

भारतीय मानक

वस्त्रादि – काँटन वेबिंग, विशेष – विशिष्टि
(दूसरा पुनरीक्षण)

Indian Standard

TEXTILES — COTTON WEBBING, SPECIAL — SPECIFICATION
(*Second Revision*)

ICS 59.080.20

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भारतीय मानक ब्यूरो

BUREAU OF INDIAN STANDARDS

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FOREWORD

Cotton webbing is a versatile, strong narrow fabric commonly used in various applications. It is made from natural cotton fibers, offering durability and a soft texture. Cotton webbing is breathable and comfortable yet its high tensile strength ensures reliability in heavy-duty uses like harnesses and camping gear. This standard focuses on cotton webbing used in defence purposes.

This Indian Standard (Second Revision) was adopted by the Bureau of Indian Standards after the draft finalized by the Technical Textiles for Clothtech Applications including Narrow Fabrics and Braids Sectional Committee had been approved by the Textile Division Council.

This standard was first published in 1974 and subsequently revised in 1989. This revision has been made in the light of experience gained since its publication and to incorporate the following major changes:

- a) Title of the standard has been modified.
- b) BIS certification marking clause has been modified; and
- c) References to Indian Standard given in Annex A has been updated

The composition of 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 : 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

TEXTILES — COTTON WEBBING, SPECIAL — SPECIFICATION
(Second Revision)

1 SCOPE

This standard prescribes constructional particulars and other requirements for 3 varieties of special cotton webbings, dyed or undyed, used by Defence personnel.

2 REFERENCES

The standards listed below contain provisions which, through reference in this text, constitute provisions of this standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below:

3 MANUFACTURE

3.1 Yarn

The cotton yarn used in the manufacture of webbing shall conform to the requirements specified in IS 171. The yarn shall be free from spinning and doubling defects.

3.2 The webbing shall be woven uniformly on shuttle looms with firm, straight and properly formed selvages. It shall be free from weaving flaws, weighting, sizing and finishing materials.

3.2.1 The webbings may also be produced on needle looms subject to the agreement between the buyer and the seller. Selvages of the needle loom produced webbings shall be made secure by using one of the systems shown in Fig. 1.

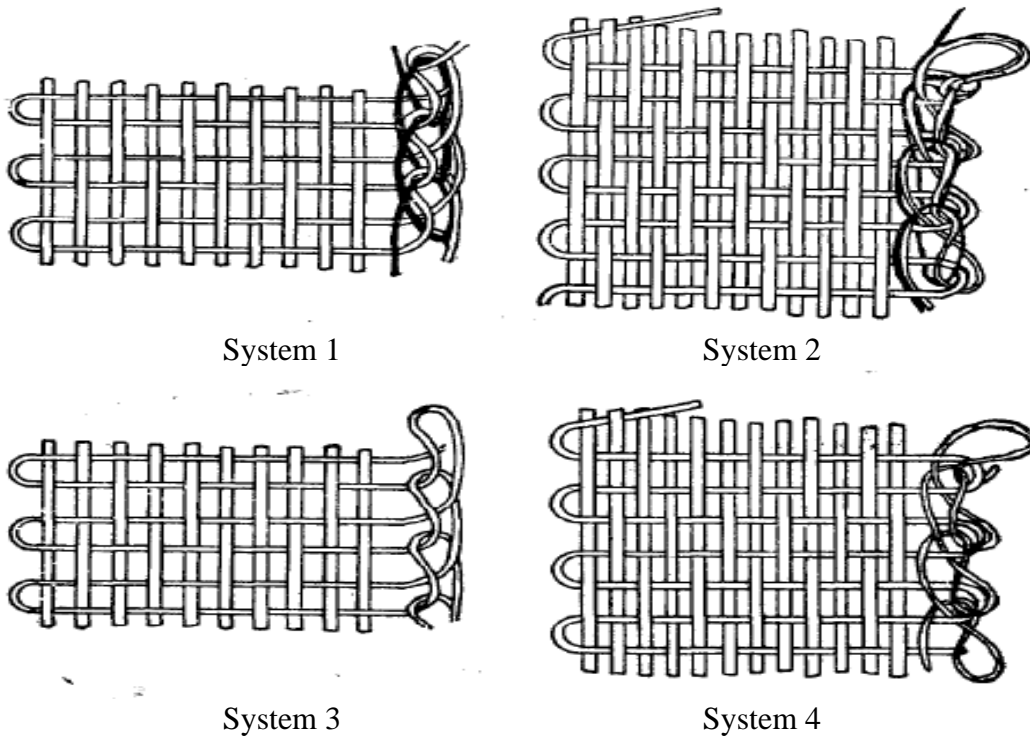


FIG. 1 NEEDLE LOOM SELVEDGE SYSTEM

3.3 Dyeing

The webbing shall be dyed as required by the buyer.

4 REQUIREMENTS

4.1 The webbing shall conform to the constructional particulars specified in Table 1.

4.2 The webbing shall also conform to the requirements specified in Table 2.

4.3 Sealed Sample

If in order to illustrate or specify properties of the webbing not covered in this standard, a sample has been agreed and sealed, the supply shall be in conformity with sample in such respect.

4.3.1 The custody of the sealed sample shall be a matter of prior agreement between the buyer and the seller.

5 MARKING

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

- a) Name of the material, variety no.,
- b) Length of webbing,
- d) Year of manufacture,
- c) Manufacturer's name, initials or trade-mark, if any; and
- e) Any other information as required by the law in force.

5.1.1 Each roll of webbing may also be marked with the Standard Mark.

5.2 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 product(s) may be marked with the Standard Mark.

6 PACKING

6.1 The webbing shall be packed as required by the buyer.

7 SAMPLING

7.1 Unless otherwise agreed, the number of rolls to be selected at random shall be as given in Table 3.

7.2 Criteria for Conformity

The criteria for conformity shall be as follows:

<i>Sl No.</i>	<i>Characteristics</i>	<i>Number of Test Specimens</i>	<i>Criteria for Conformity</i>
(1)	(2)	(3)	(4)
i)	Length, width, ends in full width, picks, weave.	As per col (3) under Table 3	Defective rolls not to exceed the number given under col (4) of Table 3
ii)	Mass breaking load, colour fastness, scouring loss and pH value	As per col (5) under Table 3	All the test specimens shall pass the requirements.

Table 1 Constructional Particulars of Special Cotton Webbing
(Clause 4.1)

Sl No.	Variety No.	Count of Yarn for Warp and Weft (for guidance only) (See Note 1)	Width mm	Length m	Ends in Full Width, Min	Picks Per Dm (See Note 2)	Mass g/m Max	Average Breaking Load on Full Width × 90 Cm Between Grips N Min	Weave
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
i)	1	60 tex × 2 (10 ^s /2)	44 ± 1.5	20 or as agreed	140	70 ± 2	54	4115	Herring Bone
ii)	2		50 ± 2		160	70 ± 2	62	4705	
iii)	3		76 ± 3		240	70 ± 2	93	7095	
	Method of Test		IS 1954		IS 1963	IS 1963	IS 1964	IS 1969 (Part 1)	Visual
NOTE									
1 For webbing woven on needle looms, count of yarn used in weft should be approximately two times finer than specified.									
2 For needle loom webbing, the number of picks per dm would be 140 ± 4 since two threads would be working as one.									

Table 2 Other Requirements of Special Cotton Webbing
(Clause 4.2)

Sl No.	Characteristic	Requirements	Method of Test, Ref to
(1)	(2)	(3)	(4)
i)	Colour fastness:		
	a) Light	5 or better	IS/ISO 105-B02
	b) Washing (Test 2)	4 or better	IS/ISO 105-C10

ii)	Scouring loss, percent, <i>Max</i>	2	IS 1383
iii)	pH value	6 to 8.5	IS 1390

Table 3 Sampling
(Clause 7.1)

SI No.	No. of Rolls in the Lot	Sample Size	Permissible No. of Defective Rolls	Sub-Sample Size
(1)	(2)	(3)	(4)	(5)
i)	Up to 100	8	0	3
ii)	101 to 300	13	1	4
iii)	301 to 500	20	2	5
iv)	501 to 1000	32	3	7
v)	1000 and above	50	5	10

ANNEX A
(Clause 2.1)

LIST OF REFERRED INDIAN STANDARDS

<i>IS No.</i>	<i>Title</i>
IS 171: 1993	Textiles — Ring spun grey cotton yarn for weaving — Specification (Fourth Revision)
IS 1383: 2023	Methods For Determination Of Scouring Loss In Grey And Finished Cotton Textile Materials (Second Revision)
IS 1390: 2022	Textiles — Determination of pH of Aqueous Extract (Third Revision)
IS 1954: 2024	Textiles - Fabrics - Determination of width and length (Third Revision)
IS 1963: 1981	Methods for determination of threads per unit length in woven fabrics (Second Revision)
IS 1964: 2001	Textiles — Methods for determination of mass per unit length and mass per unit area of fabrics — Specification (Second Revision)

IS 1969 (Part 1) : 2018	Textiles — Tensile properties of fabrics — Part 1 Determination of maximum force and elongation at maximum force using the strip method (Fourth Revision)
IS/ISO B02 : 2014	Textiles — Tests for colour fastness — Part B02 Colour fastness to artificial light: Xenon arc fading lamp test
IS/ISO C10 : 2006	Textiles — Tests for colour fastness — Part C10 Colour fastness to washing with soap or soap and soda

ANNEX B

(Foreword)

COMMITTEE COMPOSITION

Technical Textiles for Clothtech Applications including Narrow Fabrics and Braids Sectional Committee, TXD 39

Organization

Retd. Additional Controller CQA (General Stores), DGQA, Ministry of Defence

ICAR - Central Institute for Research on Cotton Technology, Mumbai

Federation of Indian Chambers of Commerce and Industry

Indian Technical Textile Association, Mumbai

M K U Limited, Kanpur

Motilal Dulichand Pvt Ltd, Kanpur

National Textile Corporation, New Delhi

Ordnance Parachute Factory, Kanpur

Office of Textiles Commissioner, Mumbai

SGS Limited, Gurugram

S L Banthia Textiles Industries Pvt Ltd

Shipra International, Kanpur

Sky Industries Ltd, Navi Mumbai

Synthetic and Art Silk Mills Research Association, Mumbai

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DR P JAGAJANANTHA

DR T SENTHILKUMAR (*Alternate*)

SHRI ANU HANDA

DR ANUP RAKSHIT

SHRI VIKRAM JAIN (*Alternate*)

SHRI SUMIT KHANDELWAL

SHRI RAJIB PAL (*Alternate*)

SHRI SHAILENDRA NATH MISRA

SHRI SUDHIR SHIVHARE (*Alternate*)

SHRI R K YADAV

SHRI V M BAGADE,

SHRI S KONDAIAH (*Alternate*)

SHRI V K KOHLI

SHRI HUMAYUN K

MS ANITHA JEYARAJ

SHRI GAURAV SARASWAT (*Alternate*)

SHRI SANTOSH KUMAR BANTHIA

SHRI ABHISHEK KUMAR AGRAWAL

SHRI KAPIL MEHROTRA

SHRI MICHAEL (*Alternate*)

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SHRI PREMNATH SURWASE (*Alternate*)

Thanawala & Co., Mumbai

The Bombay Textile Research, Association, Mumbai

U P Textile Technological Institute, Kanpur

Universal Yarn & Tex Pvt Ltd, Kanpur

BIS Directorate General

SHRI HEMAL THANAWALA

SHRI VIVAN THANAWALA (*Alternate*)

SHRI SHAIKH RIYAZ AHMED

DR PRASANTA KUMAR PANDA (*Alternate*)

DR PRASHANT VISHNOI

SHRI RAJIV K BHARTIYA

SHRI J. K. GUPTA, SCIENTIST 'E'/DIRECTOR and Head (Textiles)
[Representing Director General (*Ex-officio*)]

Member Secretary

SHRI TANISHQ AWASTHI
SCIENTIST 'B'/ASISTANT DIRECTOR
(Textiles), BIS