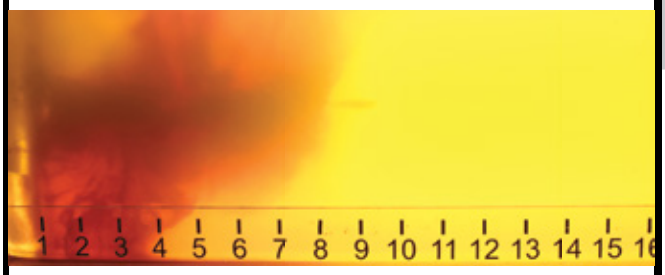
PACKAGING

- Tray: Item No. 8413

- Gross Weight: 1.73 lbs
- 20 rounds per box with plastic tray

- Carton: Item No. 845021
- Carton Weight: 17.3 lbs
- Carton Dimensions: 7.0" x 7.625" x 8.937"
- 10 boxes per carton | 200 rounds per carton

300 WIN MAG
178 gr. ELD® MATCH TAP PRECISION®
22" BBL | 1:8" Twist | NEMO ARMS OMEN
ITEM NO. 82045

	Total Penetration	Max Cavity	Depth to Max Cavity	Initial Penetration	Retained Weight	Retained Weight %	Expanded Diameter	Velocity (fps)	
	14.25"	8.5"	4.25"	0.5"	72.3 gr.	41%	0.84"	2894	BARE GELATIN
	14.75"	7.5"	5.0"	0.0"	87.2 gr.	49%	0.77"	2903	STEEL
	14.0"	8.0"	4.25"	0.25"	93.0 gr.	52%	0.75"	2878	WALLBOARD
	13.5"	8.0"	3.75"	0.25"	97.3 gr.	55%	0.73"	2891	PLYWOOD
	9.0"	9.0"	1.5"	0.0"	65.4 gr.	17%	0.58"	2887	AUTO GLASS

300 WIN MAG
178 gr. ELD® MATCH TAP PRECISION®

Item #82045						
26" Savage 110 B 1:9.3"	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	2934	2762	2597	2438	2284	2136
Energy (ft lbs)	3402	3015	2665	2348	2061	1803
Trajectory (inches)	-1.5	0.0	-3.1	-11.3	-25.4	-46.1
26" Remington® 700 Police 1:10"	**Muzzle**	**100 yds**	**200 yds**	**300 yds**	**400 yds**	**500 yds**
Velocity (fps)	2905	2734	2570	2412	2259	2112
Energy (ft lbs)	3335	2955	2610	2299	2017	1762
Trajectory (inches)	-1.5	0.0	-3.2	-11.6	-26.0	-47.2

***Test data used on packaging label**

300 PRC

225 gr. ELD® Match TAP PRECISION®

Polymer Tipped Americ Boat Tail Bullet | B.C. = .777

#81215

The 300 PRC 225 ELD® Match TAP Precision® was designed and adopted to fulfill a specific need within the Department of Defense by increasing hit probability and providing exceptional terminal performance from 0 – 2000 yards. This cartridge is an efficient, non-belted magnum featuring a 225 grain ELD® Match bullet with a Heat Shield Tip. While utilizing the same bolt face as a 300 Win Mag, the 300 PRC headspaces off the shoulder rather than a belt, providing superior accuracy. Following similar design characteristics present in the 6.5 Creedmoor, the 300 PRC provides higher velocities and the ability to run longer/heavier bullets than the 300 Win Mag, making it a much more versatile cartridge.

The Heat Shield® Tip results in higher retained velocities, less drop, less wind drift, and is designed to expand at velocities as low as 1650 FPS making it an excellent choice for Military, SWAT, and Precision Rifle Marksman.

Hornady Product Summary

Tested and selected by the US Department of Defense for its extended long range sniping program, the 300 PRC is what all 30 caliber magnum cartridges want to be... but can't! Designed from the start to launch heavy-for-caliber, high performance bullets efficiently with utmost precision, the 300 PRC is a large 30 caliber match accurate cartridge designed for the 21st century and beyond.

This line of ammunition is intended for Law Enforcement sales ONLY.

B.C. = Ballistic Coefficient

300 PRC
225 gr. ELD® MATCH TAP PRECISION®

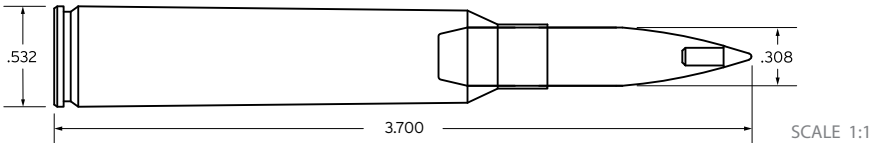
ITEM NO. 81215

Performance Characteristics:

- Match accuracy
- Minimal deflection on glass
- Large wound cavities
- MADE IN THE USA
- **Net Explosive Weight** (approx. per box): 0.5357 lbs / .2416 kg

CASE: 300 PRC

- Manufacturer's name (Hornady) and caliber designation (300 PRC) imprinted on case head
- **Characteristics:** Match grade annealed brass alloy



BULLET: ELD® MATCH

- **Ballistic Coefficient:** .777
- **Sectional Density:** .339
- **Bullet Length:** 1.655"
- **Recommended Rifling Twist Rate:** 1:8"
- **Characteristics:** Heat Shield® Tipped Match Grade
- **Push/Pull:** 50/50 minimum (lbs)

POWDER & PRIMER

- **Powder:** Temperature stable with flash suppressant
- **Primer:** Large magnum rifle

LOT NUMBERS

- Lot numbers on each box and case

BALLISTIC DATA

	Muzzle	100 yds	200 yds	300 yds	400 yds	500 yds
Velocity (fps)	2810	2692	2577	2465	2356	2250
Energy (ft lbs)	3945	3620	3318	3036	2773	2529
Trajectory (in)	-1.5	0	-3.3	-11.9	-26.1	-46.7

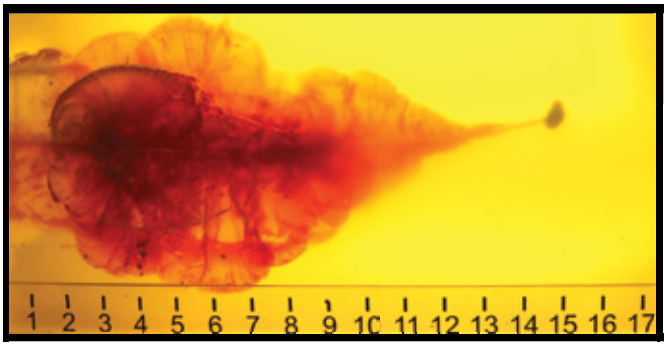
PACKAGING

- Tray: Item No. 8413

- Gross Weight: 1.85 lbs
- 20 rounds per box with plastic tray

- Carton: Item No. 845021
- Carton Weight: 18.5 lbs
- Carton Dimensions: 7.0" x 7.625" x 8.937"
- 10 boxes per carton | 200 rounds per carton

300 PRC
225 GR. ELD® MATCH TAP PRECISION®
26" BBL PROOF CARBON FIBER
1:8" Twist | BARRET MRAD
ITEM NO. 81215



Total Penetration	Max Cavity	Depth to Max Cavity	Initial Penetration	Retained Weight	Retained Weight %	Expanded Diameter	Velocity (fps)
15.0"	8.0"	4.5"	0.0"	95.8 gr.	43%	0.61"	2888

BARE GELATIN

338 LAPUA MAGNUM
250 gr. BOAT TAIL HOLLOW POINT

ITEM NO. 8230

Performance Characteristics:

- Match accuracy
- MADE IN THE USA
- Net Explosive Weight (approx. per box): 0.2486 lbs / .1128 kg
- **Cartridge Overall Length (COL):** 3.625"

CASE: 338 LAPUA MAG

- Manufacturer's name (Hornady) and caliber designation (338 LAPUA MAG) imprinted on case head
- **Characteristics:** High quality annealed brass alloy

BULLET: BTHP

- **Ballistic Coefficient:** .670
- **Sectional Density:** .313
- **Bullet Length:** 1.570"
- **Recommended Rifling Twist Rate:** 1:9"
- **Characteristics:** Heat Shield® Tip, Boat Tail
- **Push/Pull:** 100/100 minimum (lbs)

POWDER & PRIMER

- **Powder:** Temperature stable with flash suppressant
- **Primer:** Large magnum rifle

LOT NUMBERS

- Lot numbers on each box and case

BALLISTIC DATA

	Muzzle	100 yds	200 yds	300 yds	400 yds	500 yds	600 yds	700 yds	800 yds	900 yds	1000 yds
Velocity (fps)	2850	2712	2579	2449	2323	2201	2082	1968	1857	1750	1649
Energy (ft lbs)	4509	4083	3691	3330	2996	2689	2407	2149	1914	1701	1509
Trajectory (in)	-1.5	0	-3.2	-11.7	-26.0	-46.7	-74.6	-110.6	-155.5	-2105	-276.9

PACKAGING

- Tray: Item No. 8413

- Gross Weight: 2.10 lbs
- 20 rounds per box with plastic tray

- Carton Weight: 12.80 lbs
- Carton Dimensions: 7.25" x 5.0" x 10.25"
- 6 boxes per carton | 120 rounds per carton

338 LAPUA MAGNUM
285 gr. ELD® MATCH

ITEM NO. 82300

Performance Characteristics:

- Match accuracy
- Large wound cavities
- MADE IN THE USA
- Net Explosive Weight (approx. per box): 0.2629 lbs / .1192 kg
- **Cartridge Overall Length (COL):** 3.625"

CASE: 338 LAPUA MAG

- Manufacturer's name (Hornady) and caliber designation (338 LAPUA MAG) imprinted on case head
- **Characteristics:** High quality annealed brass alloy

BULLET: ELD® MATCH

- **Ballistic Coefficient:** .789
- **Sectional Density:** .356
- **Bullet Length:** 1.740"
- **Recommended Rifling Twist Rate:** 1:9"
- **Characteristics:** Heat Shield® Boat Tail
- **Push/Pull:** 75/75 minimum (lbs)

POWDER & PRIMER

- **Powder:** Temperature stable with flash suppressant
- **Primer:** Large magnum rifle

LOT NUMBERS

- Lot numbers on each box and case

BALLISTIC DATA

	Muzzle	100 yds	200 yds	300 yds	400 yds	500 yds	600 yds	700 yds	800 yds	900 yds	1000 yds
Velocity (fps)	2745	2630	2519	2410	2304	2200	2099	2001	196	1813	1724
Energy (ft lbs)	4768	4378	4015	3676	3359	3064	2789	2534	2298	2081	1881
Trajectory (in)	-1.5	0	-1.8	-7.2	-20.5	-40.3	-67.3	-102.1	-145.7	-198.9	-262.6

PACKAGING

- Tray: Item No. 8413

- Gross Weight: 2.10 lbs
- 20 rounds per box with plastic tray

- Carton Weight: 12.80 lbs
- Carton Dimensions: 7.25" x 5.0" x 10.25"
- 6 boxes per carton | 120 rounds per carton

50 BMG
750 gr. A-MAX®

SCALE 65%

ITEM NO. 8270

Performance Characteristics:

- Match accuracy
- Large wound cavities
- MADE IN THE USA
- Net Explosive Weight (approx. per box): 0.3278 lbs / 0.14878 kg
- **Cartridge Overall Length (COL):** 5.430"

CASE: 50 BMG

- Manufacturer's name (Hornady) and caliber designation (50 BMG) imprinted on case head
- **Characteristics:** High quality annealed brass alloy

BULLET: A-MAX®

- **Ballistic Coefficient:** 1.050
- **Sectional Density:** .412
- **Bullet Length:** 2.550"
- **Recommended Rifling Twist Rate:** 1:15"
- **Characteristics:** Aluminum Tip, Boat Tail
- **Push/Pull:** 150/100 minimum (lbs)

SCALE 65%

POWDER & PRIMER

- **Powder:** Temperature stable with flash suppressant
- **Primer:** 50 BMG

LOT NUMBERS

- Lot numbers on each box and case

BALLISTIC DATA

36" Test Barrel	Muzzle	100 yds	200 yds	300 yds	400 yds	500 yds	600 yds	700 yds	800 yds	900 yds	1000 yds
Velocity (fps)	2810	2722	2637	2552	2470	2389	2309	2231	2154	2079	2006
Energy (ft lbs)	13149	12342	11576	10849	10158	9502	8879	8288	7728	7199	6698
Trajectory (in)	-1.5	0	-3.2	-11.4	-24.9	-44.2	-69.5	-101.4	-140.2	-186.6	-241.0

PACKAGING

- Bottom Tray: Item No. 8419B
- Top Tray: Item No. 8419T

- Gross Weight: 3.103 lbs
- 10 rounds per box with both trays

- Carton Weight: 31.030 lbs
- Carton Dimensions: 9.25" x 6.25" x 10.50"
- 10 boxes per carton | 100 rounds per carton

SHOTGUN

12 Gauge

Hornady Product Summary

TAP® 12 gauge Shotgun Ammunition lives up to the legendary Hornady® name in every way — reliable functioning, consistent performance and tighter patterns without modification to the shotgun. Hornady offers two loads specially designed for the type of shotgun you use and the situations you face. Both the Reduced Recoil™ (blue) and Light Magnum® (red) loadings offer reliable functioning, consistent performance, and better patterns than traditional shotgun shells through use of patented wad technology.

12 GA TAP REDUCED RECOIL™

#86265

00 Buckshot | Pellet Count: 8

Hornady TAP® Reduced Recoil™ (blue hull) is a reduced velocity load designed primarily for pump action shotguns. It comes loaded in a blue hull with a load delivering a velocity of 1,100 fps (30" test barrel.)

FEATURING THE VERSATITE® WAD

12 GA TAP LIGHT MAGNUM®

#86275

00 Buckshot | Pellet Count: 8

Hornady TAP® Light Magnum® Buckshot (red hull) is loaded to a velocity of 1600 fps (30" test barrel) to ensure proper functioning in semi-automatic police shotguns. The Light Magnum® Buckshot can also be used in pump action shotguns.

FEATURING THE VERSATITE® WAD

12 GA 2¾" 1 oz. LIGHT MAGNUM® SLUG

#86235

Rifled Slug

Hornady TAP® Light Magnum® Rifled Slug (red hull) is loaded to a velocity of 1600 fps (30" test barrel). Reliably functions in smooth bore semi-automatic police shotguns while maintaining SAAMI pressure specifications.

12 GA 2¾" 1 oz. REDUCED RECOIL™ SLUG

#86285

Rifled Slug

Hornady TAP® Reduced Recoil™ Rifled Slug (blue hull) is loaded to a velocity of 1350 fps (30" test barrel). This rifled slug is designed to be used in pump action shotguns with smooth bore barrels.

12 GA FRANGIBLE 3/4 oz. SLUG TAP® ENTRY™

#86245

Frangible Slug

Hornady 12 Gauge TAP ENTRY is designed to fit a variety of mission applications including entry (limited penetration), breaching, and training. Featuring a ¾ ounce frangible sintered slug, this round produces wound cavities similar to a 308 WIN, yet minimizes the potential for over-penetration. In most cases, a breacher must transition to an alternate firearm before entering a building, TAP ENTRY provides the capability to breach a door and make entry utilizing the same firearm. TAP ENTRY also provides the ability to train on steel silhouettes without concerns for ricochets, since the slug disintegrates upon impact, making this an extremely versatile round.

NOTE: *Hornady has color coded hulls. The Reduced Recoil load has a blue hull (Blue for Cool) and the Light Magnum® has a red hull (Red for Hot).*

This line of ammunition is intended for Law Enforcement sales ONLY.

SHOTGUN
12 GA TAP® REDUCED RECOIL™ 00 BUCK

ITEM NO. 86265

Performance Characteristics:

- Hornady TAP® Reduced Recoil™ (blue hull) is a reduced velocity load designed primarily for pump action shotguns. It comes loaded in a blue hull with a load delivering a velocity of 1,100 fps (30" test barrel.)
- MADE IN THE USA
- Net Explosive Weight (approx. per box): 0.0214 lbs

PROJECTILE

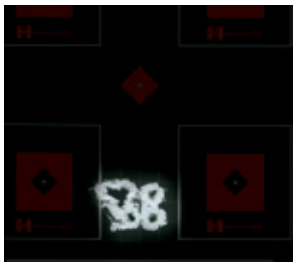
- **Shot size:** 00 Buckshot
- **Pellet Count:** 8
- **Muzzle Velocity:** 985 fps
- **Firearm:** Remington 870 Police Magnum
- **Barrel:** 18.0"

CASE

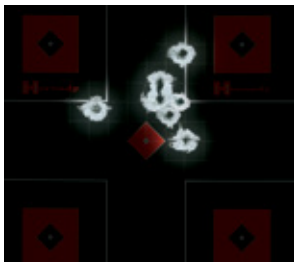
- Manufacturer's name (Hornady) and caliber designation (12 GA) imprinted on case head

FEATURING THE VERSATITE® WAD

PRIMER

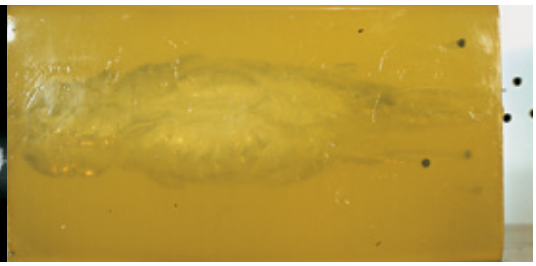


7 Yards 1.325"



15 Yards 2.687"

25 Yards 4.437"

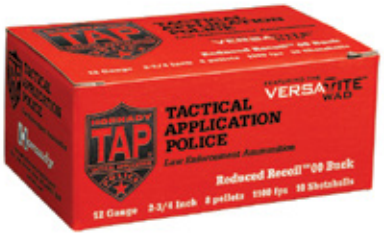


BARE GELATIN

LABELS & LOT NUMBERS

- Lot numbers on each box and carton

PACKAGING



- Box Weight: .83 lbs
- Gross Weight: .89 lbs
- 10 rounds per box

- Carton: Item No. 84610
- Carton Weight: 8.9 lbs
- Carton Dimensions: 4.562" x 6.0" x 9.875"
- 10 boxes per carton | 100 rounds per carton

SHOTGUN
12 GA TAP® LIGHT MAGNUM® 00 BUCK

ITEM NO. 86275

Performance Characteristics:

- Hornady TAP® Light Magnum® Buckshot (red hull) is loaded to a velocity of 1600 fps (30" test barrel) to ensure proper functioning in semi-automatic police shotguns. The Light Magnum® Buckshot can also be used in pump action shotguns.
- MADE IN THE USA
- Net Explosive Weight (approx. per box): 0.0500 lbs

PROJECTILE

- **Shot size:** 00 Buckshot
- **Pellet Count:** 8
- **Muzzle Velocity:** 1442 fps
- **Firearm:** Benelli M1 Super 90
- **Barrel:** 18.0"

CASE

- Manufacturer's name (Hornady) and caliber designation (12 GA) imprinted on case head

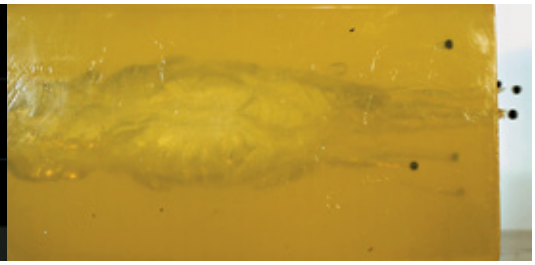
FEATURING THE VERSATITE® WAD

PRIMER

7 Yards 1.875"

15 Yards 2.75"

25 Yards 5.187"

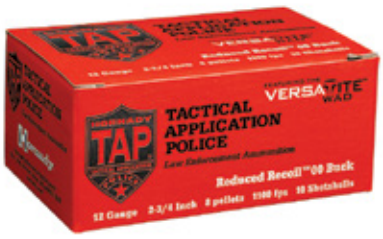


BARE GELATIN

LABELS & LOT NUMBERS

- Lot numbers on each box and carton

PACKAGING



- Box Weight: .89 lbs
- Gross Weight: .95 lbs
- 10 rounds per box

- Carton: Item No. 84610
- Carton Weight: 9.5 lbs
- Carton Dimensions: 4.562" x 6.0" x 9.875"
- 10 boxes per carton | 100 rounds per carton

SHOTGUN
12 GA 2¾" 1 OZ.
REDUCE RECOIL™ RIFLED SLUG

ITEM NO. 86285

Performance Characteristics:

- Hornady TAP® Reduced Recoil™ Rifled Slug (blue hull) is loaded to a velocity of 1350 fps (30" test barrel). This rifled slug is designed to be used in pump action shotguns with smooth bore barrels.
- MADE IN THE USA
- Net Explosive Weight (approx. per box): 0.0136 lbs

PROJECTILE

- **Shot size:** 1 oz. slug
- **Muzzle Velocity:** 1199 fps
- **Firearm:** 870 Police Magnum
- **Barrel:** 18.0"

PRIMER

CASE

- Manufacturer's name (Hornady) and caliber designation (12 GA) imprinted on case head

25 Yards 2.0"

LABELS & LOT NUMBERS

- Lot numbers on each box and carton

PACKAGING

- Box Weight: .47 lbs
- Gross Weight: .50 lbs
- 5 rounds per box

- Carton: Item No. 84481
- Carton Weight: 10.0 lbs
- Carton Dimensions: 4.625" x 5.625" x 11.625"
- 20 boxes per carton | 100 rounds per carton

SHOTGUN
12 GA 2¾" 1 OZ.
LIGHT MAGNUM® RIFLED SLUG

ITEM NO. 86235

Performance Characteristics:

- Hornady TAP® Light Magnum® Rifled Slug (red hull) is loaded to a velocity of 1600 fps (30" test barrel). Reliably functions in smooth bore semi-automatic police shotguns while maintaining SAAMI pressure specifications.
- MADE IN THE USA
- Net Explosive Weight (approx. per box): 0.0243 lbs

PROJECTILE

- **Shot size:** 1 oz. slug
- **Muzzle Velocity:** 1452 fps
- **Firearm:** Benelli M1 Super 90
- **Barrel:** 18.0"

CASE

- Manufacturer's name (Hornady) and caliber designation (12 GA) imprinted on case head

25 Yards 2.75"

PRIMER

LABELS & LOT NUMBERS

- Lot numbers on each box and carton

PACKAGING

- Box Weight: .48 lbs
- Gross Weight: .51 lbs
- 5 rounds per box

- Carton: Item No. 84481
- Carton Weight: 10.16 lbs
- Carton Dimensions: 4.625" x 5.625" x 11.625"
- 20 boxes per carton | 100 rounds per carton

SHOTGUN
12 GA 3/4 OZ. FRANGIBLE SLUG
TAP® ENTRY™

ITEM NO. 86245

Performance Characteristics:

- Hornady TAP® Entry™ Frangible Slug (black hull) is loaded to a velocity of 1575 fps (30" test barrel). Reliably functions in smooth bore pump police shotguns while maintaining SAAMI pressure specifications.
- MADE IN THE USA
- Net Explosive Weight (approx. per box): 0.0157 lbs

PROJECTILE

- **Shot size:** 3/4 oz. slug
- **Muzzle Velocity:** 1434 fps
- **Firearm:** 870P
- **Barrel:** 18 1/2"

CASE

- Manufacturer's name (TAP) and caliber designation (12 GA) imprinted on case head

PRIMER

LABELS & LOT NUMBERS

- Lot numbers on each box and carton

PACKAGING

- Box Weight: .38 lbs
- Gross Weight: .41 lbs
- 5 rounds per box

- Carton: Item No. 84481
- Carton Weight: 8.25 lbs
- Carton Dimensions: 4.625" x 5.625" x 11.625"
- 20 boxes per carton | 100 rounds per carton

9MM LUGER 115 gr. Training™ — #90269 (Brass)
Full Metal Jacket Bullet | B.C. = .140

9MM LUGER 135 gr. FMJ Training™ — #90238 (Brass)
Full Metal Jacket Flat Point Bullet | B.C. = .195

357 SIG 135 gr. FMJ Training™ — #91298 (Brass)
Full Metal Jacket Flat Point Bullet | B.C. = .153

40 S&W 175 gr. FMJ Training™ — #91374 (Brass)
Full Metal Jacket Flat Point Bullet | B.C. = .155

45 AUTO 220 gr. FMJ Training™ — #90924 (Brass)
Full Metal Jacket Flat Point Bullet | B.C. = .180

Designed to complement our existing line of Critical DUTY® law enforcement handgun ammunition, Hornady® Handgun Training™ ammunition is loaded with the same bullet weights and profiles as our Critical DUTY® counterparts at an economical price. Care has been given to ensure that Hornady® Handgun Training™ ammunition provides reliable functioning as well as point of aim/point of impact that is consistent with comparable Critical DUTY® rounds. These loads feature quality brass cases, optimized propellants and Hornady® pistol bullets.

9MM LUGER 90 gr. Frangible Training™ — #90230 (Brass)
Frangible Flat Base Bullet | B.C. = .120

357 SIG 90 gr. Frangible Training™ — #91285 (Brass)
Frangible Flat Base Bullet | B.C. = .110

40 S&W 125 gr. Frangible Training™ — #91319 (Brass)
Frangible Flat Base Bullet | B.C. = .122

45 AUTO 145 gr. Frangible Training™ — #90931 (Brass)
Frangible Flat Base Bullet | B.C. = .081

Hornady® Frangible Training Ammunition is designed to provide a lead-free alternative to our traditional training ammunition line. This ammunition gives law enforcement officers the ability to train using steel targets at close distances while reducing the risk of ricochets. Since this ammunition is entirely lead-free, it serves as an excellent choice for indoor range use. Hornady® Frangible Training™ Ammunition features brass cases and lead-free primers and projectiles that are matched with optimized propellants to provide the very best in frangible ammunition.

223 REM 55 gr. SP Training™ — #80255 (Brass)
Spire Point Heavy Jacketed Bullet | B.C. = .235

223 REM 55 gr. FMJ-BT Training™ — #80275 (Brass)
Boat Tail Full Metal Jacket Bullet | B.C. = .243

223 REM 55 gr. FMJ Training™ — #80271 (Brass)
Spire Point Heavy Jacketed Bullet | B.C. = .395

5.56 NATO 45 gr. Frangible Training™ — #81251 (Brass)
Frangible Flat Base Bullet | B.C. = .110

5.56 NATO 55 gr. FMJ Training™ — #81278 (Brass)
Spire Point Heavy Jacketed Bullet | B.C. = .395

5.56 NATO 75 gr. TAP SBR® Training™ — #81292 (Brass)
Spire Point Heavy Jacketed Bullet | B.C. = .395

300 BLACKOUT 110 gr. NTX® Training™ — #80864 (Brass)
Frangible Flat Base Bullet | B.C. = ..209

300 BLACKOUT 110 gr. Frangible Training™ — #80870 (Brass)
Frangible Blat BaseBullet | B.C. = .395

Featuring our 55 gr. FMJ-BT, 55 gr. SP, or 75 gr. BTHP bullet, Hornady® 223 Rem Training™ ammunition compliments the current TAP® duty rounds by delivering comparable, yet economical ammunition for law enforcement training. Utilizing efficient production processes and quality brass or steel cases, Hornady® Training™ ammunition delivers reliable functioning, accuracy, and point of aim / point of impact consistency when compared to comparable duty rounds.

TRAINING™ Ammunition

Hornady Product Summary

Hornady® Training™ ammunition provides a cost effective firearms training alternative to the standard TAP® and Critical DUTY® loads. Loaded with proven propellants, coupled with high quality cases, bullets, and primers, Hornady® Training™ ammunition is designed to deliver point of aim / point of impact comparable to our TAP® and Critical DUTY® offerings. Hornady® Training™ Ammunition - an economical, high quality solution for Law Enforcement training.

NOTICE: *These products are not intended for duty use.*

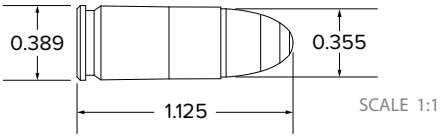
This line of ammunition is intended for Law Enforcement sales ONLY.

TRAINING™
9MM LUGER 115 gr. FMJ

ITEM NO. 90269

Performance Characteristics:

- Training Ammunition
- Cost effective alternative to DUTY ammunition
- MADE IN THE USA
- **Net Explosive Weight** (approx. per box): .0335 lbs / .0152 kg



CASE: 9MM LUGER

- Manufacturer's name (HMC or HORNADY) and caliber designation (9mm Luger) imprinted on case head
- **Characteristics:** High quality brass alloy

BULLET: TRAINING™

- **Ballistic Coefficient:** .140
- **Sectional Density:** .130
- **Bullet Lenght:** .560"
- **Characteristics:** Full Metal Jacket
- **Push/Pull:** 30/30 minimum (lbs)

POWDER & PRIMER

- **Powder:** Temperature stable with flash suppressant
- **Primer:** Small pistol

LOT NUMBERS

- Lot numbers on each box and case

BALLISTIC DATA

	Muzzle	50 yds	100 yds
Velocity (fps)	1135	1032	959

PACKAGING

- Tray: Plastic - 50ct

- Carton Dimensions: 5.69" x 2.5" x 4.5"
- 50 rounds per box with tray

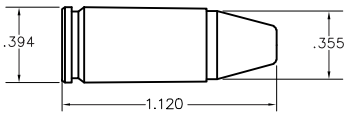
- Carton Weight: 14.10 lbs
- Carton Dimensions: 6.25" x 6.0" x 14.5"
- 20 boxes per carton | 1000 rounds per carton

TRAINING™
9MM LUGER 135 gr. FMJ

ITEM NO. 90238

Performance Characteristics:

- Same weight as Critical DUTY® ammunition counterpart
- Cost effective alternative to DUTY ammunition
- Quality brass case
- MADE IN THE USA
- **Net Explosive Weight** (approx. per box): 0.0321 lbs / .0146 kg



CASE: 9MM LUGER

- Manufacturer's name (HMC or HORNADY) and caliber designation (9mm Luger) imprinted on case head
- **Characteristics:** High quality brass alloy

BULLET: TRAINING™

- **Ballistic Coefficient:** .195
- **Sectional Density:** .153
- **Characteristics:** Full Metal Jacket Flat Point
- **Push/Pull:** 100/100 minimum (lbs)

POWDER & PRIMER

- **Powder:** Temperature stable with flash suppressant
- **Primer:** Boxer Primed

LOT NUMBERS

- Lot numbers on each box and case

BALLISTIC DATA

	Muzzle	50 yds	100 yds
Velocity (fps)	1010	960	918

PACKAGING

- Tray: Item No. 5701

- Gross Weight: 1.53 lbs
- 50 rounds per box with styrofoam tray

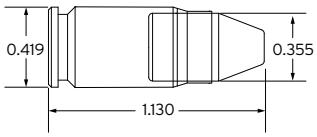
- Carton: Item No. 5716
- Carton Weight: 15.3 lbs
- Carton Dimensions: 6.5" x 5.75" x 14.25"
- 10 boxes per carton | 500 rounds per carton

TRAINING™
357 SIG 135 gr. FMJ

ITEM NO. 91298

Performance Characteristics:

- Same weight as Critical DUTY® ammunition counterpart
- Cost effective alternative to DUTY ammunition
- Quality brass case
- MADE IN THE USA
- **Net Explosive Weight** (approx. per box): 0.0500 lbs / .0227 kg



SCALE 1:1

CASE: 357 SIG

- Manufacturer's name (HMC or HORNADY) and caliber designation (357 SIG) imprinted on case head
- **Characteristics:** High quality brass alloy

BULLET: TRAINING™

- **Ballistic Coefficient:** .153
- **Sectional Density:** .153
- **Characteristics:** Full Metal Jacket Flat Point
- **Push/Pull:** 125/100 minimum (lbs)

POWDER & PRIMER

- **Powder:** Temperature stable with flash suppressant
- **Primer:** Boxer Primed

LOT NUMBERS

- Lot numbers on each box and case

BALLISTIC DATA

	Muzzle	50 yds	100 yds
Velocity (fps)	1210	1091	1008

PACKAGING

- Tray: Item No. 5703

- Gross Weight: 1.28 lbs
- 50 rounds per box with styrofoam tray

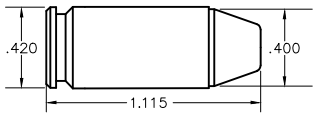
- Carton: Item No. 5739
- Carton Weight: 12.8 lbs
- Carton Dimensions: 6.875" x 6.625" x 9.375"
- 10 boxes per carton | 500 rounds per carton

TRAINING™
40 S&W 175 gr. FMJ

ITEM NO. 91374

Performance Characteristics:

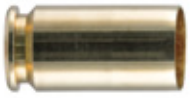
- Same weight as Critical DUTY® ammunition counterpart
- Cost effective alternative to DUTY ammunition
- Quality brass case
- MADE IN THE USA
- **Net Explosive Weight** (approx. per box): 0.0436 lbs / .0198 kg



SCALE 1:1

CASE: 40 S&W

- Manufacturer's name (HMC or HORNADY) and caliber designation (40 S&W) imprinted on case head
- **Characteristics:** High quality brass alloy



BULLET: TRAINING™

- **Ballistic Coefficient:** .155
- **Sectional Density:** .156
- **Characteristics:** Full Metal Jacket Flat Point
- **Push/Pull:** 125/125 minimum kg

POWDER & PRIMER

- **Powder:** Temperature stable with flash suppressant
- **Primer:** Boxer Primed

LOT NUMBERS

- Lot numbers on each box and case

BALLISTIC DATA

	Muzzle	50 yds	100 yds
Velocity (fps)	1010	948	899

PACKAGING

- Tray: Item No. 5703

- Gross Weight: 1.91 lbs
- 50 rounds per box with styrofoam tray

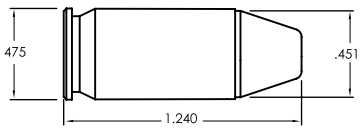
- Carton: Item No. 5739
- Carton Weight: 19.1 lbs
- Carton Dimensions: 6.875" x 6.625" x 9.375"
- 10 boxes per carton | 500 rounds per carton

TRAINING™
45 AUTO 220 gr. FMJ

ITEM NO. 90924

Performance Characteristics:

- Same weight as Critical DUTY® ammunition counterpart
- Cost effective alternative to DUTY ammunition
- Quality brass case
- MADE IN THE USA
- **Net Explosive Weight** (approx. per box): 0.0443 lbs / .0201 kg



SCALE 1:1

CASE: 45 AUTO

- Manufacturer's name (HMC or HORNADY) and caliber designation (45 AUTO) imprinted on case head
- **Characteristics:** High quality brass alloy

BULLET: TRAINING™

- **Ballistic Coefficient:** .180
- **Sectional Density:** .155
- **Characteristics:** Full Metal Jacket Flat Point
- **Push/Pull:** 75/100 minimum (lbs)

POWDER & PRIMER

- **Powder:** Temperature stable with flash suppressant
- **Primer:** Boxer Primed

LOT NUMBERS

- Lot numbers on each box and case

BALLISTIC DATA

	Muzzle	50 yds	100 yds
Velocity (fps)	900	863	829

PACKAGING

- Tray: Item No. 5703

- Gross Weight: 2.38
- 50 rounds per box with styrofoam tray

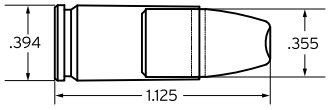
- Carton: Item No. 5739
- Carton Weight: 23.8 lbs
- Carton Dimensions: 6.875" x 6.625" x 9.375"
- 10 boxes per carton | 500 rounds per carton

TRAINING™
9MM LUGER 90 gr. FRANGIBLE

ITEM NO. 90230

Performance Characteristics:

- Cost effective alternative to DUTY ammunition
- Quality brass case
- 100% lead free
- Frangible
- MADE IN THE USA
- **Net Explosive Weight** (approx. per box): 0.0421 lbs / .0191 kg



SCALE 1:1

CASE: 9MM LUGER

- Manufacturer's name (HMC or HORNADY) and caliber designation (9mm Luger) imprinted on case head
- **Characteristics:** High quality brass alloy

BULLET: TRAINING™

- **Ballistic Coefficient:** .120
- **Sectional Density:** .102
- **Characteristics:** Frangible
- **Push/Pull:** 100/100 minimum (lbs)

POWDER & PRIMER

- **Powder:** Temperature stable with flash suppressant
- **Primer:** Boxer primed, lead free

LOT NUMBERS

- Lot numbers on each box and case

BALLISTIC DATA

	Muzzle	50 yds	100 yds
Velocity (fps)	1300	1124	1011

PACKAGING

- Tray: Item No. 5701

- Gross Weight: 1.28 lbs
- 50 rounds per box with styrofoam tray

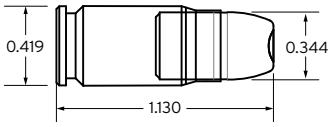
- Carton: Item No. 5716
- Carton Weight: 12.8 lbs
- Carton Dimensions: 6.5" x 5.75" x 14.25"
- 10 boxes per carton | 500 rounds per carton

TRAINING™
357 SIG 90 gr. FRANGIBLE

ITEM NO. 91285

Performance Characteristics:

- Cost effective alternative to DUTY ammunition
- Quality brass case
- 100% lead free
- Frangible
- MADE IN THE USA
- **Net Explosive Weight** (approx. per box): 0.0268 lbs /.0122 kg



SCALE 1:1

CASE: 357 SIG

- Manufacturer's name (HMC or HORNADY) and caliber designation (357 SIG) imprinted on case head
- **Characteristics:** High quality brass alloy

BULLET: TRAINING™

- **Ballistic Coefficient:** .110
- **Sectional Density:** .102
- **Characteristics:** Frangible
- **Push/Pull:** 80/80 minimum (lbs)

POWDER & PRIMER

- **Powder:** Temperature stable with flash suppressant
- **Primer:** Boxer primed, lead free

LOT NUMBERS

- Lot numbers on each box and case

BALLISTIC DATA

	Muzzle	50 yds	100 yds
Velocity (fps)	1440	1209	1056

PACKAGING

- Tray: Item No. 5703

- Gross Weight: 1.28 lbs
- 50 rounds per box with styrofoam tray

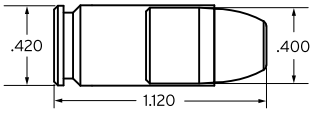
- Carton: Item No. 5739
- Carton Weight: 12.8 lbs
- Carton Dimensions: 6.875" x 6.625" x 9.375"
- 10 boxes per carton | 500 rounds per carton

TRAINING™
40 S&W 125 gr. FRANGIBLE

ITEM NO. 91319

Performance Characteristics:

- Cost effective alternative to DUTY ammunition
- Quality brass case
- 100% Lead free
- Frangible
- MADE IN THE USA
- **Net Explosive Weight** (approx. per box): 0.0464 lbs / .0210 kg



SCALE 1:1

CASE: 40 S&W

- Manufacturer's name (HMC or HORNADY) and caliber designation (40 S&W) imprinted on case head
- **Characteristics:** High quality brass alloy

BULLET: TRAINING™

- **Ballistic Coefficient:** .122
- **Sectional Density:** .103
- **Characteristics:** Frangible
- **Push/Pull:** 100/100 minimum (lbs)

POWDER & PRIMER

- **Powder:** Temperature stable with flash suppressant
- **Primer:** Boxer primed, lead free

LOT NUMBERS

- Lot numbers on each box and case

BALLISTIC DATA

	Muzzle	50 yds	100 yds
Velocity (fps)	1210	1069	977

PACKAGING

- Tray: Item No. 5703

- Gross Weight: 1.63 lbs
- 50 rounds per box with styrofoam tray

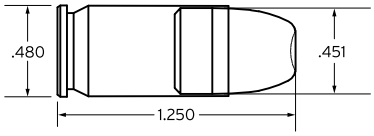
- Carton Number: 5739
- Carton Weight: 16.3 lbs
- Carton Dimensions: 6.875" x 6.625" x 9.375"
- 10 boxes per carton | 500 rounds per carton

TRAINING™
45 AUTO 145 gr. FRANGIBLE

ITEM NO. 90931

Performance Characteristics:

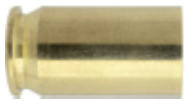
- Cost effective alternative to DUTY ammunition
- Quality brass case
- 100% Lead free
- Frangible
- MADE IN THE USA
- **Net Explosive Weight** (approx. per box): 0.0436 lbs / .0198 kg



SCALE 1:1

CASE: 45 AUTO

- Manufacturer's name (HMC or HORNADY) and caliber designation (45 AUTO) imprinted on case head
- **Characteristics:** High quality brass alloy



BULLET: TRAINING™

- **Ballistic Coefficient:** .081
- **Sectional Density:** .102
- **Characteristics:** Frangible
- **Push/Pull:** 80/80 minimum (lbs)

POWDER & PRIMER

- **Powder:** Temperature stable with flash suppressant
- **Primer:** Boxer primed, lead free

LOT NUMBERS

- Lot numbers on each box and case

BALLISTIC DATA

	Muzzle	50 yds	100 yds
Velocity (fps)	1130	974	878

PACKAGING

- Tray: Item No. 5703

- Gross Weight: 1.83 lbs
- 50 rounds per box with styrofoam tray

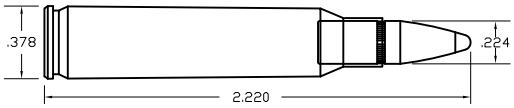
- Carton Number: 5739
- Carton Weight: 18.3 lbs
- Carton Dimensions: 6.875" x 6.625" x 9.375"
- 10 boxes per carton | 500 rounds per carton

TRAINING™
223 REM 55 gr. SP

ITEM NO. 80255

Performance Characteristics:

- Cost effective alternative to standard loads
- Quality brass case
- Point of aim/point of impact consistency compared to duty loads of like grain weight
- MADE IN THE USA
- **Net Explosive Weight** (approx. per box): 0.1750 lbs / .0794 kg



SCALE 1:1

CASE: 223 REMINGTON

- Manufacturer's name (HMC or HORNADY) and caliber designation (223 REM) imprinted on case head
- **Characteristics:** Quality annealed brass alloy

BULLET: TRAINING™

- **Ballistic Coefficient:** .235
- **Sectional Density:** .157
- **Bullet Length:** 0.705"
- **Recommended Rifling Twist Rate:** 1:7" to 1:12"
- **Characteristics:** Soft point barrier with cannelure
- **Push/Pull:** 40/40 minimim (lbs)

POWDER & PRIMER

- **Powder:** Temperature stable with flash suppressant
- **Primer:** Small rifle, boxer primed, staked

LOT NUMBERS

- Lot numbers on each box and case

BALLISTIC DATA

	Muzzle	100 yds	200 yds	300 yds	400 yds	500 yds
Velocity (fps)	3240	2823	2443	2093	1774	1493
Energy (ft lbs)	1282	973	728	535	384	272
Trajectory (in)	-1.5	0	-2.9	-11.7	-28.5	-56.4

PACKAGING

- Tray: Item No. 5701

- Gross Weight: 1.32 lbs
- 50 rounds per box with styrofoam tray

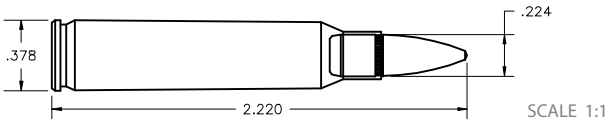
- Carton Number: 5747
- Carton Weight: 13.2 lbs
- Carton Dimensions: 5.625" x 5.937" x 14.75"
- 10 boxes per carton | 500 rounds per carton

TRAINING™
223 REM 55 gr. FMJ-BT

ITEM NO. 80275

Performance Characteristics:

- Cost effective alternative to standard loads
- Quality brass case
- Point of aim/point of impact consistency compared to duty loads of like grain weight
- MADE IN THE USA
- **Net Explosive Weight** (approx. per box): 0.1750 lbs / .0794 kg



CASE: 223 REMINGTON

- Manufacturer's name (Hornady) and caliber designation (223 REM) imprinted on case head
- **Characteristics:** Quality annealed brass alloy

BULLET: TRAINING™

- **Ballistic Coefficient:** .243
- **Sectional Density:** .157
- **Bullet Length:** 0.735"
- **Recommended Rifling Twist Rate:** 1:7" to 1:12"
- **Characteristics:** Boat tail full metal jacket with cannelure
- **Push/Pull:** 50/50 minimum (lbs)

POWDER & PRIMER

- **Powder:** Temperature stable with flash suppressant
- **Primer:** Small rifle, boxer primed, staked

LOT NUMBERS

- Lot numbers on each box and case

BALLISTIC DATA

	Muzzle	100 yds	200 yds	300 yds	400 yds	500 yds
Velocity (fps)	3240	2836	2467	2126	1816	1537
Energy (ft lbs)	1282	982	743	552	403	288
Trajectory (in)	-1.5	0	-2.9	-11.5	-27.6	-54.9

PACKAGING

- Tray: Item No. 5701

- Gross Weight: 1.41 lbs
- 50 rounds per box with plastic tray

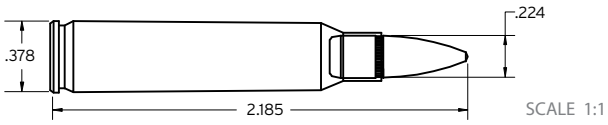
- Carton: Item No. 5747
- Carton Weight: 14.1 lbs
- Carton Dimensions: 5.625" x 5.937" x 14.75"
- 10 boxes per carton | 500 rounds per carton

TRAINING™
223 REM 55 gr. FMJ

ITEM NO. 80271

Performance Characteristics:

- Cost effective alternative to standard loads
- Quality brass case
- Point of aim/point of impact consistency compared to duty loads of like grain weight
- MADE IN THE USA
- **Net Explosive Weight** (approx. per box): 0.1750 lbs / .0794 kg



CASE: 223 REMINGTON

- Manufacturer's name (Hornady) and caliber designation (223 REM) imprinted on case head
- **Characteristics:** Quality annealed brass alloy

BULLET: TRAINING™

- **Ballistic Coefficient:** .243
- **Sectional Density:** .157
- **Bullet Length:** 0.735"
- **Recommended Rifling Twist Rate:** 1:7" to 1:12"
- **Characteristics:** Boat tail full metal jacket with cannelure
- **Push/Pull:** 45/45 minimum (lbs)

POWDER & PRIMER

- **Powder:** Temperature stable with flash suppressant
- **Primer:** Small rifle, boxer primed, staked
- Due to being a contracted item headstamp may change without notice

LOT NUMBERS

- Lot numbers on each box and case

BALLISTIC DATA

	Muzzle	100 yds	200 yds	300 yds	400 yds	500 yds
Velocity (fps)	3240	2837	2468	2128	1817	1540
Energy (ft lbs)	1282	983	744	553	403	290
Trajectory (in)	-1.5	1.4	0	-7.2	-22.1	-47.7

PACKAGING

- Tray: Item No. 8503FP

- Gross Weight: 1.41 lbs
- 50 rounds per box with pad

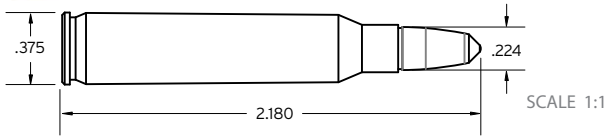
- Carton: Item No. 5745FR
- Carton Weight: 14.1 lbs
- Carton Dimensions: 3.250"x8.000"x13.250"
- 10 boxes per carton | 500 rounds per carton

TRAINING™
5.56 NATO 45 gr. FRANGIBLE

ITEM NO. 81251

Performance Characteristics:

- Frangible training ammunition
- MADE IN THE USA
- **Net Explosive Weight** (approx. per box): 0.1995 lbs / .0905 kg



CASE: 223 REMINGTON

- Manufacturer's name (Hornady) and caliber designation (556 NATO) imprinted on case head
- **Characteristics:** Quality annealed brass alloy

BULLET: TRAINING™

- **Ballistic Coefficient:** .110
- **Sectional Density:** .128
- **Bullet Length:** 0.785"
- **Recommended Rifling Twist Rate:** 1:7" to 1:9"
- **Characteristics:** Frangible
- **Push/Pull:** 40/50 minimum (lbs)

POWDER & PRIMER

- **Powder:** Loaded to NATO specifications, temperature stable, flash suppressant
- **Primer:** Small rifle milspec primer, staked primer pocket

LOT NUMBERS

- Lot numbers on each box and case

BALLISTIC DATA

	Muzzle	100 yds	200 yds	300 yds	400 yds	500 yds
Velocity (fps)	3050	2237	1571	1118	920	805
Energy (ft lbs)	929	500	247	125	85	65
Trajectory (in)	-1.5	0	-5.8	-26.2	-74.3	-163.5

PACKAGING

- Tray: Item No. 5701

- Gross Weight: 1.33 lbs
- 50 rounds per box with plastic tray

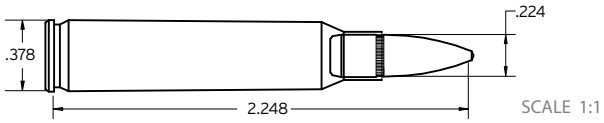
- Carton: Item No. 5747
- Carton Weight: 13.30 lbs
- Carton Dimensions: 5.70" x 5.91" x 14.69"
- 10 boxes per carton | 500 rounds per carton

TRAINING™
5.56 NATO 55 gr. FMJ

ITEM NO. 81278

Performance Characteristics:

- Cost effective alternative to standard loads
- Quality brass case
- Point of aim/point of impact consistency compared to duty loads of like grain weight
- MADE IN THE USA
- **Net Explosive Weight** (approx. per box): 0.1750 lbs / .0794 kg



CASE: 223 REMINGTON

- Manufacturer's name (Hornady) and caliber designation (223 REM) imprinted on case head
- **Characteristics:** Quality annealed brass alloy

BULLET: TRAINING™

- **Ballistic Coefficient:** .243
- **Sectional Density:** .157
- **Bullet Length:** 0.755"
- **Recommended Rifling Twist Rate:** 1:7" to 1:12"
- **Characteristics:** Boat tail full metal jacket with cannelure
- **Push/Pull:** 45/45 minimum (lbs)

POWDER & PRIMER

- **Powder:** Loaded to NATO specifications, temperature stable, flash suppressant
- **Primer:** Small rifle, boxer primed

LOT NUMBERS

- Lot numbers on each box and case

BALLISTIC DATA

	Muzzle	100 yds	200 yds	300 yds	400 yds	500 yds
Velocity (fps)	3240	2837	2468	2128	1817	1540
Energy (ft lbs)	1282	983	744	553	403	290
Trajectory (in)	-1.5	1.4	0	-7.2	-22.1	-47.7

PACKAGING

- Tray: Item No. 8503FP

- Gross Weight: 1.41 lbs
- 50 rounds per box with pad

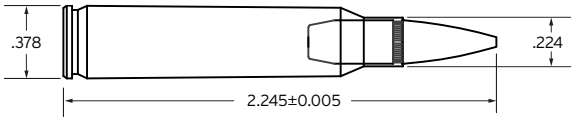
- Carton: Item No. 5745FR
- Carton Weight: 14.1 lbs
- Carton Dimensions: 3.25" x 8.00" x 13.25"
- 10 boxes per carton | 500 rounds per carton

TRAINING™
5.56 NATO 75 gr. TAP SBR®

ITEM NO. 81292

Performance Characteristics:

- High weight retention
- Large wound cavities
- Barrier blind
- Meets FBI Protocol
- MADE IN THE USA
- **Net Explosive Weight** (approx. per box): 0.1650 lbs / .0748 kg



CASE: 5.56 NATO

- Manufacturer's name (Hornady) and caliber designation (5.56 NATO) imprinted on case head
- **Characteristics:** Quality annealed brass alloy

BULLET: TRAINING™

- **Ballistic Coefficient:** .395
- **Sectional Density:** .214
- **Bullet Length:** .983"
- **Recommended Rifling Twist Rate:** For use in 1:7" twist SBRs.
- **Characteristics:** Boat tail hollow point with cannelure
- **Push/Pull:** 75/125 minimum (lbs)

POWDER & PRIMER

- **Powder:** Specifically designed for 10.5" - 11.5" barrels. Low flash, cooler burning, and temperature stable.
- **Primer:** Small rifle milspec primer, staked primer pocket

LOT NUMBERS

- Lot numbers on each box and case

BALLISTIC DATA

	Muzzle	100 yds	200 yds	300 yds	400 yds	500 yds
Velocity (fps)	2310	2105	1911	1728	1560	1408
Energy (ft lbs)	888	738	608	497	405	330
Trajectory (in)	-1.5	0	-6.4	-22.3	-49.9	-91.8

PACKAGING

- Tray: Item No. 5701

- Gross Weight: 1.48 lbs
- 50 rounds per box with styrofoam tray

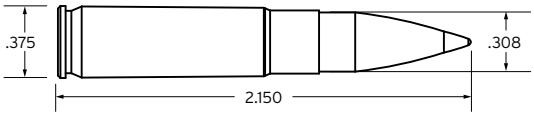
- Carton: Item No. 5747
- Carton Weight: 14.8 lbs
- Carton Dimensions: 5.625" x 5.937" x 14.75"
- 10 boxes per carton | 500 rounds per carton

TRAINING™
300 BLACKOUT 110 gr. NTX®

ITEM NO. 80864

Performance Characteristics:

- Lead free training ammunition
- MADE IN THE USA
- **Net Explosive Weight** (approx. per box): 0.1385 lbs / .0628 kg



SCALE 1:1

CASE: 300 BLACKOUT

- Manufacturer's name (Hornady) and caliber designation (300 BLK) imprinted on case head
- **Characteristics:** High quality annealed brass alloy

BULLET: TRAINING™

- **Ballistic Coefficient:** .209
- **Sectional Density:** .166
- **Bullet Length:** 1.290"
- **Recommended RiflingTwist Rate:** For use in 1:5" - 1:8".
- **Characteristics:** Lead Free, Jacketed Frangible, Polymer Tipped
- **Push/Pull:** 50/50 minimum (lbs)

POWDER & PRIMER

- **Powder:** Temperature stable with flash Suppressant
- **Primer:** Lead free small rifle, staked primer pocket

LOT NUMBERS

- Lot numbers on each box and case

BALLISTIC DATA

	Muzzle	100 yds	200 yds	300 yds	400 yds	500 yds
Velocity (fps)	2080	1726	1422	1186	1036	942
Energy (ft lbs)	1057	728	494	344	262	217
Trajectory (in)	-1.5	0	-10.3	-38.0	-90.4	-175.1

PACKAGING

- Tray: Item No. 5701

- Gross Weight: 1.48 lbs
- 50 rounds per box with tray

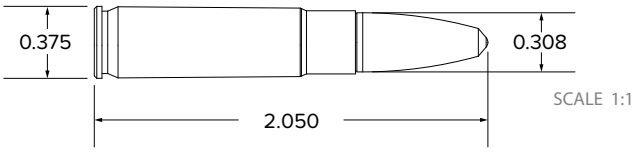
- Carton Weight: 16.0 lbs
- Carton Dimensions: 5.69" x 5.95" x 14.70"
- 10 boxes per carton | 500 rounds per carton

TRAINING™
300 BLACKOUT 110 gr. FRANGIBLE

ITEM NO. 80870

Performance Characteristics:

- Cost effective alternative to standard loads
- 100% lead free
- Frangible
- MADE IN THE USA
- **Net Explosive Weight** (approx. per box): 0.1339 lbs / .0607 kg



CASE: 300 BLACKOUT

- Manufacturer's name (Hornady) and caliber designation (300 BLK) imprinted on case head
- **Characteristics:** High quality brass alloy

BULLET: FRANGIBLE

- **Ballistic Coefficient:** .200
- **Sectional Density:** .166
- **Bullet Length:** 1.075"
- **Recommended Rifling Twist Rate:** 1:8"
- **Characteristics:** Frangible
- **Push/Pull:** 60/60 minimum (lbs)

POWDER & PRIMER

- **Powder:** Temperature stable with flash suppressant
- **Primer:** Lead free, small rifle, staked primer pocket

LOT NUMBERS

- Lot numbers on each box and case

BALLISTIC DATA

	Muzzle	100 yds	200 yds	300 yds	400 yds	500 yds
Velocity (fps)	2375	2094	1834	—	—	—
Energy (ft lbs)	1378	1071	623	—	—	—
Trajectory (in)	-1.5	3.2	0	—	—	—

PACKAGING

- Tray: Item No. 5701

- Gross Weight: 1.6 lbs
- 50 rounds per box with plastic tray

- Carton: Item No. 5747
- Carton Weight: 16 lbs
- Carton Dimensions: 5.625" x 5.937" x 14.75"
- 10 boxes per carton | 500 rounds per carton

STABILIZING SBRs

Top to bottom: 16-, 12-, 10.4-, and 9-inch upper receivers. Per inch of barrel in .223/5.56mm, there is a loss of 20 to 40 fps.

Understanding Twist Rates

By Jayden Quinlan

Short-barreled rifles have skyrocketed in popularity over the last several years, but has the niche outrun the knowledge in the pursuit of ergonomics? There is nothing quite as frustrating as banging the 16th inch of your muzzle on every surface imaginable as you try to smoothly deploy a carbine in CQB, vehicle or urban environments.

You can't have your cake and eat it too, and this applies to SBRs. The largest compromise in the case of the shorter barrel resides in the ballistics department.

In layman's terms, bullets maintain a point-forward flight based on having enough rotational speed to overcome the resistance of the atmosphere, or drag. If the bullet does not have enough spin, the atmospheric resistance will be greater than the stability of the bullet and cause it to tumble.

Think of a football. If you throw a good spiral with a lot of spin, it will stay point forward all the way to the receiver's hands. If you throw it with little or no spin, it will quickly tumble and become inaccurate. This is not an apples-to-apples comparison due to the dynamics a bullet encounters during supersonic and transonic flight, but should paint an understandable picture.

SBR VELOCITIES

The rotational speed of the bullet is not only a function of the twist rate of the

barrel, but also the velocity of the bullet. SBRs produce considerably slower muzzle velocities than standard-length barrels.This is simply due to the reduction in time and distance that the expanding gases have to accelerate the bullet in the bore.

An average velocity loss of 20 to 40 feet-per-second (fps) per inch of barrel is not uncommon in .223/5.56mm platforms. This loss in velocity translates into slower bullet RPMs, making the same bullet out of an SBR less stable than one fired in a standard-length barrel. Refer to the table that displays RPM differences due to the velocity lost by using a shorter barrel.

TWIST RATES

Obviously the twist rate of the barrel has a large part to play in the rotational speed and stability of the bullet. When dealing with the reduced velocities produced by SBRs, using the fastest approved twist rate will yield the best results with a wider range of bullets. On average, RPM loss from a 1:7 twist compared to a 1:9 twist ranges from 15,000 to 25,000 RPMs. This loss in stability can be significant enough to cause a bullet to tumble in a 1:9 twist but remain stable in a 1:7 twist.

BULLETS

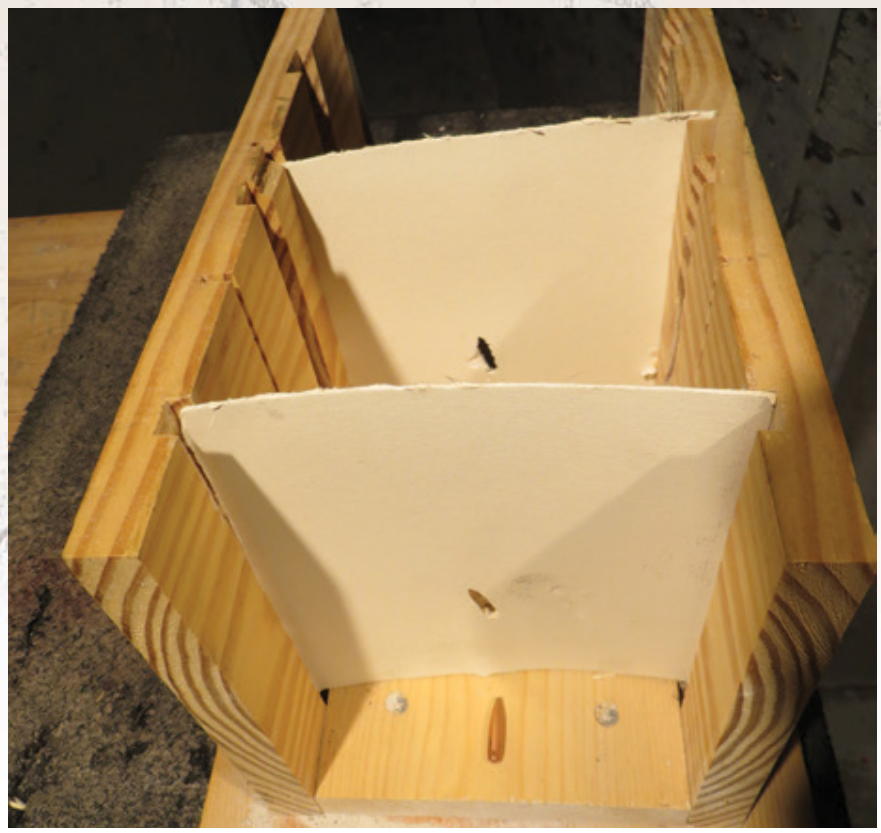
As bullet weight increases within a given caliber, the bullet becomes longer. The longer the bullet, the more spin required to stabilize it. Without getting too technical, this is a function of leverage. The longer the bullet, the more leverage the atmospheric resistance has to overturn it and cause it to tumble. Shooting a longer, heavier bullet in combination with the reduced velocities and RPMs produced by SBRs is the most common cause of bullet instability.

50-, 53-, 60-, and 80-grain .224 bullets. As bullet weight within a given caliber increases, so does bullet length.

Using standard-length carbine, shooter has to dip the muzzle to clear the door jamb before coming on target and engaging.

Lifesaving seconds gained by SBR. Shooter can maintain shooting stance, sight picture, and cheek weld while clearing muzzle of door jamb and moving to engage new target.

Witness card test fixture. Simple cardboard box can achieve similar results for a field-expedient test.



Bullet position changes from first card to second card as bullet tumbles.

ATMOSPHERIC CONDITIONS

Cold air at lower elevations is denser than hot air at higher elevations. Since certain bullet, twist rate, and velocity combinations are already pushing the envelope for stable/unstable bullet flight in SBRs, a simple change in air density can send it over the edge.

Shooting at a high elevation in the summer may stabilize the bullet perfectly, but heading to the coast in December can easily cause a bullet to tumble.

SAFETY CONCERNS

Shooting an unstable bullet can become a major safety concern, especially when shooting suppressed. The possibility of encountering a baffle strike due to shooting an understabilized bullet is a concern not only to the shooter, but also to those around him.

If the bullet strikes a baffle and makes it out of the suppressor, the remaining flight path is very unpredictable. The Internet is littered with pictures of baffle stuck suppressors that may provide extra motivation to ensure your bullet is stable before suppressing the system.

SHOOTER TESTING

If a shooter isn't 100% confident in the stability of the bullet he is shooting in a certain condition or platform, a witness paper test can be very useful. For this test, a minimum of two pieces of paper or witness card material can be used to

Results of witness card test. Bullet was traveling nearly sideways as it penetrated both first and second witness cards.

record a bullet's position in flight. Utilizing more than two pieces will give the shooter a more representative test result. This test will not only expose a bullet that has completely lost stability and is tumbling end over end, but will also show bullet yaw.

Bullet yaw may not be to the stage of an end-over-end tumble, but can be enough to cause a baffle strike at worst and accuracy issues at best. Another option is the use of a bullet stability calculator. A valuable resource, these calculators are available online but require accurate bullet length inputs for proper calculations. If factory ammunition is used, a kinetic bullet puller can be used to safely remove the bullet from the case and measured with calipers.

» RPM DIFFERENCES DUE TO LOWER VELOCITY (Based On 1:7 Twist)

VELOCITY	3,100 fps	2,900 fps	2,700 fps	2,500 fps
RPMs	319,000	298,000	278,000	257,000

SBR TERMINAL PERFORMANCE

If an SBR is going to be used for hunting or defensive purposes, the reduction in velocity and RPM can have a dramatic effect on terminal performance of bullets. Bullets designed to expand or reduce the possibility for overpenetration can function terminally like an FMJ.

Lack of velocity may not be enough to initiate expansion, causing a through-and-through shot, resulting in overpenetration. Most expanding-style bullets are designed to remain point forward during terminal performance to allow for expansion of the bullet.

The lack of RPMs may still stabilize the bullet in flight, but once it encounters the increased resistance of a medium, it may be enough to overturn the bullet and cause it to tumble instead of remaining point forward and expanding as designed.

Five-inch shorter barrel gives shooter more ergonomic platform for work in close-quarter environments.

CONCLUSION

SBRs have developed a significant following in military, law enforcement, and civilian circles for good reason. Their ergonomics, portability, and manipulation benefits give the user an unparalleled advantage when working in close down-and-dirty environments.

As with everything, pros and cons are always present. In the case of the SBR, most of the cons can be avoided through knowledge and testing.

Jayden Quinlan works as a Ballistic Engineering Technician in research and development at Hornady Manufacturing.

Bonded vs. Non-Bonded

When encountering barriers, an expanding style bullet needs to be built strong enough to stay together and maintain the mass needed to achieve penetration. A core jacket separation is the worst case scenario for a bullet that penetrates a barrier. The forces encountered by the bullet as it penetrates the barrier cause the lead core to separate from the jacket. The energy the bullet had is now divided into two or more independent pieces resulting in under penetration.

Bonding the bullet has been the most popular method of eliminating this issue. During the bonding process, the core is essentially welded to the jacket. This process will eliminate the core jacket separation issue, but induces other performance issues in the process.

Bonding requires the use of pure lead, the softest consistency used in bullet manufacturing. The use of pure lead combined with the bonded jacket and core makes consistent expansion through barriers difficult to achieve. The resistance of the barrier typically crushes and deforms a bonded bullet excessively due to the use of the softer pure lead. This excessive deformation results in either under penetration or erratic penetration as it is now the consistency of the barrier that will determine the amount of deformation, which effects expansion, not the design features of the bullet. Typically a harder barrier will cause more deformation resulting in less penetration. A softer barrier will cause less deformation resulting in more penetration.

Hornady has taken a different approach to performance through barriers. Instead of the "one size fits all" fix of bonding the bullet, the bullet in Critical Duty ammunition was built with specific design features to control performance through each barrier. Not bonding the bullet allows for the use of harder lead antimonies. This reduces the crushing and deformation of pure lead, and allows the core to aid in controlling expansion. Core jacket separation is prevented by utilizing the InterLock® design similar to that used in big game hunting bullets. This design mechanically locks the jacket and core without compromising other performance characteristics of the bullet. Controlled and consistent expansion is achieved by the use of a patented polymer tip material that prevents clogging and initiates expansion through different material consistencies. The controlled and consistent expansion results in consistent penetration.

A bonded bullet approaches barrier performance with a reactive design; its main purpose being the prevention of jacket core separations. Critical Duty is designed with a proactive approach by using specific design features to control performance through each of the FBI Protocol test barriers.

SBR USE OF HORNADY TAP AND MULTIPLE SHOT ENGAGEMENTS

For use in short barreled rifles, Hornady recommends 223 Rem 55 gr. TAP URBAN against soft targets (no barrier penetration). For hard targets (barrier penetration), the 5.56 NATO 62 gr. BARRIER load is recommended.

Multiple shot testing was conducted to determine the effect of successive shots through auto glass representing a windshield, and sheet metal representing a car door.

The following tests were conducted in the Hornady Ballistics Lab using a 10.4" HK 416 1:7" twist.

223 REM 55 GR. TAP URBAN: BARE

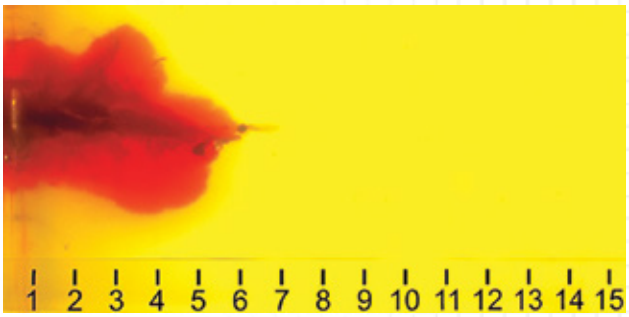
Avg Muzzle Velocity: 2543 fps

Analysis: The reduced velocities produced by the 10.4" barrel did not have a major effect on terminal performance when compared to a 16" barrel. Penetration and retained weight of bullet were nearly identical to published data for a 16" barrel fired into bare gelatin.

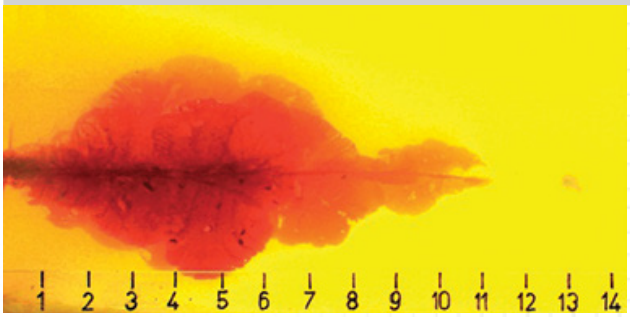
5.56 NATO 62. GR. BARRIER: GLASS

Avg Muzzle Velocity: 2603 fps

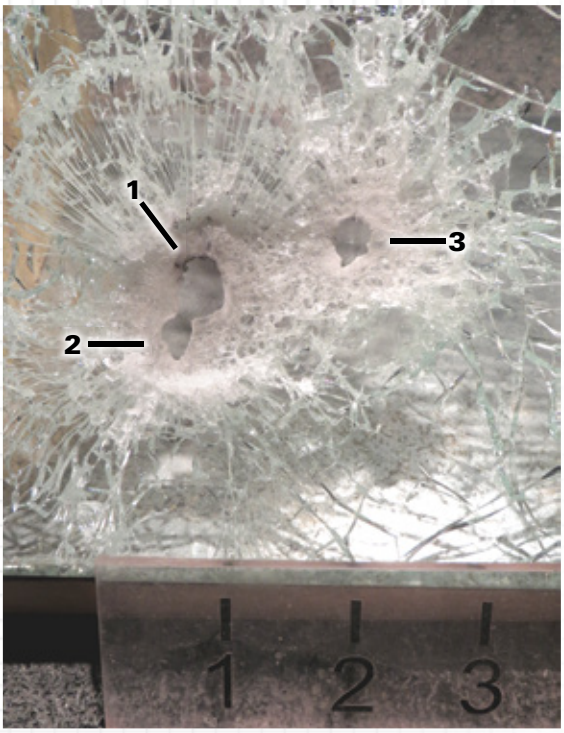
Shot 1: New piece of unshot double pane laminated automotive glass.



Shot 2: Round impacted within area of eroded glass from shot 1.



Shot 3: Impacted 1 ¼" from previous two shots. Glass was fractured by prior shots but not eroded.

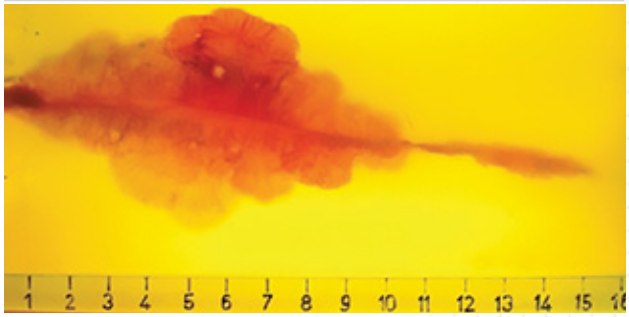


Analysis: As the glass is weakened by additional shots, its damaging effect on each successive bullet is lessened. A bullet traveling through the eroded area of glass from a prior shot showed performed similar to bare gelatin and had the least damaging effects on the bullet. A bullet traveling through fractured but not eroded glass performed similar to unshot glass, but penetrated slightly deeper. Damage to bullet fired through fractured glass was similar to damage from unshot glass.

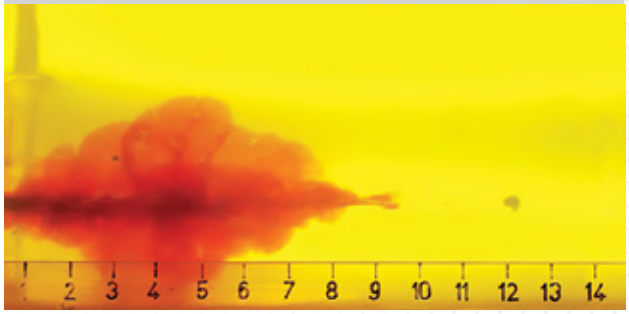
5.56 NATO 62. GR. BARRIER: SHEET METAL

Avg Muzzle Velocity: 2603 fps

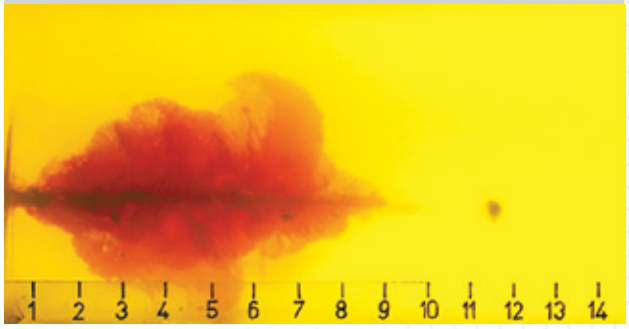
Shot 1: Two unshot sheets of 20 gauge sheet metal.



Shot 2: Impacted 1/4" from shot 1 within divot in metal.



Shot 3: Impacted 3/4" from shot 1 and 2 in fresh metal without divot.



Analysis: The effects of previous shots in sheet metal are much more localized when compared to multiple rounds in glass. Damage to bullets by sheet metal showed more consistency even when shot into a portion of the divot left by a prior shot. Penetration numbers for the 3 shot groups through steel performed more consistently than 3 shots through glass.

Conclusion:

Reduced velocities produced by the SBR did not lessen or prevent complete bullet fragmentation of the **223 Rem 55 gr. TAP URBAN** load. The possibility of over penetration is still mitigated when fired out of an SBR.

Damage to auto glass from previous shots and location of successive shots have a large effect on the terminal performance of the **5.56 NATO 62 gr. TAP BARRIER** when fired in an SBR. Terminal performance can be similar to published data out of a 16" barrel for bare gelatin or glass depending on shot location.

Damage to sheet metal from previous shots doesn't seem to have a large effect on terminal performance of the **5.56 NATO 62 gr. TAP BARRIER.** Penetration numbers are slightly higher for sheet metal when fired out of an SBR due to the reduced velocities produced by the shorter barrel.

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