

BUREAU OF INDIAN STANDARDS
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IS 10994 (Part 2) : 2023

भारतीय मानक मसौदा
शॉट गन के कार्ट्रिज के लिए विशिष्टि
भाग 2 ब्लैंक कार्ट्रिज
(IS 10994 भाग 2 का पहला पुनरीक्षण)

Draft Indian Standard
SPECIFICATION FOR CARTRIDGES FOR SHOT GUNS
PART 2 BLANK CARTRIDGES
(*First revision of IS 10994 Part 2*)

UDC 623.455.6 : 623.456.5

Arms and Ammunition for Civilian Use
Sectional Committee PGD 28

Last Date for Comments: XXX

NATIONAL FOREWORD

This Indian Standard (First Revision) will be adopted by the Bureau of Indian Standards after the draft finalized by the Arms and Ammunition for Civilian Use Sectional Committee will be approved by the Production and general Engineering Division Council.

This Indian Standard originally published by the Indian Standards Institution on 1984, The first revision of this standard has been taken up to include the last methods for Arms and Ammunition for Civilian Use being practiced across the globe.

This standard covers the dimensional, material and testing requirements for Cartridges for Shot Guns. Shot guns are required by civilians for games and hunting purposes.

This Indian Standard (IS 10994) is being issued in the following parts, part 1 covering general requirements for shot gun cartridges and subsequent parts covering the individual components

- Part 1 General requirements
- Part 2 Blank cartridges
- Part 3 Case empty
- Part 4 Cap filled
- Part 5 Anvil
- Part 6 Propellant
- Part 7 Discs
- Part 8 Air cushion
- Part 9 Lead shots

In this revision, the following changes have been made:

- a) New figures have been added;
- b) Practices of fitting removal and cleaning have been updated; and
- c) Structure of the document has been updated.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated expressing the result of a test or analysis, shall be rounded off in accordance with IS 2 : 2022 'Rules for rounding off numerical values (*second revision*).' The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

Indian Standard

**SPECIFICATION FOR CARTRIDGES FOR SHOT GUNS
PART 2 BLANK CARTRIDGES**

1 SCOPE

Covers the general requirements about sampling inspection and performance testing of blank shot gun cartridges for general purposes for use at -20°C to +50°C.

This specification covers the requirements of blank cartridges (without lead shots) for general purpose use only, that is, for creating a loud sound to frighten off intruders.

2 REFERENCES

<i>IS No.</i>	<i>Title</i>
IS 10994 (Part 1) : 1984.	Specification for Cartridges for Shot Guns Part 1 General Requirements

3 COMPONENTS, NOMENCLATURE AND CONFORMITY

A typical assembly illustration for guide fine showing names of components is given in Fig. 1 and list of components indicating their conformity to relevant part of this Indian Standard is given below:

Component	Part No. of IS 10994
Case, Empty	Part 3
a) Body	
b) Head	
c) Cup where used	
d) Cap chamber	
e) Base wad	
Cap Filled	Part 4 *
a) Cap empty	
b) Initiatory composition	
c) Disc	
Anvil	Part 5 *
Propellant	Part 6 *

Disc	Part 7
Air Cushion	Part 8

4 SAMPLING

The acceptance inspection of cartridges shall be in accordance with IS 2500 (Part 1) : 2000 “Sampling procedures for inspection by attributes”. A list showing classification of defects and AQLs to be adopted is given in Annex A of IS 10994 (Part 1) : 1984.

5 TEST

5.1 Drop Test

Ten capped cases shall be dropped through a distance of 244 cm in a suitable drop test apparatus. The capped cases should be securely held in adopter in a 30 kg block with mouths of half the cases downward and remaining with mouth upward. No cap shall function after dropping.

5.2 Sensitivity Test

Twenty five capped cartridge cases from each lot shall be tested for sensitivity in cap test apparatus, using a carbon steel ball weighing exactly 113.4 g and adjusted to give a drop of 30.48 cm. All the caps sensitivity tested shall fire satisfactorily under these conditions.

5.3 Insensitivity Test

Twenty proof samples shall be selected from each lot and assembled into cartridge cases. Then these cases shall be tested for insensitivity in the sensitivity test apparatus using suitable adapter and carbon steel ball weighing 113.4 g to give a drop of 10.16 cm; none of the cap should function.

5.4 Pull Out Test

Five cartridges from each lot shall be tested for strength of turnover by cutting open as near to the head as possible and the contents removed from the rear (without disturbing turnover) and the turnover tested, which shall not be less than 177.93 N at 8 to 10 percent moisture content. This shall also cover the breakdown tests to ascertain the correctness of construction of the cartridges. The mean of the charge mass of 5 cartridges shall be within the specified limits.

5.5 Proof Test

The cartridges shall pass the proof test given in Annex A.

5.6 Wads and cartridge cases when tested for functioning trial shall function correctly.

6 RESUBMISSION OF REJECTED BATCHES

Rejected batches may be resubmitted with the approval of the purchaser. Where re-submission is permitted and the manufacturer elects to re-submit, the manufacturer shall first inspect the rejected batch, either for the particular types or classes of defects that caused the batch to be rejected, or for all types and classes of defects, as directed by the purchaser. The manufacturer shall repair or remove all defectives of these types or classes. The purchaser shall inspect a re-submitted batch for the types or classes of defects, using normal or tightened inspection at this discretion.

7 PROTECTIVE TREATMENT

The body of the finished cartridge shall be coated with lacquer.

8 PACKING AND MARKING

8.1 Twenty cartons containing 25 cartridges per carton shall be packed in one box or as specified in the contract or order but overall mass of one packed box shall not exceed 35 kg for safety in handling. The cartridges shall be delivered in lots of 10,000 cartridges plus 20 for proof. Each lot is to be filled preferably with one batch of propellant.

8.2 BIS Certification Marking

The product(s) conforming to the requirements of this standard may be certified as per the conformity assessment schemes under the provisions of the *Bureau of Indian Standards Act, 2016* and the Rules and Regulations framed thereunder, and the products may be marked with the standard mark.

9 SAFETY

Responsibility for the safety of operation rests with the manufacturer if the instructions and guidelines for safe usage provided by manufacturer are followed properly.

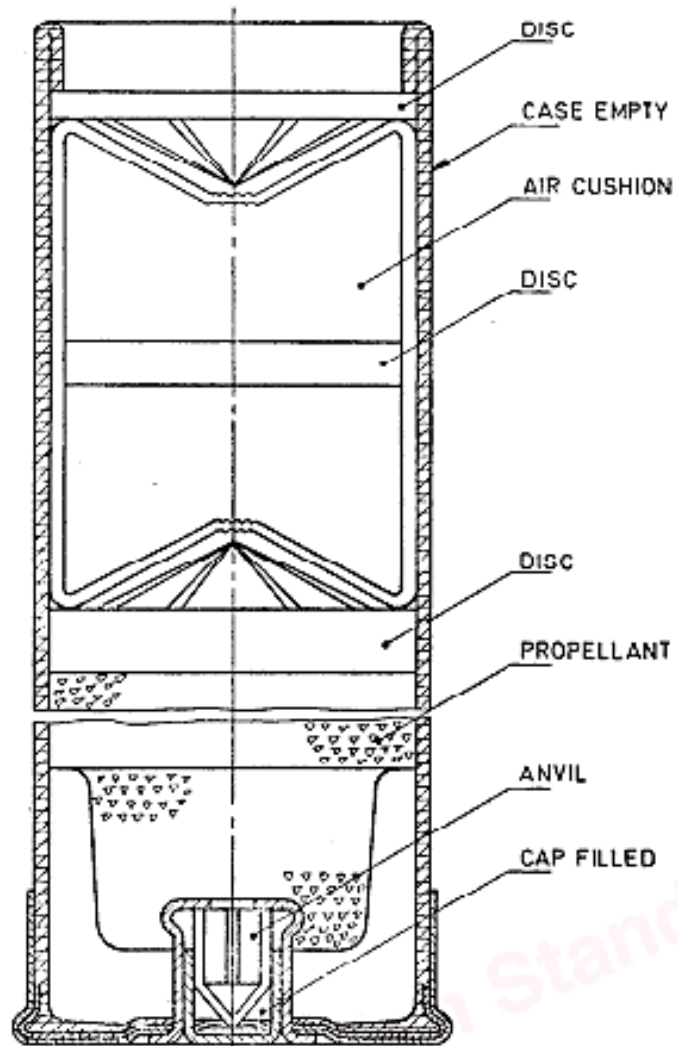


FIG. 1 BLANK CARTRIDGE FOR SHOT GUNS

ANNEX A
(Clause 5.5)

PROOF TEST

A-1 TYPE OF PROOF

A-1.1 Functioning and Casualty Proof

32 cartridges shall be fired from old gun (16 rounds) and new gun (16 rounds). The fired cases shall be free from the defects. The acceptance criteria for these defects is appended below:

Sl No.	Defect	Acceptance Quality Levels		
		Critical	Major	Minor
		0	0.65 percent	1.5 percent
i)	Pierced cap	@		
ii)	Burst case	@		
iii)	Collapsed case	@		
iv)	Case separation	@		
v)	Gas escape		@	
vi)	Stretching		@	
vii)	Cap blown out	@		
viii)	Misfire		@	
ix)	Head loose		@	
x)	Hard to load and extract		@	
xi)	Air cushion remains in the bore		@	
xii)	Poor audibility (for blank amn)		@	

A-1.2 Sentencing

The lot shall be sentenced subject to satisfactory performance at F and C proofs as per the acceptance criteria given in A-2.

A-2 Acceptance plan for proof of cartridges is given below:

AQLs	
Critical	— 0
Major	— 1.0 percent
Minor	— 2.5 percent
First sample size	— 32
Critical	— 0
Major	— 0 Ac 2 Re

Minor	— 1 Ac 4 Re
Second sample size	— 32
Critical	— 0
Major (cumulative) -1 AC 2 Re	
Minor (cumulative) -4 AC 5 Re	

A-3 Failure of the cartridges in any sample to comply with the applicable requirement shall be cause for rejection of the lot subject to testing of a second sample consisting of same quantity of cartridges used in initial test at which the failure occurred. Failure of the cartridges to comply with the applicable requirements at reproof shall be the cause for rejection of the lot.