

वस्त्रादि — हथकरघा ऊनी कंबल, प्राकृतिक  
ग्रे/भूरा — विशिष्टि  
( तीसरा पुनरीक्षण )

Textiles — Handloom Wool Blankets,  
Natural Grey/Brown — Specification  
( Third Revision )

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## FOREWORD

This Indian Standard (Third 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 first published in 1957 and subsequently revised in 1972, and 1980. This revision has been brought out to standard has again been revised to incorporate the following changes:

- a) Tolerances for breaking load has been incorporated;
- b) Marking clause has been modified;
- c) References to Indian Standards have been updated;
- d) *pH* value of aqueous extract has been incorporated; and
- e) Sampling plan has been updated.

The composition of the Committee responsible for the formulation of this standard is given in [Annex C](#).

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 — HANDLOOM WOOL BLANKETS, NATURAL  
GREY/BROWN — SPECIFICATION***( Third Revision )***1 SCOPE**

**1.1** This standard prescribes constructional particulars and other requirements for two varieties of handloom wool blankets, namely, barrack blankets, natural grey in shade and hospital blankets, natural brown in shade.

**1.2** This standard does not specify general appearance and feel of the blankets (*see* [4.3](#)).

**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 these standards.

**3 MANUFACTURE****3.1 Yarn**

The yarn shall be spun on woollen system. Yarn for Type A blankets shall be manufactured from 100 percent wool having average fibre fineness of up to 41 microns, while that for Type B blankets shall be made from a blend of a minimum of 90 percent wool, having average fineness of up to 41 microns, and a maximum of 10 percent viscose rayon or nylon (*see* Note in [Table 2](#)).

**3.2 Blankets**

The blankets shall be properly washed and shall be free from grease, soap, filling or any other admixture which would give fictitious mass or firmness.

**3.2.1** The blankets shall be milled and given a raised finish.

**3.2.2** The hospital blankets shall have white borders, 5 cm wide, running along the length of the blankets, woven at a distance of 10 cm from each edge.

**3.2.3** The blankets shall be rendered mothproof with dichloro-diphenyl-trichloro ethane (DDT), or otherwise heavily preserved with naphthalene.

NOTE — The manufacturer shall declare whether the blanket have been rendered mothproof or not.

**3.2.4** The blankets when visually examined, both against light and on a flat surface shall not have more than one objectionable flaw per blanket. The objectionable flaws shall be those which immediately strike the eyes of the person examining the blankets and shall be deemed to include:

- a) missing ends and picks;
- b) floats;
- c) cuts and holes;
- d) stains;
- e) weft bars and warp section marks; and
- f) big slubs and knots.

Reference may be made to IS 14466 for details of the flaws.

**4 REQUIREMENTS**

**4.1** The constructional particulars of the blankets shall be as given in [Table 1](#).

**4.2** The blanket shall also conform to the requirements given in [Table 2](#).

**4.3 Sealed Sample**

If in order to illustrate or specify general appearance, feel, shade, etc, of blankets, a sample has been agreed upon and sealed, the supply shall be in conformity with the sample in such respects.

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

**5 SAMPLING****5.1 Lot**

The quantity of blankets of the same type, delivered to a buyer against a dispatch note, shall constitute a lot.

**5.2** The conformity of the lot shall be determined on the basis of the tests carried out on samples drawn from the lot.

**5.3** Unless otherwise agreed to between the buyer and the seller, the number of blankets selected at random from a lot shall be according to [Table 3](#). To ensure the randomness of selection, methods given in IS 4905 shall be followed.

**Table 1 Constructional Particulars of Handloom Wool Blankets, Natural Grey/Brown**

(Clause 4.1)

Sl No.	Ends/ dm	Picks/ dm	Mass/ m <sup>2</sup>  g	Mass per Blanket  kg	Breaking Load on Strips 15 cm × 20 cm, <i>Min</i> N (kgf)		Length  cm	Width  cm	Weave
					Warp way	Weft way			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
i)	80	60	650	2.3	950 (97)	660 (67)	230	152	2/2 twill
Tolerance	± 10 percent	± 10 percent	+ 50 g – 20 g	+ 0.02 kg – 0.05 kg	± 10 percent	± 10 percent	± 2 cm		—
Method of test, Refer to	IS 1963		IS 1964	<a href="#">Annex B</a>	IS 1969 (Part 1)		IS 1954		Visual

NOTE — 1 N (Newton) is approximately equal to 0.102 kgf.

**Table 2 Other Requirements of Handloom Wool Blankets, Natural Grey/Brown**

(Clauses 3.1 and 4.2)

Sl No.	Characteristic	Requirement	Method of Test, Ref to
(1)	(2)	(3)	(4)
i)	Relaxation shrinkage, percent, <i>Max</i>	4	IS 665
ii)	Scouring loss, percent, <i>Max</i>	4	<a href="#">Annex B</a>
iii)	DDT, percent, <i>Min</i>	0.3	IS 3522 (Part 2)
iv)	Wool content	<i>see</i> <a href="#">3.1</a>	IS 8476
v)	Average wool fabric diameter ( <i>see</i> Note), <i>Max</i>	44 microns	IS 744
vi)	pH value of aqueous extract	5 to 7.5	IS 1390

NOTE — The blankets having wool fibres of average diameter up to 44 microns may be accepted, if agreed to between the buyer and the seller, with suitable price deviation.

**Table 3 Sample Size and Criterion for Conformity**

(Clauses 5.3 and 5.4)

Sl No.	Lot Size	Sample Size	Permissible No. of Non-conforming Blankets	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 1 200	20	1	5
v)	1 201 to 10 000	32	2	8
vi)	10 001 to 35 000	50	3	8
vii)	35 001 to 500 000	80	5	13
viii)	500 001 and above	125	7	13

#### 5.4 Number of Tests and Criterion for Conformity

<i>Sl No.</i>	<i>Characteristic(s)</i>	<i>No. of Tests</i>	<i>Criterion for Conformity</i>
(1)	(2)	(3)	(4)
i)	Visual examination, ends, picks, mass per blanket, length and width	According to col (3) of <a href="#">Table 3</a>	Permissible number of non-conforming blankets does not exceed the corresponding number given in col (4) of <a href="#">Table 3</a>
ii)	Mass per square metre, breaking load, relaxation shrinkage, scouring loss, DDT percent, wool content and wool fibre diameter	According to col (5) of <a href="#">Table 3</a>	All the test specimens meet the relevant requirements

#### 6 MARKING

6.1 The blankets shall be marked with the following:

- a) Name of the material, with type (*see* [3.1](#));
- b) Manufacturer's name, initials or trade-mark, if any;
- c) Month and year of manufacture;
- d) Length and width of the blankets;
- e) Indication of the source of manufacture; and
- f) Other declarations required as per law in force.

#### 6.2 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.

#### 7 PACKING

7.1 The blankets shall be packed in bales in conformity with the procedure laid down in IS 741 or by the method given in [7.2](#) if specifically required by the buyer.

7.2 Fifteen blankets of the same variety shall be individually folded and placed one over the other. The folded blankets shall be wrapped in a layer each of polyethylene film, kraft paper and hessian (305 g/m<sup>2</sup>) in such a way that hessian forms the outermost layer. Each layer shall have an overlap of minimum 10 cm. The outermost layer shall be suitably stitched with jute twine and the package made secure by means of steel strips or hoops of medium grade. The gross mass of the bale shall normally not exceed 38 kg.

## ANNEX A

(Clause 2)

## LIST OF REFERRED STANDARDS

<i>IS No.</i>	<i>Title</i>	<i>IS No.</i>	<i>Title</i>
IS 665 : 1989	Textiles — Determination of dimensional changes of fabrics containing wool on soaking in water ( <i>first 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 741 : 1971	Code for inland packaging of woollen and worsted yarn and cloth ( <i>first revision</i> )	IS 1969 (Part 1) : 2018/ISO 13934-1 : 2013	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 744 : 2000	Textiles — Methods for determination of wool fibre diameter, percentage of medullated fibres and kemp fibre ( <i>third revision</i> )	IS 3522 (Part 2) : 1989	Textiles — Estimation of common preservatives: Part 2 ( <i>first revision</i> )
IS 1390 : 2022/ ISO 3071 : 2020	Textiles — Determination of pH of aqueous extract ( <i>third revision</i> )	IS 4905 : 2015/ ISO 24153 : 2009	Random sampling and randomization procedures ( <i>first revision</i> )
IS 1954 : 2024/ ISO 22198 : 2006	Textiles — Fabrics — Determination of width and length ( <i>third revision</i> )	IS 8476 : 1977	Method for determination of wool content in woollen textile materials
IS 1963 : 1981	Methods for determination of threads per unit length in woven fabrics ( <i>second revision</i> )	IS 14466 : 1997/ ISO 8498 : 1990	Fabrics — Description of defects — Vocabulary

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## ANNEX B

(Table 1 and Table 2)

## METHODS OF TEST

**B-1 MASS PER BLANKET**

**B-1.1** Condition all blankets in the test sample to moisture equilibrium in standard atmosphere (65 percent  $\pm$  2 percent relative humidity and 27 °C  $\pm$  2 °C temperature) for a period of 48 h in such a way as to expose as far as possible all portions of the blankets to the atmosphere.

**B-1.2** Measure the length and width of each blanket, correct to the nearest centimetre and determine the mass and correct to the nearest 10 g. Calculate the mass of the blanket of dimensions specified in [Table 1](#).

**B-2 SCOURING LOSS****B-2.1 Test Specimen**

From each piece in the test sample cut a test specimen square in shape, with sides parallel to warp and weft threads, and weighing approximately 10 g.

**B-2.2 Procedure**

**B-2.2.1** Heat the test specimen to constant mass in a

drying oven at 105 °C  $\pm$  3 °C and determine its mass accurately.

NOTE — Constant mass shall be deemed to have been reached, if the difference between the two successive weighings at an interval of 20 min is less than 0.05 percent.

**B-2.2.2** Extract the above test specimen with a mixture of benzene and methyl alcohol in the proportion of 3 : 2 in a Soxhlet apparatus for 4 h at the rate of 5 extractions per hour, by placing the specimen in a thimble and covering it with cotton wool previously extracted with the above mixture of benzene and methyl alcohol. Distil off the solvents from the extract. Heat the residue to a constant mass (*see* Note under [B-2.2.1](#)) at 105 °C  $\pm$  3 °C and determine the mass accurately.

**B-2.3 Calculations**

$$\text{Scouring loss, percent} = 100 \times \frac{a+R}{b+R}$$

where

$a$  = mass of the dry residue ([B-2.2.2](#));

$R$  = moisture regain percent; and

$b$  = mass of the test specimen ([B-2.2.1](#)).

## ANNEX C

*(Foreword)*

## COMMITTEE COMPOSITION

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