***भारतीय मानक***

***Indian Standard***

**IS 1242 : 2024**

**Doc.No: TXD 08 (23995)**

***वस्त्रादि — हथकरघा सूती शर्टिंग — विशिष्टि***

*( दूसरा* पुनरीक्षण )

**Textiles — Handloom Cotton Shirting — 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.

This standard was originally published in 1957 and subsequently revised in 1987. The standard has again been revised to incorporate the following changes:

1. Test method for identification of material has been incorporated;
2. All amendments have been incorporated;
3. Marking clause has been modified;
4. References to Standards have been updated;
5. *p*H value of aqueous extract has been incorporated; and
6. Sampling plan has been incorporated.

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 COTTON SHIRTING — SPECIFICATION

*(Second Revision)*

**1 SCOPE**

**1.1** This standard prescribes the constructional particulars and other requirements of handloom cotton shirting, bleached, dyed, striped, checked or printed.

**1.2** This standard does not specify the general appearance, feel, finish or weaving and printing pattern, etc of the shirting.

**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 Constructional Particulars**

Construction particulars shall conform to those given in Table 1. These are obtainable by using yarn conforming to IS 171.

**4 REQUIREMENTS**

The requirements of shirting shall conform to those given in Table 2.

**5 INSPECTION**

**5.1** The shirting when visually inspected should be reasonably free from the following defects (*see* IS 14466):

1. Weft crack of more than 2 missing picks across the width of the material;
2. Prominently noticeable weft bar due to the difference in raw material, count, twist, lustre, colour, shade or pick spacing of adjacent groups of weft yarn;
3. More than two adjacent ends running parallel, broken or missing and extending beyond 15 cm;
4. Prominent selvedge defect;
5. Noticeable warp or weft float in the body of the material;
6. Noticeable oil or other stain in the material;
7. Noticeable hole, cut or tear up to 3 mm in size in the body of the fabric;
8. Conspicuous broken pattern;

j) Prominently noticeable printing or dyeing defect;

k) Smash definitely rupturing the texture of the material; and

 m) Extensive printing or dyeing defect.

**Table 1 Constructional Particulars of Handloom Cotton Shirting**

(*Clause* 3.1)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sl No.** |  **Variety** **No.** | **Count of Yarn** | **Ends/dm** | **Picks/dm** |
| Warp | Weft |
| (1) | (2) | (3) | (4) | (5) | (6) |
|  | 1 | 20s/2 (or 30 tex × 2) | 18s (or 33 tex) | 160 | 140 (double) |
|  | 2 | 20s/2 (or 30 tex × 2) | 20s (or 30 tex) | 170 | 140 (double) |
|  | 3 | 20s/2 (or 30 tex × 2) | 20s (or 30 tex) | 190 | 200 |
|  | 4 | 20s/2 (or 30 tex × 2) | 20s/2 (or 30 tex × 2) | 160 | 145 |
|  | 5 | 20s (or 30 tex) | 18s (or 33 tex) | 200 | 170 |
|  | 6 | 20s (or 30 tex) | 20s (or 30 tex) | 130 (double) | 126 (double) |
|  | 7 | 20s (or 30 tex) | 20s (or 30 tex) | 165 (double) | 173 (double) |
|  | 8 | 20s (or 30 tex) | 30s (or 20 tex) | 220 | 205 |
|  | 9 | 26s(or 23 tex) | 26s (or 23 tex) | 220 | 220 |
|  | 10 | 30s/2 (or 20 tex × 2) | 30s/2 (or 20 tex × 2) | 190 | 170 |
|  | 11 | 30s(or 20 tex) | 30s (or 20 tex) | 240 | 220 |
|  | 12 | 36s/2 (or 16 tex × 2) | 20s (or 30 tex) | 200 | 180 |
|  | 13 | 36s/2 (or 16 tex × 2) | 20s (or 30 tex) | 260 | 250 |
|  | 14 | 40s/2 (or 15 tex × 2)  | 20s (or 30 tex) | 280 | 250 |
|  | 15 | 40s/2 (or 15 tex × 2) | 30s (or 20 tex) | 240 | 190 |
|  | 16 | 40s/2 (or 15 tex × 2) | 30s (or 20 tex) | 240 | 200 |
|  | 17 | 40s/2 (or 15 tex × 2) | 40s (or 15 tex) | 240 | 225 |
|  | 18 | 40s (or 15 tex) | 40s (or 15 tex) | 280 | 280 |
|  | 19 | 40s (or 15 tex) | 40s (or 15 tex) | 320 | 320 |
|  | 20 | 60s/2 (or 10 tex × 2) | 60s/2 (or 10 tex × 2) | 280 | 220 |
|  | 21 | 60s/2 (or 10 tex ) | 40s (or 15 tex) | 380 | 330 |
|  | 22 | 80s/2 (or 7.4 tex × 2) | 40s (or 15 tex) | 330 | 330 |
|  | 23 | 80s/2 (or 7.4 tex) | 80s/2 (or 7.4 tex) | 440 | 470 |
| Tolerance | **—** | ± 5 percent | ± 5 percent | ± 5 Percent | ± 5 percent |
| Method of Test, Ref to | **—** | IS 1315 | IS 1963 |

**Table 2 Requirements of Handloom Cotton Shirting**

(*Clause* 4)

|  |  |  |  |
| --- | --- | --- | --- |
| **Sl No.** | **Characteristic** | **Requirement** | **Method of Test, Ref to** |
| (1) | (2) | (3) | (4) |
| i) | Dimensional changes, percent, *Max* | 2.5 | IS 2977 |
| ii) | Scouring loss, percent, *Max* | 2.5 | IS 1383 |
| iii) | Colour fastness rating:a) Lightb) Washing | 5 or better4 or better | IS/ISO 105-B01 orIS/ISO 105-B02IS/ISO 105-C10 |
| iv) | Length | As agreed | IS 1954 |
| v) | Width | As agreed (˗ 2 percent tolerance) | IS 1954 |
| vi) | *p*H value of aqueous extract | 6.0 to 8.5 | IS 1390 |
| vii) | Fibre identification | 100 percent cotton | IS 667 |

**6 SAMPLING**

**6.1 Lot**

The quantity of handloom cotton shirting 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, count, 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) | Dimensional change, colour fastness, fibre identification and scouring loss | According to co1 (5) of Table 3 | All the pieces shall meet the requirement |

**7 MARKING**

**7.1** Each shirting shall be suitably marked or labelled with the following information:

1. Name of the material;
2. Manufacturer's name, initials or trade-mark;
3. Length and width of shirting;
4. Count of warp and weft yarn;
5. The words 'Fast Colour' in case of dyed and printed shirting;
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**

Unless otherwise agreed upon by the buyer and the seller the shirting shall preferably be packed in bales or cases in conformity with the procedure laid down either in IS 1347 or IS 293.

**ANNEX A**

(*Clause* 2)

**LIST OF REFERRED STANDARDS**

|  |  |
| --- | --- |
| *IS No.* | *Title* |
| IS 171 : 1993 | Textiles — Ring spun grey cotton yarn for weaving — Specification (*fourth revision*) |
| IS 293 : 1980 | Code for seaworthy packaging of cotton yarn and cloth (*third revision*) |
| IS 667 : 1981 | Methods for identification of textile fibres (*first revision*) |
| IS 1315 : 1977 | Method for determination of linear density of yarns spun on cotton system (*first 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 1390 : 2022 | Textiles — Determination of *p*H of aqueous extract (*third 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 2977 : 1989 | Fabrics (other than wool) — Method for determination of dimensional changes on soaking in water (*first revision*) |
| IS 14466 : 1997/ISO 8498 : 1990 | Fabrics — Description of defects — Vocabulary |
| IS/ISO 105-B01 : 2014 | Textiles — Tests for colour fastness — Part B01 Colour fastness to light: Daylight |
| IS/ISO 105-B02 : 2014 | Textiles — Tests for colour fastness — Part B02 Colour fastness to artificial light: Xenon arc fading lamp test |
| 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