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मानक

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Mazdoor Kisan Shakti Sangathan

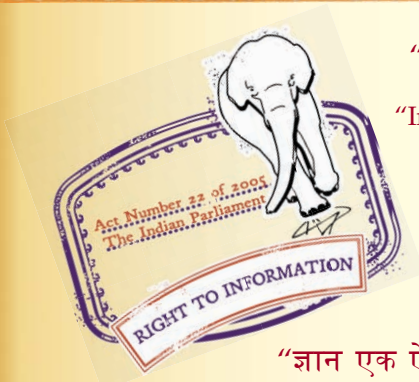
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“पुराने को छोड़ नये के तरफ”

Jawaharlal Nehru

“Step Out From the Old to the New”

IS 14564 (1998): Textiles - Cotton tapes for personnel parachutes [TXD 13: Textile Materials for Aerospace Purposes]



“ज्ञान से एक नये भारत का निर्माण”

Satyanarayan Gangaram Pitroda

“Invent a New India Using Knowledge”



“ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है”

Bhartrhari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”

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भारतीय मानक
वस्त्रादि — कार्मिक पैराशूटों के लिए
कॉटन फीते — विशिष्टि

Indian Standard

TEXTILES— COTTON TAPES FOR PERSONNEL
PARACHUTES — SPECIFICATION

ICS 59.080.99

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BUREAU OF INDIAN STANDARDS
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002

August 1998

Price Group 2

FOREWORD

This Indian Standard was adopted by the Bureau of Indian Standards, after the draft finalized by the Textile Materials for Aerospace Purposes Sectional Committee had been approved by the Textile Division Council.

The Committee responsible for the formulation of this standard is given in Annex B.

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 : 1960 'Rules for rounding off numerical values (*revised*)'. 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

TEXTILES — COTTON TAPES FOR PERSONNEL PARACHUTES — SPECIFICATION

1 SCOPE

This standard covers three varieties of scoured and undyed 6.5 mm wide cotton tape generally used in the fabrication of parachutes and other aerial delivery equipments.

2 REFERENCES

The Indian Standards listed in Annex A are necessary adjuncts to this standard.

3 MANUFACTURE

The tapes shall be uniformly woven with regular and firm selvages. These shall be free from sizing, finishing, dressing materials and weaving defects.

4 REQUIREMENTS

4.1 The finished cotton tape shall conform to the requirements given in Table 1.

4.2 The tapes shall also conform to the chemical requirements given in Table 2.

5 MARKING

Each roll of tape shall be attached with a label on which the following information shall be marked:

- a) Name of the material;
- b) Manufacturer's name, initials or trade-mark; and
- c) Year of manufacture.

5.1 BIS Certification Marking

The tape may also be marked with the Standard Mark.

5.1.1 The use of the Standard Mark is governed by the provisions of the *Bureau of Indian Standards Act, 1986* and the Rules and Regulations made thereunder. The details of conditions under which the licence for the use of Standard Mark may be granted to manufacturers or producers may be obtained from the Bureau of Indian Standards.

Table 1 Requirements of Cotton Tapes for Personnel Parachutes

(Clause 4.1)

Variety No.	Width mm	Length m	Ends Full Width	Picks per dm	Fold of Warp Yarn	Weight g/100 m Max	Breaking Load in kg on 60-cm Length		Universal Count (or Cotton Count)		Weave
							Min	Max	Warp	Weft	
(1)	(2)	(3)	Min (4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
I	6.5	100 or as ordered	7	85	4 cord each 3 fold	340	36	41	30 tex X12 (or 20 s/12)	27tex X2 (or 22 s/2)	Plain
II	do	do	21	do	do	do	do	do	30 tex X 4 (or 20 s/4)	do	do
III	do	do	28	do	do	do	do	do	30 tex X 3 (or 20 s/3)	do	do
Tolerance	—	± 1	—	± 5	—	—	—	—	—	—	—
Methods of Test	IS 1954		IS 1963		—	IS 1964	IS 1969	—	—	—	Visual

Table 2 Chemical Requirements
(Clauses 4.2 and 7.6)

Characteristic (1)	Requirement (2)	Method of Test, Ref to (3)
Scouring loss, percent, <i>Max</i>	2	IS 1383
pH value of aqueous extract	6-8.5	IS 1390 (Cold method)

6 PACKING

An appropriate number of rolls shall be arranged in a cylindrical bundle and secured by jute twine to form a pack. A suitable number of such packs shall be arranged and wrapped with polyethylene film of at least 40 microns thickness (*see* IS 2508) and placed in wooden packing case of adequate strength, previously lined with one layer of waterproof packing paper. The empty space, if any, in the packing case shall be stuffed with cushioning materials to avoid damage in transit. The case shall be bound by iron hoops or wires. The gross mass of the case shall not exceed 40 kg. Corrugated paper boxes may also be used for packing. In that case box shall be bound by polypropylene strapping 0.55 mm thick and 12 mm wide.

7 SAMPLING AND CRITERIA FOR CONFORMITY

7.1 Lot

The quantity of cotton tape in a consignment shall constitute a lot.

7.2 The conformity of the lot to the requirements of this standard shall be determined on the basis of tests carried out on the samples selected from the lot.

7.3 Unless otherwise agreed to between the buyer and the seller, the number of rolls to be selected at random from a lot shall be in accordance with col 2 of Table 3.

7.4 For evaluating weight, breaking load, scouring loss and pH sub-sample rolls specified in col 4 of Table 3 shall be drawn from the sample rolls selected according to col 2 of the Table 3. The samples thus drawn shall constitute the test sample.

7.5 For evaluating ends in full width and picks per decimetre, count of yarn, width and length, the rolls selected in col 2 of Table 3 shall constitute the test sample.

7.6 Criteria for Conformity

The lot shall be considered to be in conformity with the requirements of this standard if the following conditions are satisfied:

- a) The number of rolls found non-conforming with respect to ends in full width, picks per decimetre and width does not exceed the corresponding number given in col 3 of Table 2.
- b) In case of length, the value obtained for each roll shall be compared with its declared or marked length. The mean percentage of deficiency in length, if any, shall be determined and made applicable to the lot.
- c) From the observed values of weight, scouring loss and pH, the average *X* and the range *R*

Table 3 Sample Size and Criteria for Conformity
(Clauses 7.3, 7.4 and 7.5)

Lot Size No. of Rolls	Sample Size	Permissible No. of Defective Rolls	Sub-Sample Size	Permissible No. of Defective Rolls
(1)	(2)	(3)	(4)	(5)
Up to 25	3	0	3	None
26 to 100	5	0	4	
101 " 150	8	0	5	
151 " 300	13	0	7	
301 " 500	20	1	8	
501 " 1 000	50	1	9	
Above 1 000	80	2	10	

shall be calculated and values of the expression $X + 0.6R$ shall be less than or equal to the specified values.

- d) The breaking load value of individual test specimen in a lot shall not be less than the value specified in this standard.

NOTES

1 Average X is the value obtained by dividing the sum of the observed values by the number of tests.

2 Range R is the difference between the maximum and minimum in a set of observed values.

ANNEX A (Clause 2)

LIST OF REFERRED INDIAN STANDARDS

<i>IS No.</i>	<i>Title</i>	<i>IS No.</i>	<i>Title</i>
1383: 1977	Methods for determination of scouring loss in grey and finished cotton textile materials (<i>first revision</i>)	1964: 1970	Methods for determination of weight per square metre and weight per linear metre of fabrics (<i>first revision</i>)
1390: 1983	Methods for determination of pH value of aqueous extracts of textile materials (<i>first revision</i>)	1969: 1985	Methods for determination of breaking load and elongation of woven textile fabrics (<i>second revision</i>)
1954: 1990	Determination of length and width of fabrics — Methods (<i>second revision</i>)		
1963: 1981	Methods for determination of threads per unit length in woven fabrics (<i>second revision</i>)	2508: 1982	Low density polyethylene films (<i>second revision</i>)

ANNEX B

(Foreword)

COMMITTEE COMPOSITION

Textile Materials for Aerospace Purposes Sectional Committee, TX 13

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SHRI R. K. DUA,

Director (Tex)

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Madura Coats Ltd (Thread Division), Bangalore

Todi Industries Ltd, Mumbai

Unnati Corporation, Ahmedabad

FGP Ltd, Mumbai

Motilal Dulichand (P) Ltd, Kanpur

Shriram Fibres Ltd, Chennai

Indian Airlines, New Delhi

Ordnance Parachute Factory, Kanpur

Ministry of Defence, DGQA(S), New Delhi

Air Headquarters, DGQAS(Aero), Ministry of Defence, New Delhi

Ministry of Defence (R&D), New Delhi

Ministry of Defence, DGAQA (Air), New Delhi

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Member Secretary

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