

**भारतीय मानक ब्यूरो**  
**BUREAU OF INDIAN STANDARDS**

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**भारतीय मानक मसौदा**

**वस्त्रादि – हथकरघा वर्स्टेड रफाल शॉल और लोहिस – विशिष्ट**

**( आई एस 1267 का दूसरा पुनरीक्षण )**

*Draft Indian Standard*

**TEXTILES —HANDLOOM WORSTED RAFAL SHAWLS AND LOHIS —  
SPECIFICATION**

*( Second Revision of IS 1267 )*

**ICS 59.080.30**

Handloom and khadi sectional committee,  
TXD 08

Last date for receipt of comment is  
22 April 2024

**FOREWORD**

*(Formal clauses will be added later)*

Rafal shawls and lohis are special types of cloth made by skilled craftsmen using a weaving method called rafal. They use handlooms to create intricate designs like geometric shapes or flowers. Shawls are big pieces of cloth worn around the shoulders for warmth or style. Lohis are smaller and can be worn on the head, as wraps, or as decorations.

This standard was originally published in 1958 and subsequently revised in 1992. The standard has again been revised to incorporate the following changes:

- a) Marking clause has been modified;
- b) References to Indian Standards have been updated;
- c) Test method for identification of material has been incorporated;
- d) Method of test for count of yarn along with its tolerance has been specified; and

e) Sampling clause has been modified.

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.

## **1 SCOPE**

**1.1** This standard prescribes constructional particulars and other requirements for ten varieties of handloom worsted rafal shawls and lohis.

**1.2** This standard does not specify the general appearance, feel, etc of the material.

## **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 editions of the standards indicated in Annex A.

## **3 ATMOSPHERIC CONDITIONS FOR TESTING**

Test specimens may be conditioned and tested in the prevailing atmosphere for determining the conformity of the material to this standard. However, in all cases of disputes, the specimens shall be conditioned and tested in the standard atmosphere as specified in the referred Indian Standards on test methods.

## **4 MANUFACTURE**

### **4.1 Yarn**

**4.1.1** The worsted yarn used in the manufacture of the cloth shall be free from admixture of non-woollen fibre and shall be such that the cloth produced complies with the requirements of this standard.

**4.1.2** The approximate count of yarn is given in Table 1 for guidance.

### **4.2 Cloth**

**4.2.1** The cloth shall be of 2/2 twill weave.

**4.2.2** The cloth shall be clean scoured, and free from grease, soap, filling or any other admixture which would give it fictitious weight, substance or firmness.

**4.2.3** The transverse ends of the shawls and lohis shall be finished off with a fringe of approximately 65 mm length.

**Table 1 Constructional Particulars and Breaking Load Requirements for Handloom  
Worsted Rafal Shawls and Lohis**  
(Clause 4.1.2 and 5.1)

| Sl No.                 | Variety No. | Approximate Count of Yarn (Universal Count)<br>(Worsted Count) |                       | Ends/dm     | Picks/dm        | Mass g/m <sup>2</sup> | Breaking Load on 15 × 20 cm Strips<br>N            |          |
|------------------------|-------------|--|-----------------------|-------------|-----------------|-----------------------|--|----------|
|                        |             | Warp   | Weft                  |             |                 |                       | Warp way   | Weft way |
| (1)                    | (2)         | (3)  | (4)                   | (5)         | (6)             | (7)                   | (8)  | (9)      |
| i)                     | 1           | 18 tex × 2<br>(2/48s)  | 14 tex<br>(64s)       | 170         | 150<br>(double) | 185                   | 770  | 660      |
| ii)                    | 2           | 18 tex × 2<br>(2/48s)  | 18 tex × 2<br>(2/48s) | 180         | 140             | 125                   | 800  | 620      |
| iii)                   | 3           | 14 tex × 2<br>(2/64s)  | 14 tex<br>(64s)       | 280         | 250             | 120                   | 880  | 540      |
| iv)                    | 4           | 18 tex × 2<br>(2/48s)  | 18 tex × 2<br>(2/48s) | 220         | 190             | 175                   | 830  | 660      |
| v)                     | 5           | 18 tex × 2<br>(2/48s)  | 18 tex × 2<br>(2/48s) | 250         | 210             | 195                   | 880  | 680      |
| vi)                    | 6           | 18 tex × 2<br>(2/48s)  | 28 tex × 2<br>(2/32s) | 165         | 150             | 165                   | 780  | 630      |
| vii)                   | 7           | 28 tex × 2<br>(2/32s)  | 40 tex × 2<br>(2/22s) | 140         | 120             | 175                   | 780  | 580      |
| viii)                  | 8           | 40 tex × 2<br>(2/22s)  | 59 tex<br>(15s)       | 130         | 160             | 235                   | 1 060  | 660      |
| ix)                    | 9           | 40 tex × 2<br>(2/22s)  | 42 tex<br>(18s)       | 140         | 170             | 210                   | 1 200  | 800      |
| x)                     | 10          | 40 tex × 2<br>(2/22s)  | 40 tex × 2<br>(2/22s) | 130         | 140             | 230                   | 1 060  | 1 200    |
| Tolerance, percent     | —           | ± 5 percent  | ± 5 percent           | ± 5 percent | ± 5 percent     | ± 5 percent           | - 5 on average value and -15 on individual reading |          |
| Method of Test, Ref to | —           | IS 1315  |                       | IS 1963     |                 | IS 1964 or Annex B    | IS 1969 (Part 1)                                   |          |

NOTE — Approximate count of yarn for guidance only.

## 5 REQUIRIEMENTS

**5.1** The cloth shall conform to the requirements specified in Table 1.

**5.2** The cloth shall also conform to the requirements specified in Table 2.

### 5.3 Dimensions

The length and width of the cloth, when determined in accordance with IS 1954, shall be as agreed to between the buyer and the seller or as declared by the seller subject to the tolerances specified in the Government of India, Ministry of Commerce and Industry Notification No. S.O. 2937 dated 20 September 1962 issued under the Trade and Merchandise Marks Act, 1958 (43 of 1958) (*see* Annex C).

**Table 2 Other Requirements for Handloom Worsted Rafal Shawls and Lohis**  
(*Clause 5.2*)

| Sl No. | Characteristic   | Requirement   | Method of Test, Ref to   |
|--------|--|---|--|
| (1)    | (2)  | (3)   | (4)  |
| i)     | Relaxation shrinkage percent, <i>Max</i>   | 4   | IS 665   |
| ii)    | pH value of aqueous extract  | 5.0 to 7.0  | IS 1390  |
| iii)   | Colour fastness:<br>a) Light<br><br>b) Washing Test 1<br>1) Change in colour<br>2) Staining on fabric<br><br>c) Dry cleaning<br>1) Change in colour<br>2) Staining on fabric | 4 or better<br><br><br>4 or better<br>4 or better<br><br>4 or better<br>4 or better | IS/ISO 105-B01<br>or<br>IS/ISO 105-B02<br><br>IS/ISO 105-C10<br><br>IS/ISO 105-D01 |
| iv)    | Fiber composition, <i>Min</i>  | 97 percent wool   | IS 2006  |

#### 5.4 Sealed Sample

If in order to illustrate or specify the indeterminable characteristics, such as general appearance, feel and shade, a sample has been agreed upon and sealed, the supply shall be in conformity with the sample in such respects. The custody of the sealed sample shall be a matter of prior agreement between the buyer and the seller.

### 6 VISUAL INSPECTION

**6.1** The cloth when visually inspected should be free from the major flaws listed in Annex D. The number of permissible major flaws per unit length or per piece shall be as agreed to between the buyer and the seller.

**6.2** For details of the flaws mentioned in **6.1**, reference may be made to IS 14466.

### 7 SAMPLING

**7.1** The quantity of shawls and lohis of the same variety delivered to a buyer against a despatch note shall constitute a lot.

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

**7.3** 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 7.3)

| 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              |

#### **7.4 Number of Samples and Criteria for Conformity**

| Sl No. | Characteristic(s)  | No. of Tests                    | Criterion for Conformity  |
|--------|--|---------------------------------|---|
| (1)    | (2)  | (3)                             | (4)   |
| i)     | Ends, picks, mass and visual inspection  | According to col (3) of Table 3 | Permissible number of non-conforming piece does not exceed the corresponding number given in col (4) of Table 3 |
| ii)    | Relaxation shrinkage, pH value, breaking load, colour fastness and fibre composition | According to col (5) of Table 3 | All the test specimens meet the relevant requirements   |

## **8 MARKING**

**8.1** The shawls and lohis shall be suitably marked with the following information:

- Name of the material and variety No;
- Manufacturer's name, initials or trade-mark;
- Length (cm) and width (cm);
- Count of warp and weft yarn;
- Indication of the source of manufacture; and
- Other declarations required as per law in force.

## **8.2 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 may be marked with the Standard Mark

## **9 PACKING**

Unless otherwise agreed upon by the buyer and seller, the shawls and lohis shall be packed in bales or cases in accordance with the procedure laid down in IS 32 or IS 741.

**ANNEX A**  
(Clause 2)

**LIST OF REFERRED STANDARDS**

| <i>IS No.</i>                        | <i>Title</i>   |
|--------------------------------------|--|
| IS 32 : 2023                         | Code for seaworthy packaging of woollen and worsted yarn and cloth   |
| IS 665 : 1989                        | Textiles — Determination of dimensional changes of fabrics containing wool on soaking in water ( <i>first revision</i> )   |
| IS 741 : 1971                        | Code for inland packaging of woollen and worsted yarn and cloth ( <i>first revision</i> )  |
| IS 1315 : 1977                       | Method for determination of linear density of yarns spun on cotton system ( <i>first revision</i> )  |
| IS 1390 : 2022/ ISO 3071 : 2020      | Textiles Determination of pH of aqueous extract ( <i>third revision</i> )  |
| IS 1954 : 1990                       | Determination of length and width of woven fabrics — Methods ( <i>second revision</i> )  |
| IS 1963 : 1981                       | Methods for determination of threads per unit length in woven fabrics ( <i>second revision</i> )   |
| IS 1964 : 2001                       | Textiles — Methods for determination of mass per unit length and mass per unit area of fabrics ( <i>second revision</i> )  |
| IS 1969 (Part 1) : 2018/ ISO 13934-1 | Textiles — Tensile properties of fabrics — Part 1 Determination of maximum force and elongation at maximum force using the strip method ( <i>fourth revision</i> ) |
| IS 2006 : 1988                       | Method for quantitative chemical analysis of binary mixtures of protein fibre with certain other non-protein fibres ( <i>second revision</i> )                     |
| 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  |
| IS/ISO 105-D01 : 2010                | Textiles — Tests for colour fastness — Part D01 Colour fastness to drycleaning using perchloroethylene solvent   |

**ANNEX B**  
(Table 1)

**METHOD FOR DETERMINATION OF MASS OF FABRIC**

**B-1** Cut four specimens of 100 mm × 100 mm each from a sample. Condition all the specimens in a desiccator charged with saturated solution of sodium nitrate at  $27\text{ }^{\circ}\text{C} \pm 2\text{ }^{\circ}\text{C}$  for a period of 24 hours. Remove all the specimens from the desiccator and immediately determine their collective in a weighing balance to the milligram.

**B-2** Calculate mass of the fabric in  $\text{g/m}^2$ .

**ANNEX C**  
(Clause 5.3)

**EXTRACTS FROM THE GOVERNMENT OF INDIA, MINISTRY OF COMMERCE  
AND INDUSTRY (TRADE AND MERCHANDISE MARKS) NOTIFICATION  
NO. SO. 2937 DATED 20 SEPTEMBER 1962**

a) A trade description of length and width on woollen (including shoddy) and worsted fabricated items like blankets, shawls, scarves or other articles of a similar kind:

- i) The actual length of the piece shall not be less than the stamped length by more than 1 percent; and
- ii) The permissible limits of variation in respect of trade description of width shall be as those prescribed for width of woollen and worsted piece goods [*see* item (b) below].

b) A trade description of width stamped on worsted, woollen and shoddy piece goods:

- i) In pieces of worsted fabric, the stamped width shall not be greater or less than the actual, width provided that the variation in width at any point is not more than 2 percent and on average not more than 1.5 percent; and
- ii) In pieces of woollen and shoddy piece goods, the stamped width shall not be greater or less than the actual width, provided that the variation in width at any point is not more than 3 percent and on average not more than 2 percent.



## **ANNEX D**

*(Clause 6.1)*

### **LIST OF MAJOR FLAWS**

- a) One or more ends missing in the body of the material throughout its length; more than three ends missing at a place and running over 60 cm, or prominently noticeable double ends running throughout the piece;
- b) Undressed snarls noticeable over a length exceeding 5 percent of the length of the piece;
- c) Smash definitely rupturing the texture of the fabric;
- d) Hole, cut or tear;
- e) Read marks prominently noticeable over a length exceeding 5 percent of the piece;
- f) Defective or damaged selvedge noticeable over a length exceeding 5 percent of the length of the piece;
- g) Skewing of weft;
- h) Weft crack or two or more missing picks across the width of the fabric;
- j) Warp or weft bar due to difference in raw material, count, twist, lustre, colour, shade or, spacing of adjacent groups of yarns (starting mark);
- k) More than two adjacent ends running parallel, broken or missing and extending beyond 10 cm;
- m) Noticeable warp or weft float in the body of the fabric;
- n) Noticeable oil or other stain in the fabric;
- p) Oily weft in the fabric;
- q) Prominently noticeable slub;
- r) Conspicuous broken pattern;
- s) Gout due to foreign matter, usually lint or waste woven into the fabric;
- t) Prominent selvedge defect;
- u) Significant shading or listing having a gradual change in tone or depth of shade (excluding in selvedge);
- w) Coloured flecks;
- y) Blurred or dark patch;
- z) Patchy, streaky or uneven dyeing;
- aa) Dye bar; and
- bb) Fuzzy appearance.