



**GOVERNMENT OF INDIA
MINISTRY OF DEFENCE**

JOINT SERVICES SPECIFICATION

ON

BOARDS, CARTON FOR AMMUNITION

(DS Cat No.)

Boards, Carton for Ammunition, 0.508 mm thick	8135-000142
Boards, Carton for Ammunition, 0.762 mm thick	8135-000258
Boards, Carton for Ammunition, 0.889 mm thick	8135-000269
Boards, Carton for Ammunition, 1.143 mm thick	8135-000270

JSS 8135 – 15: 2010

(Revision No. 2)

Supersedes JSS 8135 – 15: 2000

(Revision No. 1)

**DIRECTORATE OF STANDARDISATION
DEPARTMENT OF DEFENCE PRODUCTION
MINISTRY OF DEFENCE
'H' BLOCK, NIRMAN BHAWAN PO
NEW DELHI - 110 011**

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LIST OF MEMBERS ASSOCIATED WITH ARMAMENT STANDARDISATION SUB COMMITTEE

1. This Joint Services Specification has been approved by Dr. BR Gandhe, Director, Directorate of Armaments (R&D), and Chairman Armament Standardisation Sub Committee by circulation.

2. The following members were present/consulted in approving the document: -

<u>Sl No.</u>	<u>Name & Designation</u>	<u>Organisation</u>
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10	Col JS Lotay, Jt Controller	CQA (Amn), Pune
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15.	Shri Shrish Kumar Jt. General Manager	Ammunition Factory, Pune
16.	Lt Col R K Talwar	Secretary ASSC

RECORD OF AMENDMENTS

Amendment		Amendment Pertains to Sl. No./Para No ./ Column No	Authority	Amended by	Signature & Date
No.	Date			Name & Appointment (IN BLOCK LETTERS)	

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0. FOREWORD

0.1 This Joint Services Specification has been prepared by the Armament Standardisation Sub Committee on the authority of the Standardisation Committee, Ministry of Defence.

0.2 This specification has been approved by the Ministry of Defence and is mandatory for use by the Defence Services.

0.3 This specification is a revision of JSS 8135-15:2000 (Revision No. 1) and supersedes the same.

0.4 This specification is meant to govern manufacture, supply and quality assurance of Boards, Carton for Ammunition.

0.5 Quality Assurance Authority for the item covered by this specification is The Controller, Controllerate of Quality Assurance (Military Explosives), Aundh Road, Kirkee, Pune – 411 020. Enquiries regarding this specification relating to any contractual conditions should be addressed to the Quality Assurance Authority named in the tender or contract. Other enquiries should be referred to: -

The Director,
Directorate of Standardisation,
Ministry of Defence,
'H' Block, Nirman Bhawan PO,
New Delhi - 110 011.

0.6 Copies of this specification can be obtained on payment from:-

The Director,
Directorate of Standardisation
Standardisation Documents Centre,
Ministry of Defence
Room No. 5, 'J' Block
Nirman Bhawan, PO New Delhi- 110 011.

0.7 This specification holds good only for the supply order for which it is issued.

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1. SCOPE

1.1 This specification is meant to govern manufacture, supply and quality assurance of Boards, Carton for Ammunition suitable for use in the manufacture of Carton for Ammunition.

2. RELATED SPECIFICATIONS/DOCUMENT

2.1 Reference is made in this specification to: -

IS 138:1992	Ready Mixed Paint, Marking, for Packages and Petrol Containers – Specification (Third Revision) Reaffirmed 2004, Amds 1
IS 1060 (Part 1) : 1966	Methods of sampling and test for paper and allied products: Part 1 (Revised) Reaffirmed 2009, Amds 4
IS 1060 (Part 2) : 1960	Methods of sampling and test for paper and allied products: Part 2 Reaffirmed 2009
JSG 0114: 1994	Methods of tests for textiles used in Ammunition
IND/ME/381 (b)	Casein glue
IND/ME/532 (c)	Starch paste

2.2 Copies of the Indian Standards are obtainable on payment from: -

Bureau of Indian Standards
Manak Bhawan
9, Bahadur Shah Zafar Marg
New Delhi - 110 002
or
their regional/branch offices.

2.3 Copies of the Joint Services Guide are obtainable on payment from: -

The Director,
Directorate of Standardisation
Standardisation Documents Centre,
Ministry of Defence
Room No. 5, 'J' Block
Nirman Bhawan, PO New Delhi- 110 011.

2.4 Copies of IND/ME specification are obtainable on payment from: -

The Controller,
Controllerate of Quality Assurance
(Military Explosives)
Aundh Road, Kirkee,
Pune - 411 020.

3. MANUFACTURE AND FINISH

3.1 The material shall consist of good quality, well-sized board with pure Kraft lining on one face. It shall possess good securing and bending properties and the plies shall adhere firmly together. The board shall be uniform in thickness, free from holes, hard spots and lumps and shall lie flat and be dimensionally stable. Both sides of the board shall be clean and free from loosely bound fibres and loading.

NOTE :- The adhesive used shall be starch paste to IND/ME 532 (c) or casein glue to IND/ME/381(b) when pure craft lining is present and shall be approved by the Quality Assurance Officer prior to use. No modifications in the adhesion shall be made without the consent of the Quality Assurance Authority.

4. TENDER SAMPLE

4.1 The contractor shall submit a tender sample of 1 kg conforming do this specification, free of charge.

5. PRE-INSPECTION OF STORES/CONSIGNMENT

5.1 Manufacturer/contractor must satisfy themselves that the stores are in accordance with the terms of the contract and fully conform to the required specification, by carrying out a thorough pre-inspection of each lot before actually tendering the same for inspection to the Quality Assurance Officer nominated under the terms of the contract. A declaration by the contractor that a necessary pre-inspection has been carried out on the stores tendered, will be submitted along with the challan. The declaration will also indicate the method followed in carrying out pre-inspection showing the features checked/tested and will have the test certificate attached to the challan/declaration.

5.2 If the Quality Assurance Officer finds that pre-inspection of the consignment as required above has not been carried out, the consignment is liable for rejection.

6. QUALITY ASSURANCE

6.1 Inspection

6.1.1 The material shall be subject to inspection by and to the final approval of the Quality Assurance Officer/Quality Assurance Authority. Samples of the material may be taken from any portion of a consignment.

6.2 Sampling

6.2.1 Not less than 5 per cent of the packages shall be sampled. The representative test sample, not less than 0.5 kg., shall consist of sheets of at least 30 x 30 cm.

6.3 Criteria for conformity

6.3.1 If on examination, any sample is found not to conform to this specification, the whole batch/lot/consignment may be rejected.

6.3.2 The foregoing provisions shall apply equally to prime contractors and to any sub contractors.

6.4 Test Requirements

6.4.1 Samples taken from any portion of the supply of material shall conform to clause 3 and in addition shall conform to the test requirements: -

TEST REQUIREMENTS OF BOARDS, CARTON FOR AMMUNITION

(a) **Chemical**

<u>Sl. No.</u>	<u>Characteristics</u>	<u>Requirements</u>	<u>Test Method</u>
1	2	3	4
(i)	Moisture content at 103 to 105°C for 2 hours per cent by mass	Max 9.0	IS 1060 (Part 1) Method 9
(ii)	pH of water extract	Min 5.5 Max 7.5	IS 1060 (Part 1) Method 10
(iii)	Water soluble chlorides calculated as Sodium chloride, per cent by mass	Max 0.05	JSG 0114 Method 7
(iv)	Water soluble sulphates calculated as anhydrous Sodium sulphate, per cent by mass	Max 0.25	IS 1060 (Part 2) Method 18
(v)	Fatty and/or similar acids, calculated as oleic acid per cent by mass	Max 0.25	IS 1060 (Part 2) Method 19
(vi)	Ash on incineration at 800°C ± 25 deg C, per cent by mass	Max 10.0	IS 1060 (Part 1) Method 11

Note:- All percentages shall be calculated on the dry mass material after drying to constant mass.

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(b) **Physical**

The material shall be conditioned, prior to test, for 24 hours in an atmosphere of 65 ± 2 per cent relative humidity at $27^{\circ}\text{C} + 2$ deg C. The material shall be capable of making carton, without any cracks during creasing, scoring or stamping. No crack will be visible on folded edges.

The sample shall comply with the following physical requirements: -

Sl. No.	Thickness in mm including Kraft lining	Substance g/m^2	Bursting strength kPa (kg/cm^2) Min	Minimum Thickness of pure Kraft lining in mm
(i)	0.508 \pm 0.051	350 \pm 35	549.2 (5.6)	0.101
(ii)	0.762 \pm 0.076	530 \pm 55	637.4 (6.5)	0.127
(iii)	0.889 \pm 0.089	650 \pm 65	686.5 (7.0)	0.127
(iv)	1.143 \pm 0.114	800 \pm 80	735.5 (7.5)	0.203

7. WARRANTY

7.1 The stores supplied against the contract shall be deemed to be warranted against defective material and performance by the contractor for a period of 12 months from the date of receipt of the store at the consignee's end and if during this period any of the stores supplied is found defective the same shall be replaced by the supplier/manufacturer/contractor free of charges at the consignee's premises.

8. PACKAGING

8.1 50 or 100 boards (according to the thickness of boards on order) shall be wrapped in paper to form a packet. 10 such packets shall be packed with a single layer of hessian cloth to form a bale. The bale will be placed between two suitable thick boards (wood or paper), one on top and one at bottom and the assembly banded all round by hoop iron, for safe rail transit.

OR

Packaging (Preservation, identification and packing) shall be in accordance with the terms of the contract.

9. MARKING

9.1 All bales containing the material shall be indelibly and legibly marked with the following details: -

- (i) Nomenclature and specification number of the material
- (ii) Name and address of the consignee
- (iii) A.T or S.O number and date
- (iv) Consignment number
- (v) Batch No. and date of manufacture
- (vi) Gross and net mass.
- (vii). Consecutive number of package and total number of packages in the consignment
- (viii) Date of supply.
- (ix) Manufacturer's initials or recognised Trade mark.

9.2 In addition to the above, the Quality Assurance Officer may suggest some more markings/identifications suitable at the time of inspection.

9.3 The paint used for marking should conform to IS 138 and to the satisfaction of the Quality Assurance Officer/Quality Assurance Authority.

10. DEFENCE STORES CATALOGUE NUMBER

10.1 The Defence Stores Catalogue Numbers as applicable to this specification are as under: -

<u>Nomenclature</u>	<u>DS Cat No.</u>
Boards, Carton for Ammunition, 0.508 mm thick	8135-000 142
Boards, Carton for Ammunition, 0.762 mm thick	8135-000 258
Boards, Carton for Ammunition, 0.889 mm thick	8135-000 269
Boards, Carton for Ammunition, 1.143 mm thick	8135-000 270

11. SUGGESTIONS FOR EMPROVEMENT

11.1 Any suggestion for improvement in this document may be forwarded to :-

The Director,
Directorate of Standardisation,
Ministry of Defenre,
'H' Block, Nirman Bhawan PO,
New Delhi - 110 011.