

# TAPE COTTON MEDIUM

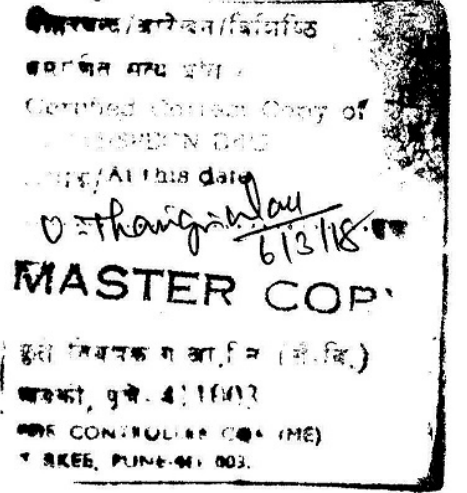
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DC No. 5405-ME

01.02.16

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Width in mm		DS Cat Nos.
i.	6	-- 8315 - 000 447
ii.	10	-- 8315 - 000 448
iii.	13	-- 8315 - 000 449
iv.	16	-- 8315 - 000 450
v.	19	-- 8315 - 000 451
vi.	22	-- 8315 - 000 452
vii.	25	-- 8315 - 000 453
viii.	38	-- 8315 - 000 454
ix.	50	-- 8315 - 000 455



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TROLLERATE OF QUALITY ASSURANCE (MILITARY EXPLOSIVES)

AUNDH ROAD, PUNE - 411 020.

DEPARTMENT OF DEFENCE PRODUCTION

MINISTRY OF DEFENCE

AMENDMENT RECORD

Amendment		Authority	Clauses Affected	Remarks
D.C.	DATE			

# TAPE COTTON MEDIUM

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THIS SPECIFICATION OR ANY OTHER PATTERN, DRAWINGS OR ANY OTHER INFORMATION ISSUED IN CONNECTION THEREWITH MAY ONLY BE USED FOR A SPECIFIC ORDER PLACED BY THE COMPETENT AUTHORITY. IT IS NOT TO BE USED FOR ANY OTHER PURPOSE WHATSOEVER WITHOUT THE EXPRESS WRITTEN SANCTION OF THE DIRECTOR GENERAL OF QUALITY ASSURANCE, MINISTRY OF DEFENCE, NEW DELHI - 110 011 .

## 0. FOREWORD

0.1 This specification has been prepared by the CONTROLLERATE OF QUALITY ASSURANCE (MILITARY EXPLOSIVES) AUNDH ROAD, PUNE -411 020.

0.2 This specification is a revision of IND/ME/888(Prov) and supersedes the same.

0.3 For additional copies or any other enquiry regarding this specification reference should be made to the Quality Assurance Authority (i.e. CQA(ME) Aundh road, Pune-411 020).

## 1. SCOPE

1.1 This specification is meant to govern supply and inspection of Tape Cotton medium required for manufacture of bags for packing C.E./T.N.T/N.C.P. and Propellants.

## 2. RELATED SPECIFICATIONS AND DOCUMENTS

2.1 The related documents mentioned at clause 2.2 are those applicable at the date of publication of this specification. It is contractor's/manufacturer's responsibility to confirm their current applicability and to obtain from the Authority Holding Sealed Particulars ( i.e. CQA(ME) Aundh road Pune-411 020) information concerning any change that may be necessary due to cancellation replacement or supersession of any of these documents.

2.2 The following related specifications have been referred to in the preparation of this specification:-

JSG 0114 : 2015, Rev No. 1	-	Methods of tests for textiles used in Ammunition
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2.3 Copies of this specification and other related specifications are obtainable on payment basis as follows:-

SPECIFICATION	SOURCE OF SUPPLY
IS Specification	: Bureau of Indian Standards, Manak Bhawan 9, Bahadur Shah Zafar Marg, NEW DELHI – 110 002 or Their regional / Branch offices
IND/ME/ Specification	: C. Q. A. ( ME ), AUNDH ROAD, PUNE - 411 020.
JSS	: The Director Directorate of Standardization Standardization Documents Centre Ministry of Defence Room no 05. 'J' Block Nirman Bhawan PO New Delhi – 110 011

### 3. MATERIAL

3.1 The tape cotton, Medium shall be made from good quality cotton yarn. The weave shall be plain or twill. The tape shall be uniformly woven and shall be free from creases, flaws, knots and other defects. The selvedge shall be firm and straight. The tape may be proofed or unproofed. scoured and soured and the tape may be in loom state or in roll form and shall be of the width ordered in the contract. The tapes shall normally be supplied in  $50 \pm 10$  meters length in roll form. The tapes shall be as free from joints as practicable & the number of joints shall not exceed three in 50 meters and no piece length shall be less than 5 meters. Pins or other metal fastening shall not be used to join any two lengths of tape.

### 4. TENDER SAMPLES

4.1 A tenderer shall submit a tender sample (2 rolls/hanks) of 30 to 50 meters free of all charges, conforming to this specification, the minimum mass of the sample to be submitted for test shall not be less than 250 grams.

### 5. PRE-INSPECTION OF STORES

5.1 Before tendering the store to the Inspector, the Contractor shall carry out a thorough inspection of each delivery to satisfy himself that the store fully conforms to this specification and shall render a certificate to that effect to the Quality Assurance Officer.

### 6. QUALITY ASSURANCE

#### 6.1 Inspection

6.1.1 The tape cotton, medium and the packages in which it is contained shall be subject to inspection by and to the final approval of the Quality Assurance Officer/Quality Assurance Authority.

6.1.2 Samples of the material and of the packages, may be taken from any portion of a consignment/batch/lot.

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

6.1.4 The foregoing provisions shall apply equally to prime contractors and to sub-contractors, if any.

#### 6.2 Sampling

6.2.1 Not less than 5 samples from separate roll/hanks, each of at least 10 to 15 meters in length shall be drawn from a consignment of 10,000 meters or part thereof. The length of each sample in case of 6.0 mm and 10.0 mm tape shall be a minimum of 20 to 25 meters.

### 6.3 Test Requirements

6.3.1 Samples taken from any portion of the supply shall comply with clauses 3 above and shall also conform to the following requirements.

#### (A) Chemical requirements - i) General

Sl No.	Characteristics	passing Standard	Test Method Ref to JSG 0114
1	pH of aqueous extract Max Min	8.5 5.5	6
2	Water soluble chlorides, calculated as NaCl percent by mass Max	0.1	7
3	Water soluble sulphates, calculated as Na <sub>2</sub> SO <sub>4</sub> percent by mass Max	0.25	8
4	Ash, Percent by mass a) unproofed material, b) Proofed material Max Max	0.5 5.0	10

- 2) When the material is proofed it shall comply also with the following requirements in addition to the above tests (1 to 4).

Sl. No.	Characteristics	Requirements	Test Method Ref to JSG 0114
1	2	3	4
1	Mould Proofed material water soluble matter % by mass a) When mould proofed by para nitrophenol 0.25% b) When mould proofed by sodium pentachlorophanate - 0.5%	Min 0.35 Min 0.70	5 5
2	Smoulder proofed by Gelatine and Diammonium hydrogen phosphate. (a) Water soluble matter, percent by mass (b) Soluble phosphate calculated as Diammonium hydrogen phosphate percent (i) Max (ii) Min (c) Time of smouldering seconds	Min Max Max	5 5 3.0 2.5 5
3	Smoulder proofed by Galantine and Dianmonium hydrogen phosphate and mould proofed by paranitrophenol 0.25% (a) Water soluble matter percent (b) Soluble Phosphates calculated as Diammonium hydrogen phosphate, percent by mass (i) Max (ii) Min (c) Time of smouldering seconds,	(i) Max (ii) Min (i) Max (ii) Min Max	11.0 5.0 3.0 2.5 5
4	Smoulder proofed by Gelatine and Diammonium hydrogen phosolphate and mould proofed by sodium penta chlorophenate 0.5% (a) Water Soluble matter percent by mass (b) Soluble phosphates calculated as Diammniun hydrogen phosphates, percent by mass (i) Max (ii) Min (c) Time of smouldering seconds	Min Max Max	5 6.7 3.0 2.5 5

- NOTES;**
- i) The amount of material added In the proofing process shall not exceed 20% of the air-dry- mass, of the tape prior to proofing.
  - ii) The following details of a single process which gives satisfactory results are added for guidance.
    - a) Moulde Proofing - The tape is dipped in a 0.25% Solution of paranitrophenol or 0.5% sodium pentachlorophenate solution for 15 minutes, excess solution drained and the tape is dried in air.
    - b) Smoulder Proofed- Some as in (c). below but without paranitrophenol or sodium pentachlorophenate.
    - c) Mould and Smoulder Proofing – The tape is passed through a sizing bath containing 3 percent gelatine, 8 percent groundnut oil, 2 percent Diammonium hydrogen photrphate and 0.25 percent para nitrophpnol or 0.5 percent sodium pentachlorophenate. The nip rollers are adjusted to leave on the tape its own mass of size.
  - iii) When the percentage of Diammonium hydrogen phosphate present in the material is of the order of 2% - 3% additional mould proofing is necessary
  - iv) All percentages shall be calculated on the dry mass of the material after drying to constant mass.

) **Physical Requirements**

Material shall conform to the physical requirements of the given schedule attached to this specification. (Please see page No. 10)

7. **PACKAGING AND MARKING**

7.1 **PACKAGING**

7.1.1 Assemble as many rolls as convenient on a common hollow wooden or card board mandril. Securely tie with a piece of Jute, twine or cotton tape so as to form a bundle. Such bundle will be wrapped in polythene and finally with gunny bag and tied/stitched securely,

7.2 **Marking**

7.2.1 All the packages constituting a consignment shall each be legibly and durably marked with the following details as applicable.

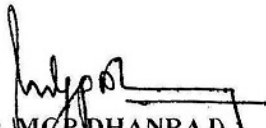
- (i) Nomenclature and specification number of the material,
- (ii) Name and address of the consignment,
- (iii) AT/SO No. and date,
- (iv) Consignment,
- (v) Lot No./ Batch No. and date of manufacture,
- (vi) Quantity in number,
- (vii) Consecutive number of package and total No. of packages
- (viii) Date of supply,
- (ix) Contractor's initials or recognised trade mark if any.



8.0 DEFENCE STORE CATALOGUE NUMBER

8.1 Defence Store Catalogue number allotted to the store are :-

	<u>Width in mm</u>		<u>DS Cat Nos.</u>
i.	6	--	8315 - 000 447
ii.	10	--	8315 - 000 448
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Date :- 28/01/2016


(Mrs. MGP DHANRAJ)  
Controller  
CQA [ME], PUNE

SCHEDULE TO- PHYSICAL REQUIREMENTS

Width in mm	Weave	Total Warp ends Min	Weft picks per dm, Min	Tex		Finished Mass per 100 metres In gramm	Breaking load on full width x 20 cm between grip	
				Warp	Weft		N	Min
1	2	3	4	5	6	7	8	
1. 6.0 ± 1.5	Plain or twill	20	125	21 Tex X 2	22.7 Tex	115 ± 5%	85	
2. 10.0 ± 1.5	“	30	125	“	“	160 ± 5%	115	
3. 13.0 ± 1.5	“	35	125	“	“	210 ± 5%	145	
4. 16.0 ± 1.5	“	45	125	“	“	255 ± 5%	180	
5. 19.0 ± 1.5	“	50	135	“	“	300 ± 5%	215	
6. 22.0 ± 1.5	“	65	140	“	“	385 ± 5%	265	
7. 25.0 ± 2.5	“	75	140	“	“	420 ± 5%	295	
8. 38.0 ± 2.5	“	110	140	“	“	645 ± 5%	445	
9. 50.0 ± 2.5	“	145	140	“	“	850 ± 5%	585	

## NOTE:-

- 1) When tapes are scoured the soured mass will be approximately 5 percent lighter.
- 2) The Tex count figured are for guidance only.
- 3) Before testing for physical requirements, the material shall be conditioned for 24 hours in an atmosphere of 65 ± 2% relative humidity at 27°C ± 2 deg C.
- 4) Samples shall comply with the physical requirements for the specific width in the schedule attached.