



DENEL LANDWARD
Pretoria Metal Pressings (PMP)

Supply and delivery of ammunition to DENEL PMP

Round 9 x 19mm Luger Full Metal Jacket 115gr or 124gr

This specification forms part of Denel PMP's tendering process to indicate the parameters of importance to which the rounds required needs to be complied with.

The required rounds need to comply with SAAMI and CIP standards.

The following is the typical parameters that will be inspected and tested upon receiving samples for testing. A minimum of 500 rounds is needed for inspection purposes.

1. The rounds shall be made up from newly manufactured components (no reloading of ammunition will be accepted)
 - Full metal jacket bullet, consisting of gilded metal jacket and a lead core 115gr or 124gr.
 - Cartridge case manufactured from cartridge brass 70/30.
 - Primer/percussion cap, Boxer or Berdan, manufactured from Brass 70/30.
 - Propellant designed and loaded to prevent compressed loads and to comply with the prescribed SAAMI or CIP standard velocities. The propellant shall be free of any foreign matter. The loading shall attain the desired chamber pressures according to SAAMI or CIP standards.
2. The dimensions of the assembled rounds shall adhere to the minimum requirements set out in SAAMI and CIP standards:
 - Overall length $\leq 29.69\text{mm}$
 - Cartridge case length $\leq 19.15\text{mm}$
 - Rim dia $\leq 9.96\text{mm}$
 - Head dia $\leq 9.93\text{mm}$
 - Shoulder dia $\leq 9.65\text{mm}$
 - Extraction groove dia $\leq 8.79\text{mm}$
3. The head stamp
 - The manufacturers head stamp shall be stamped onto the head of the cartridge case.
4. The ammunition shall be operational in the following temperature and atmospheric range:
-20°C to +50°C and 0% to +90% humidity, condensing.

5. The ammunition shall have a shelf life of at least 10 years when stored under the following conditions:

-10 to +30°C

6. The following functional testing will be performed on the ammunition:

Characteristic	Specification
Average velocity at +21°C (corrected, 260mm barrel Standard deviation not greater than 10m/s	401,3 ± 15 m/s at 5m
Average chamber pressure at +21°C (corrected): Average chamber pressure +3 std. dev. (corrected):	≤ 215MPa (Piezo method) ≤ 250MPa (Piezo method)
Shot time at +21°C: Shot time at -40°C:	≤ 4 milliseconds ≤ 10 milliseconds
Accuracy at +21°C:	Mean radius ≤ 76,2mm at 46m.
Integrity of the bullet at +21°C:	No separation of bullet jacket and core.
Bullet extraction resistance at +21°C:	Minimum 20kgf.

Rounds shall function at +21°C, -40°C and +52°C without casualty in serviceable, Beretta Mod. 92, Glock, Beretta PX4 Storm, BXP and H&K MP5. All rounds must be easy to load and extract without any difficulty.

There shall be no stoppages or interruption in the functioning of the weapon that can be attributed to any of the following ammunition defects:

- Bullet remains in the barrel.
- Ammunition functions premature, misfire, or audible hang-fire.
- Cartridge case fails to extract.
- Ammunition does not fit the chamber.
- Malfunction of the weapon that can be attributed to an ammunition defect.
- The bullet may not separate (core and jacket separation) during firing.
- Breech explosion.
- Primer misfire

None of the following defects shall be present on the cartridge cases after being fired:

- Missing, loose or pierced percussion cap.
- Transverse splits in cartridge case or severe transverse stretch-marks around cartridge case.
- Longitudinal splits in body or mouth of cartridge case.
- Cartridge case separations.
- Gas leaks between percussion cap and cartridge case on more than 66% of the cap circumference.

7. The following manufacturing and visual defects shall not be acceptable:

- Percussion cap turned, loose, deformed, inverted or protruding above the surface of the cartridge case head.
- Any strange splits in the body or mouth, flaking of material and any prominent dents, cuts or deep draw marks, folds, wrinkle or bulges may not occur on the cartridge case.
- Bullet may not be loose in the cartridge case or may not be pressed in by hand.
- The rounds shall be free of corrosion, stains, discoloration, dirt or oil.

8. Lot size and identification

A lot of rounds shall consist of rounds produced in one continuous and unchanged process.

A Lot shall contain propellant from one batch.

The final test results per manufactured lot shall be submitted.

9. Packaging requirements

Name of Manufacturer

Type of ammunition.

Quantity

Hazard pictograms as contemplated in SANS 10234 or GHS published by the United Nations.

Batch numbers

Net explosive content mass

UN number

UN packaging certification.

Supplier address

10. Documentation requirements

A complete Product specification (incl permissible tolerances for specified parameters) from the manufacturer shall be submitted together with the tender.