***भारतीय मानक***

***Indian Standard***

**IS 1102 : 2024**

**Doc.No: TXD 08 (23978)**

***वस्त्रादि — हथकरघा बकरम कपड़ा — विशिष्टि***

*( दूसरा* पुनरीक्षण )

**Textiles — Handloom Buckram Cloth — Specification**

( *Second Revision )*

ICS 59.080.30

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भारतीय मानक ब्यूरो

BUREAU OF INDIAN STANDARDS

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**October 2024 Price Group X**

Handloom and Khadi Sectional Committee, TXD 08

FOREWORD

This Indian Standard (Second Revision) was adopted by the Bureau of Indian Standards, after the draft finalized by the Handloom and Khadi Sectional Committee had been approved by the Textiles Division Council.

Buckram cloth is generally used for interlining of garments to give stiffness. It is also used in millinery to give hats shape and structure.

This standard was originally published in 1957 and subsequently revised in 1968. The standard has again been revised to incorporate the following changes:

1. All amendments have been incorporated;
2. Marking clause has been modified;
3. References to Standards have been updated; and
4. Sampling plan 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, shall be rounding 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 — HANDLOOM BUCKRAM CLOTH — SPECIFICATION

*(Second Revision)*

**1 SCOPE**

**1.1** This standard prescribes the constructional details and other particulars of four varieties of handloom buckram cloth.

**1.2** This standard does not specify the indeterminable characteristics like general appearance, feel and shade of the cloth (*see* *also* **5.1**).

**2 REFERENCES**

The standards listed in Annex A 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 edition of the standards indicated in Annex A.

**3 MANUFACTURE**

**3.1** **Yarn**

The yarn used in the manufacture of cloth should be reasonably free from defects and shall be such that the cloth produced complies with the requirements of this standard. The warp yarn used in the manufacture of cloth shall be of two fold cotton. The weft yarn shall be of single worsted in case of Variety 1 and of single jute in case of other varieties. The approximate count of warp and weft yarn used in the manufacture of cloth is given below.

|  |  |  |  |
| --- | --- | --- | --- |
| *Sl No.* | *Variety No.* | *Warp*  *Universal Count*  (*Cotton Count*) | *Weft*  *Universal Count*  (*Metric Count or Grist*) |
| (1) | (2) | (3) | (4) |
| i) | 1 | 30 tex × 2 (20s/2) | 40 tex (25 Nm) |
| ii) | 2 | 30 tex × 2 (20s/2) | 140 tex (4s) |
| iii) | 3 | 15 tex × 2 (40s/2) | 140 tex (4s) |
| iv) | 4 | 30 tex × 2 (20s/2) | 140 tex (4s) |
| NOTES **—** To convert universal count in tex to:  **a)** cotton count, divide 590.5 by the universal count;  **b)** metric count, divide 1 000 by the universal count; and  **c)** grist, multiply 0.029 03 by the universal count. | | | |

**3.2 Cloth**

**3.2.1** The cloth shall be woven in plain weave.

**3.2.2** The selvedges shall be firm and well-woven.

**3.2.3** The cloth conforming to Variety No. 1 shall be mothproofed. The cloth conforming to other varieties may also be mothproofed, if specified by the buyer.

NOTE **—** Copper naphthenate is a suitable mothproofing agent. The amount of copper content calculated as copper in the cloth, if treated with copper naphthenate shall be not less than 0.65 percent when tested by the relevant method given in IS 3522 (Part 3). The amount of proofing agents present in the cloth, when treated with materials other than copper naphthenate shall be not less than the values as specified by the buyer.

**3.2.4** Either of warp or weft of the cloth may be dyed to the shade as specified by the buyer. However, sulphur black dyes shall not be used.

**3.2.4.1** The dyed cloth shall conform to the colour fastness requirements of Table 2.

**3.2.5** The cloth when visually examined should be reasonably free from spinning and weaving defects.

**4 REQUIREMENTS**

**4.1 Construction**

The cloth shall comply with the particulars given in Table 1.

**4.2 Requirements**

The cloth shall comply with the requirements given in Table 2.

**5 SEALED SAMPLE**

**5.1** If, in order to illustrate or specify the indeterminable characteristics, such as general appearance, feel and shade of cloth, a sample has been agreed upon and sealed, the supply shall be in conformity with the sample in such respects.

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

**Table 1 Particulars of Handloom Buckram Cloth**

(*Clause* 4.1)

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Sl No.** | **Variety No.** | **Ends/dm** | **Picks/dm** | **Weight**  g/m2 | **Breaking Load on 10 × 20 cm Strips** | | **Length**  m | **Width**  cm |
| **Warp**  kg | **Weft**  kg |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
|  | 1 | 212 | 166 | 230 | 175 | 30 | 12  or  as  agreed | 72  or  as  agreed |
|  | 2 | 174 | 102 | 270 | 115 | 180 |
|  | 3 | 174  (Double) | 94 | 270 | 135 | 145 |
|  | 4 | 174 | 126 | 320 | 145 | 200 |
| Tolerance,  Percent | **—** | ± 5 | ± 5 | ± 5 | ˗ 5 | ˗ 5 | **—** | **—** |
| Method of Test, Ref to | **—** | IS 1963 | | IS 1964 | IS 1969 (Part 1) | | IS 1954 | |

**Table 2 Requirements of Handloom Buckram Cloth**

(*Clause* 4.2)

|  |  |  |  |
| --- | --- | --- | --- |
| **Sl No.** | **Characteristic** | **Requirement** | **Method of Test, Ref to** |
| (1) | (2) | (3) | (4) |
| i) | Scouring loss, percent | 10 to 15 | IS 1383 |
| ii) | Relaxation shrinkage, percent, *Max* | 2.5 | IS 2977 |
| iii) | Colour fastness to washing | 4 or better | IS/ISO 105-C10 |

**6 SAMPLING**

**6.1 Lot**

The quantity of handloom buckram cloth of the same variety, width and colour delivered to a buyer at a time shall constitute a lot.

**6.2** To ascertain the conformity of the lot to the requirements of this standard, sample shall be drawn and inspected from each lot separately.

**6.3** The number of pieces to be selected at random for inspection shall be in accordance with Table 3.

**Table 3 Sample Size and Permissible Number of Non-Conforming Pieces**

(*Clause* 6.3)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sl No.** | **Lot Size** | **Sample Size** | **Permissible No. of Non-Conforming pieces** | **Sub Sample Size** |
| (1) | (2) | (3) | (4) | (5) |
| i) | Up to 90 | 5 | 0 | 3 |
| ii) | 91 to 150 | 8 | 0 | 3 |
| iii) | 151 to 500 | 13 | 1 | 5 |
| iv) | 501 to 1200 | 20 | 1 | 5 |
| v) | 1201 to 10000 | 32 | 2 | 8 |
| vi) | 10001 to 35000 | 50 | 3 | 8 |
| vii) | 35001 to 500000 | 80 | 5 | 13 |
| viii) | 500001 and above | 125 | 7 | 13 |

**6.4 Number of Tests and Criteria for Conformity**

|  |  |  |  |
| --- | --- | --- | --- |
| *Sl No.* | *Characteristic(s)* | *Number of Tests* | *Criteria for Conformity* |
| (1) | (2) | (3) | (4) |
| i) | Visual inspection, ends, picks, length and width | According to co1 (3) of Table 3 | Number of non-conforming pieces shall not exceed the corresponding number given in co1 (4) of Table 3 |
| ii) | Relaxation shrinkage, weight, breaking load, colour fastness to washing, and scouring loss | According to co1 (5) of Table 3 | All the pieces shall meet the requirement |

**7 MARKING**

**7.1** The cloth shall be marked with the following:

1. Name of the material;
2. Variety No.;
3. Width and length of piece;
4. Manufacturer's name, initials or trade-mark;
5. Month and year of manufacture;
6. Indication of the source of manufacture; and
7. Other declarations required as per law in force.

**7.2 BIS Certification Marking**

The product 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 may be marked with the Standard Mark.

**8 PACKING**

The cloth shall be packed in bales or cases in conformity with the procedure laid down either in IS 293 or IS 1347.

**ANNEX A**

(*Clause* 2)

**LIST OF REFERRED STANDARDS**

|  |  |
| --- | --- |
| *IS No.* | *Title* |
| IS 293 : 1980 | Code for seaworthy packaging of cotton yarn and cloth (*third revision*) |
| IS 1347 : 1972 | Specification for inland packaging of cotton cloth and yarn (*first revision*) |
| IS 1383 : 2023 | Methods for determination of scouring loss in grey and finished cotton textile materials (*second revision*) |
| IS 1954 : 2024/  ISO 22198 : 2006 | 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 (*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 2977 : 1989 | Fabrics (other than wool) **—** Method for determination of dimensional changes on soaking in water (*first revision*) |
| IS 3522 (Part 3) : 1983 | Methods for estimation of common preservatives used in textile industry |
| IS/ISO 105-C10 : 2006 | Textiles **—** Tests for colour fastness **—** Part C10 Colour fastness to washing with soap or soap and soda |

**ANNEX B**

(*Foreword*)

**COMMITTEE COMPOSITION**

Handloom and Khadi Sectional Committee, TXD 08

|  |  |
| --- | --- |
| *Organization* | *Representative(s)* |
| Weavers Service Centre, Delhi | Shri Vishesh Nautiyal (***Chairperson***)  Shri Vikas Kumar (*Alternate*) |
| Central Pollution Control Board, New Delhi | Shri P. K. Mishra  Shri Rishabh Srivastav (*Alternate*) |
| Center of Excellence for Khadi (COEK)-NIFT, New Delhi | Representative |
| CRPF, New Delhi | Shri D. P. Upadhyay  Shri Sanjeev Kumar Singh (*Alternate*) |
| Department of Handlooms & Textiles, Chennai | Shri Thiru R. Raghunath  Shri Thiru K. Munusamy (*Alternate*) |
| Fabindia, New Delhi | Representative |
| Flag Foundation of India, New Delhi | Shri Ashim Kohli |
| Gandhigram Rural Institute, Dindigul | Dr B. Senthil Kumar |
| Haryana Khadi Gramodyog Sangh, Karnal | Shri Pawan Garg  Shri R. S. Yadav (*Alternate*) |
| ICAR – Central Institute for Research on Cotton Technology, Mumbai (CIRCOT) | Dr Sujata Saxena  Dr A.S.M. Raja (*Alternate*) |
| Indian Institute of Handloom Technology, Jodhpur | Dr J. Sivagnanam |
| Indian Institute of Handloom Technology, Salem | Dr P. Thennarasu |
| Indian Institute of Handloom Technology, Varanasi | Dr Amin Hirenbhai Navinbhai  Shri Jitender Tak (*Alternate*) |
| Indian Institute of Technology, Delhi | Dr Bipin Kumar  Dr Wazed Ali (*Alternate*) |
| Indo Tibetan Border Police, New Delhi | Shri Uttam Kumar  Shri Anand Kumar (*Alternate*) |
| Jan Sewa Ashram, Aligarh | Shri R. K. Sharma  Shri Akhilesh Kumar Awasthi (*Alternate*) |
| Karnatka Khadi Gramodyog Samyuktha Sangha, Hubli | Shri K. V. Pattar  Shri Shivananda S. Mathapati (*Alternate*) |
| Khadi Dyers & Printers, Mumbai | Shri D. N. Bhatt  Shri V. D. Joshi (*Alternate*) |
| Khadi Gramodyog Mandal, Rampur | Shri Rakesh Chaudhary  Shri Prince Chaudhary (*Alternate*) |
| Kshetriya Khadi Gramodyog Samiti, Dausa | Shri R. K. Singh |
| Khadi and Village Industries Commission, Mumbai | Shri Vijaysridhar  Dr Sentil Kumar C. B. (*Alternate*) |
| Madhya Bharat Khadi Sangh, Gwalior | Shrimati Neelu Mekle  Shri Harish Mekle (*Alternate*) |
| Mahatma Gandhi Institute for Rural Industrialization, Wardha | Shri Mahesh kumar  Dr Tapan Ranjan Kar (*Alternate*) |
| Metpalli Khadi Gramodyog Pratisthan, Metpalli | Shri G. Madhav |
| Ministries of Defence (DGQA), New Delhi | Shri Arvind Compathane  Shri N. Senthil Kumar (*Alternate*) |
| Ministries of Health, New Delhi | Representative |
| National Handloom Development Corporation Ltd., Gautam Budh Nagar | Dr Sakthivel Perumal Samy  Shri Jitendra Tolambiya (*Alternate*) |
| Northern Railways, New Delhi | Shri Sanjeev Kumar Jain  Shri Rajesh Kumar (*Alternate*)  Shri Sandeep Kumar Singh  (Young Professional) |
| Northern India Textile Research Association, Ghaziabad | Dr M. S. Parmar  Shri Sanjeev Shukla (*Alternate*) |
| Office of the Development Commissioner for Handlooms, New Delhi | Shri Siddharth Singh  Shri Vinay Kumar (*Alternate*) |
| Orient Processes Pvt. Ltd., Guwahati | Shri Robin Chandra Goswami  Shri Raj Buragohain (*Alternate*) |
| Rastriya Khadi Gramodyog Federation, Moradabad | Shri Anil Kumar Singh  Shri Kuldeep Singh (*Alternate*) |
| Swastik Gramodyog Samiti, Delhi | Shri M. L. Pathak  Shri Abhishek Dixit (*Alternate*) |
| The Cotton Textiles Export Promotion Council (TEXPROCIL), Mumbai | Dr Siddhartha Rajagopal  Shri Rajesh Satam (*Alternate*) |
| The Handloom Export Promotion Council, Chennai | Dr M. Sundar  Shri N. Sreedhar (*Alternate*) |
| The Tamil Nadu Handloom Weavers Cooperative Society Ltd, Chennai | Shri T. N. Venkatesh, I.A.S.  Shri K. Kathiresan (*Alternate*) |
| BIS Directorate General | Shri J. K. Gupta, Scientist ‘E’/ Director and Head (Textiles) [Representing Director General (*Ex-officio*)] |

*Member Secretary*

SHRI SWAPNIL

Scientist ‘B’/ Assistant Director

(Textiles), BIS