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GOVERNMENT OF INDIA  
MINISTRY OF DEFENCE

S P E C I F I C A T I O N  
FOR  
"THREAD, LOCKING, COTTON, 50 N U/D"  
FOR AERONAUTICAL PURPOSES

ISSUED BY

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RAKSHA MANTRALAYA

AGRA CANTT-282001

RECORD OF AMENDMENTS

Sub heading to which amendment pertains	Authority	Incorporated by (Name and Rank in block letters)	Initials
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- 0.1 **FOREWORD** This specification has been prepared by a special committee at ADRDE and approved by DIRECTOR, ADRDE, Agra Cantt.
- 0.2 This specification would be used for manufacture, inspection and procurement of Thread, Locking, Cotton, 50 N, U/D for Aeronautical purposes.
- 0.3 In case of any discrepancy between this specification and any sample or pattern, this specification will be taken as correct.
- 0.4 Enquiries regarding this specification, in relation to any contractual conditions, should be addressed to the Inspecting Authority named in the tender or contract. Other enquiries will be referred to Director, ADRDE, Agra Cantt.
- 0.5 Copies of this specification can be obtained on payment from :-

"Aerial Delivery Research & Development Estt.  
Post Box No. 51, Station Road, AGRA CANTT - 282001"

or

The concerned Inspecting Authority.

1. **SCOPE**

- 1.1 This specification covers the requirements of undermentioned material :-

"Thread, Locking, Cotton, 50 N, U/D"

2. **RELATED SPECIFICATIONS**

- 2.1 Reference is made in this specification to :-

- 2.1.1 IS : 2 Rules for rounding off numerical values.

*Link*



- 2.1.2 IS : 196-1950 Atmospheric conditions for testing.
- 2.1.3 IS : 1670 Methods for determination of breaking load, elongation at break and tenacity of yarn.
- 2.1.4 IS : 832 Methods for determination of twist in yarn.
- 2.1.5 IS : 1376 Specification for cotton Sewing Thread, for Aeronautical purposes.  
APPENDIX 'A' Method for determination of length per Kg. of cotton Sewing Thread, Bleached.
- 2.1.6 IS : 1390 Method for determination of pH value of Aqueous Extracts of Textile Materials (cold method)
- 2.1.7 IS : 4905 Method for random sampling.
- 2.1.8 IS : 1315 Method for determination of linear density of yarn spun on cotton system.

2.2 All the specifications referred to in this specification for any tender or contract shall mean the edition current on the date of such tender or contract.

2.3 Indian Standard specifications are issued by the Bureau of Indian Standard Institution and are obtainable on payment from the Sales Section, Bureau of Indian Standard, Manak Bhawan, 9 Bahadur Shah Zafar Marg, New Delhi - 110002 or their regional offices.

3. MATERIALS

3.1 The basic materials of yarn used in the manufacture of the thread shall be evenly spun from long staple combed cotton fibres.

4. MANUFACTURE

4.1 The yarn shall first be suitably twisted and plied to the requirement, given in clause 5 below, under uniform tension.



DIMENSIONS AND OTHER DETAILS

The thread shall conform to the essential particulars given in table at Appendix 'A'.

The thread shall not be more than one year old from the date of manufacture to the date of delivery.

WORKMANSHIP AND FINISH

The thread shall be uniform in thickness throughout and shall be free from defects such as slubs, knots, kinks, projections, broken as loose ends and other manufacturing imperfections which affect its appearance or serviceability.

The thread shall have uniform diameter with round cross section and shall be smooth to handle. This shall be free from all manufacturing flaws.

MARKING

Each reel shall be wrapped all around tightly using paper wrapping of appropriate size. This wrapping paper shall be indelibly marked with the contractor's name, trade mark, date of manufacture, length of the material, D.S. Cat. No. and nomenclature of the store.

QUALITY

Any portion of the samples drawn from a consignment, on examination, shall show its conformity to the particulars furnished in the Table under Appendix 'A' in addition to the following, when tested in accordance with the standard methods.

<u>Tests</u>	<u>Requirement</u>
pH (by cold method)	6 - 8.5

mark

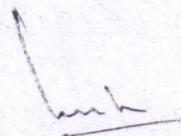


9. PRE-INSPECTION OF STORES/CONSIGNMENT

- 9.1 Manufacturers/contractors 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 thorough pre-inspection of each lot before actually tendering the same for inspection to the Inspecting Officer nominated under the terms of the contract. A declaration by the contractor that necessary pre-inspection has been carried out on the stores tendered shall be submitted alongwith 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.
- 9.2 If the Inspecting Officer finds that pre-inspection of the consignment as required above has not been carried out, the consignment is liable for rejection.

10. SAMPLING

- 10.1 The manufacturer/supplier shall tender the store duly numbered serially and arranged in such a way that all the units are easily accessible to the Inspector.
- 10.2 For carrying out full laboratory tests, the reels selected as in column 2 of the table given below shall constitute the test samples.
- 10.2.1 The Inspector shall draw samples for full tests from the bulk lot at random using the technique of simple random sampling as given in IS : 4905.
- 10.3 The remaining rolls of the lot shall be subjected to breaking load test only.





10.4

TABLE

LOT SIZE

No. of Units (In reels)	Sample size for full tests
Up to 25	5 or lot size, whichever is less.
26 to 50	8
51 to 90	13
91 to 150	20
151 to 280	32
281 to 500	50
501 to 1200	80
1201 and above	125

10.5 The reels shall be supplied in continuous length of 500 or 1000 metres or as ordered by the procuring authority.

11. CRITERIA FOR CONFORMITY

11.1 All the sample units drawn as per cl.10 shall be tested/examined to the relevant specification requirements. If all the sample units are found to conform to the specified particulars as given in the specification, the supply shall be considered to be in conformity, otherwise not.

12. INSPECTION

12.1 If on examination, material from any portion of a consignment is found not conforming fully to the specification, the whole consignment is liable to be rejected.

12.2 If on examination of 20% of any delivery, 20% of those examined are found not conforming to this specification in any respect, then the whole consignment may be rejected.

12.3 All reels not fully in accordance with this specification shall be rejected.

*Link*



13. WARRANTY

13.1 The store supplied against this order shall be deemed to bear a warranty of the contractor against defective material, workmanship and performance for a period of 12 months from the date of receipt of stores at consignee's Depot. If during this period the store supplied are found by the consignee to be defective the same shall be replaced immediately with serviceable store as per this specification by the contractor at site free of any charge or cost.

14. PACKING

14.1 The thread shall be supplied in reels of continuous length without joints, of 500/1000 m or as required by the procuring authority. Each reel shall be given paper wrapping with marking, as given under clause 7, and 10 such reels shall be packed in polythene bag of fitting size to form a unit pack, and the mouth of the bag be heat sealed. Appropriate no. of such unit packs shall be properly arranged in case wood packing (CWP) provided with liners waterproof. The empty space, if any, shall be filled-in with cushioning materials to prevent any movement of the contents inside the case wood packing, and top lid of the case shall be nailed carefully so that the nails do not pierce into the contents of the cases. The gross mass of the CWP shall not exceed 40 Kg. (Packing materials used should be of the best trade quality and previously approved by the Inspecting Officer)

14.2 If ordered for delivery to a local Inspection Depot, the thread shall be delivered loose in firm's returnable packs. After inspection, the accepted supplies shall be packed by Inspection Depot Authorities as indicated in para 14.1 above.

14.3 Before despatch each cases wood packing (CWP) shall legibly and indelibly be marked showing the following details :-

- (a) Nomenclature and Cat/Part No. of the store
- (b) Quantity packed in each CWP

*Handwritten signature*



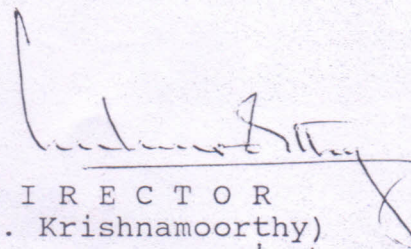
- (c) Serial Number of the CWP
- (d) Month and year of packing
- (e) Name and trade mark of the manufacturer
- (f) Gross mass of each CWP in Kg.
- (g) Name and address of the consignee
- (h) Inspection Note No. and date

15. DEFENCE STORES CATALOGUE NO.

Not yet allotted

16. SUGGESTIONS FOR IMPROVEMENT

- 16.1 Any suggestion for the improvement of this document shall be forwarded to the Director, Aerial Delivery Research & Development Establishment, Post Box No. 51, Station Road, Agra Cantt - 282001.

  
D I R E C T O R  
(K.N. Krishnamoorthy)

17/11/12

CTC  
Lishi  
04/9/06  
(PRIYI SANGANA)  
for DIRECTOR  
ADRDE, Agra.