



5.56 X 45 MM

BALL FMJ M855/ SS109 - 4,0 g (62 gr)

5.56 x 45 mm FMJ

The cartridge consists of case, primer, gunpowder and bullet. It is applicable in extreme polar or desert conditions, contributing to the versatility of its use.

5.56 x 45 mm – FMJ bullet

The FMJ (Full Metal Jacket) bullet weighs 4.0 g (62 gr) and has a lead core with a steel penetrator, enhancing its penetration capability. The jacket is made of CuZn10, providing strength and uniformity in ballistic performance.

5.56 x 45 mm – case

The caliber 5.56 x 45 mm CuZn30 case is intended for inserting the powder charge, primer and bullet.

SPECIFICATIONS

Technical Specification

CARTRIDGE

| | |
|---------|---------------------|
| Caliber | 5.56 x 45 mm, SS109 |
| Weight | max 12.40 g |
| Length | max 57.40 mm |

BULLET GRAIN

| | |
|------------|--|
| Type | FMJ, Ball |
| Weight | 4.00 g ± 0.1 g (62 grain) |
| Length | max 23.4 mm |
| Material | Jacket - CuZn10; Core - Lead, Perforating - steel tip |
| Extraction | ≥ 200 N |

CASE

| | |
|----------|-------------|
| Length | max 44.7 mm |
| Material | CuZn30 |

PRIMER

| | |
|------------|---------------------------------|
| Type | Boxer, non-corrosive, non-toxic |
| Propellant | Smokeless Powder (Double Base) |
| Waterproof | Sealant applied |

The 5.56 x 45 mm, SS109, Ball, produced in ATS AMMO is compliant with NATO STANAG 4172 requirements. It complies with the requirements of the NATO manuals AC/225(LG/3-SG/1)D/8 and PFP(NAAG-LCG/1-SG/1) WP(2010)0002. The ammunition can be fired from all NATO nominated 5.56 mm weapons: assault rifles – FNC, M16A2, H&K G36, BERETTA AR70/90, L85A2; Light machine gun – MINIMI.

| ELECTRONIC PRESSURE AND VELOCITY (KIAG 6215) | | | |
|---|--|---|------------------|
| Ammunition Temperature | +21°C ± 2°C | +52°C & -54°C | |
| Velocity (at 24 m, m/s) | V = 919 ± 10 m/s | Max Velocity Difference between +52°C/ -54°C and 21°C samples +50m/s and -80m/s | |
| Standard Deviation | ≤ 12 m/s | No requirement | |
| Max Corrected Mean Case Mouth Pressure, MPa | XCP +3SD ≤ 445 Mpa | Max case mouth difference between +52°C/ -54°C and 21°C samples is not +55 Mpa or -110 Mpa XCP+3SD ≤ 445 Mpa | |
| Min Corrected Mean Port Pressure, MPa | XPP - 3SD ≤ 103 Mpa | Max port pressure difference between +52°C/ -54°C and 21°C samples is ± 15 Mpa XPP-3SD ≥ 103 Mpa | |
| Action Time (ms) | No requirement | Max Mean Action Time + 5 SD for -54°C sample ≤ 3 ms | |
| Muzzle Energy (at 24 m, J) | ≤ 1480 J | No requirement | |
| Precision (at 183 m) | HSD ≤ 46 mm and VSD ≤ 46 mm or Mr ≤ 46 mm | | |
| Precision (at 550 m) | HSD ≤ 200 mm and VSD ≤ 200 mm | | |
| Function and Casualty | Permissible percentage of defects was not exceeded | | |
| Primer sensitivity critical high method (run down) | Test ball 111.7 ± 0.57 g | H +5 SD ≤ 450 | H - 2 SD ≤ 75 |
| Terminal effects at distance 570 m, perforation mild steel plate, aluminium witness screen (0.3 m behind steel plate) | ≤ 90% | 3,5 mm (SAE 1010/ 1020, hardness RB 55-70) 0,5 mm ANSI 2024 T3 | |
| Trajectory match | Horizontal ≤ 175 mm @ 300 m ≤ 385 mm @ 500 m | Vertical ≤ 125 mm @ 300 m ≤ 275 mm @ 550 m | |
| Waterproof test | No more than 15% of the tested rounds have leaks | | |

Compatibility with: AC/225(LG/3-SG/1)D/8 and PFP(NAAG-LCG/1-SG/1)WP(2010)0002 and STANAG 4172

| PACKING | |
|---------------------|--|
| Micro | 20 rounds fiberboard box |
| Makro | 540 rounds, ADR 1.4 S, UN0012 certified fiberboard case |
| Weight (540 rounds) | Net: 6.63 kg (±0.04 kg) Gross: 6.99 kg (±0.04 kg) NEQ: 0.89 kg |
| Hazard class | 1.4 S |
| UN Classification | CARTRIDGES, SMALL ARMS |

Packaging options are available based on the buyer's request. Cartridges can be supplied in standard outer cartons or, for an additional cost, in metal M2A1 boxes. All shipments are palletized, with boxes and pallets marked according to the customer's specifications.

V = Corrected velocity
XCP = Corrected mean chamber pressure
XPP = Corrected mean Port pressure
HSD = Horizontal standard deviation
VSD = Vertical standard deviation
Mr = Mean radius

Test Equipment

The equipment that is used for testing the ballistic characteristics of the ammunition is from Prototypa and is as follows:

- Universal Ballistic Breech (Receiver) UZ-2002
- Support reducing inserter UZ-2002
- Exchangeable parts sets for cal. 5.56x45 mm - for action time measuring:
 - Breech block head insulated marked 1 INM
 - Firing pin insulated marked 1 INA
 - Extractor marked 1
 - Firing pin spring
 - Extractor spring
 - Extractor cap
 - Rivet 3x8
 - Firing pin end
- Pressure Test Barrel cal. 5.56x45 mm for Receiver M2; Length = 508 mm, KISTLER 6215 pressure vent position M1-46.5 mm, M2=280 mm
- Velocity/Accuracy Test Barrel cal. 5.56x45mm for Receiver M2; Length = 508 mm
- Head space gauge GO and NOGO cal. 5.56x45 mm.
- SAU-4QU Signal acquisition unit
 - 4 charge inputs for transducers/voltage inputs (programmable)
- Quartz High pressure Sensor KISTLER 6215A1
- LS06 Intelligent Light gates
 - Diode system, Base 1 m, software BMS - English
- BP-1 Bullet pull tester.
 - Range of calibers from 4.5 to 12 mm
 - Maximum load 2500 N

The equipment is controlled, maintain, and calibrated according to the specifications. We are always aiming for improving the testing facility with latest in line equipment's and assuring that the possibility of mistake is reduced to the minimum.

Outsourcing Components

ATS® Ammunition has its own top-to-bottom manufacturing of a finished Product, an output of In-house made Machines, and produces 100% In-house Materials, Components and Tooling). ATS AMMO 5.56 x 45 mm, SS109 components (bullet, case, primer) are perfectly compact, customizable and *available for individual purchase*.

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|  |
| PRIMER |
| No mercury |
| CuZn30 |

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|  <small>Case Length: max 44.70 mm</small> |
| CASE 5.56 x 45 mm |
| Unprimed |
| CuZn30 |

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|--|
|  <small>Grain Bullet Length: max 23.4 mm</small> |
| SS109 (M855) FMJ BALL |
| 4 g 62 grain |
| CuZn10 Lead Core |

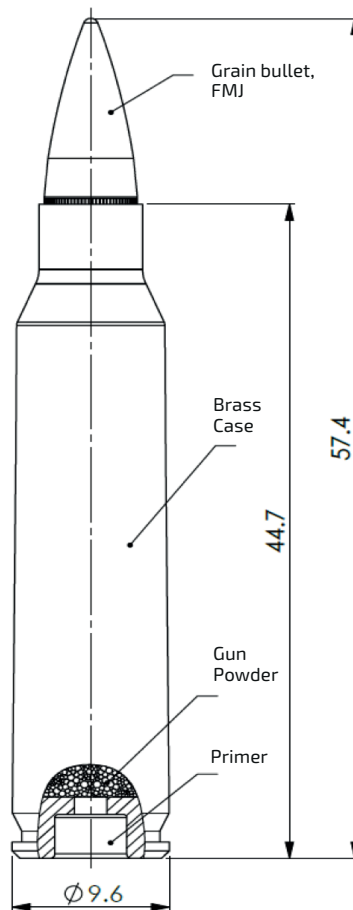


Image: Components Layout (5.56 x 45 mm, SS109)
Part number: 5561009; NSN 1305-54-000-0139