

**भारतीय मानक ब्यूरो**

**BUREAU OF INDIAN STANDARDS**

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*भारतीय मानक मसौदा*

**वस्त्रादि – कंबल बनाने का कपड़ा – विशिष्ट**

*( IS 1531:1993 का तीसरा पुनरीक्षण )*

*Draft Indian Standard*

**Textiles — Blanketing Cloth — Specification**

*( Third Revision of IS 1531:1993 )*

ICS 59.080.30

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Wool, Wool Products and Textile Floor Covering  
Sectional Committee, TXD 04

Last date for receipt of comment is  
**23 September 2024**

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**FOREWORD**

*(Formal clauses will be added later)*

The present revision has been made in the light of experience gained since its last revision and to incorporate the following major changes:

- a) Scope of the standard has been modified to define the varieties;
- b) Amendment No. 1 has been incorporated in the standard;
- c) References to Indian Standard given in Annex A has been updated;
- d) Requirement for yarn used in the manufacturing of cloth has been modified to exclude the usage of any admixture of non-woollen fibre;
- e) Cloth weave as 2/2 twill has been specified;
- f) Use of mothproofing chemicals for example; permethrin, bifenthrin, chlorofenapyr, sulcofuran, fibronil or any suitable chemicals has been specified;

- g) Length and width of the cloth has been modified to keep it as per agreement between buyer and seller in addition to the specified values;
- h) Requirement for colour fastness to rubbing, pilling resistance and pH value have been specified;
- i) Marking and Sampling clauses have been modified; and
- j) Packaging clause has been modified.

## 1 SCOPE

**1.1** This standard prescribes the constructional particulars and other requirements of two varieties of blanketing cloth.

- a) *Variety 1* — For its use as insulating lining material;
- b) *Variety 2* — For its use in making coats, coarse rugs and covers for tank mules.

**1.2** This standard does not specify the indeterminable characteristics like general appearance, feel, finish and shade of cloth (*see* also **6**).

## 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 these standards.

## 3 TERMINOLOGY

For the purpose of this standard, the definitions as given in IS 11206 shall apply.

## 4 MANUFACTURE

### 4.1 Yarn

The 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. The particulars regarding the grade of wool fibres, count of yarn and finish for the manufacture of cloth are given in Table 1.

### 4.2 Cloth

**4.2.1** The cloth shall be woven in a 2/2 twill weave. It shall be milled, and given raised finish.

**4.2.2** The cloth shall be clean, scoured and free from grease, soap, filling or any other admixture which might give fictitious mass, substance or firmness. The cloth shall be uniformly woven with firm selvages.

**4.2.3** The wool fibres shall be of natural colour and may be brown, grey or a mixture of brown and grey as agreed to between the buyer and the seller.

**4.2.4** The cloth shall be manufactured using stock-dyed wool and may be piece dyed to an agreed shade; if made from natural white fibre. Material other than wool fibres up to 5 percent may be used to provide a decorative or ornamentation effect (*see* IS 1793).

#### **4.2.5** *Freedom from Defects*

The cloth when visually examined both against light and on a surface shall not have more than one objectionable flaw per 8 m length. The objectionable flaws shall be those which strike immediately the eyes of the person examining the cloth 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;
- f) big slubs, knots and specks;
- g) dyeing defects (streaks, patches, etc.); and
- h) thick and thin places.

**4.2.5.1** All objectionable flaws shall be marked by means of a thread sewn in the selvedge opposite the flaw, and an allowance of 10 m shall be given for each such flaw. Only one selvedge shall be used for tagging.

**4.2.5.2** A reference may be made to IS 4125 for details of these defects.

#### **4.2.6** *Moth-proofing*

The cloth packages shall be rendered moth-proof with permethrin, bifenthrin, chlorofenapyr, sulcofuran, fibronil or otherwise by any suitable chemicals which will not have toxic effect on human body. The manufacturer shall declare the mothproofing chemicals used, its minimum residual content and the method of test for determining the same.

## **5 REQUIREMENTS**

The constructional particulars and other requirements of the cloth shall conform to those given in Table 1.

## **6 SEALED SAMPLE**

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

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

**Table 1 Constructional Particulars and Other Requirements of Blanketing Cloth**  
(Clauses 4.1 and 5)

Sl. No.	Characteristics	Requirement		Tolerance	Method of Test, Ref to
		Variety 1	Variety 2		
i)	Finess/Grade of Wool	44s	44s	-	IS 5910
ii)	Approximate count of basic yarn, tex (nm), <i>see</i> Note 1				IS 10014 (Part 2)
	a) Warp	400 (2.5)	500 (2.0)	-	
	b) Weft	400 (2.5)	500 (2.0)	-	
iii)	Ends/dm	60	60	± 5 percent	IS 1963
iv)	Picks/dm	70	65	± 5 percent	IS 1963
v)	Mass, g/m <sup>2</sup>	490	745	± 5 percent	IS 1964
vi)	Breaking strength on 15 cm × 20 cm strip, N, <i>Min</i>			-	IS 1969 (Part 1)
	a) Warpway	660	470	-	
	b) Weftway	980	780	-	
vii)	Length, m ( <i>see</i> Note 2)	36 or as agreed	36 or as agreed	- 1 percent	IS 1954
viii)	Width, m (Exclusive of Selvedges)	140 or as agreed	140 or as agreed	- 1 percent	IS 1954
ix)	Weave type	2/2 twill	2/2 twill	-	Visual
x)	Relaxation shrinkage, percent, <i>Max</i>			-	IS 665

	a) Warp way	4.0	4.0		
	b) Weft way	4.0	4.0		
xi)	Colour fastness to (in case of dyed cloth)				
	a) Light	4 or better	4 or better	-	IS/ISO 105-B02
	b) Washing			-	IS/ISO 105-C10
	i) Change in colour of test specimen	4 or better	4 or better	-	
	ii) Staining on adjacent fabric	4 or better	4 or better	-	
	c) Rubbing			-	IS/ISO 105-X12
	i) Dry rubbing	4 or better	4 or better	-	
	ii) Wet rubbing	3 or better	3 or better	-	
	d) Dry cleaning			-	IS/ISO 105-D01
	i) Change in colour of test specimen	4 or better	4 or better	-	
	ii) Staining on solvent	4 or better	4 or better	-	
xii)	Pilling resistance (1000 cycles)	3 or better	3 or better	-	IS 10971 (Part 1)
xiii)	Loss in weight, percent, <i>Max</i>	4	4		IS 4390
xiv)	<i>pH</i> value of aqueous extract	5-7	5-7	-	IS 1390
Notes					
1 The approximate count of basic yarn is given for guidance only.					
2 The number of short length pieces (measuring not less than 10 m) shall not exceed 5 percent of the total number of pieces in the lot.					

## 7 MARKING

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

- a) Manufacturer's name, initials or trade-mark, if any;
- b) Batch /lot number;

- c) Description of the cloth, that is, ‘wool percent’, ‘length and width of the piece’;.
- d) Net mass of the package;
- e) Month and year of manufacture;
- f) If desired by the buyer, the words ‘Treated for Moth-Resistance’; and
- g) Any other information/instruction provided by the manufacture/required under law.

## 7.2 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.

## 8 PACKING

The cloth shall be packed securely so as to allow normal handling and transport without tearing and exposing the contents. The yarn may be supplied in hanks, cones or cheeses as agreed to between the buyer and the seller and packed in suitable packaging material. Details of the packing shall be as agreed to between the buyer and the seller.

## 9 SAMPLING

**9.1 Lot** — The quantity of the cloth of the same variety, manufactured from the same quality of raw wool and delivered to the buyer against one dispatch note shall constitute a lot.

**9.2** Unless otherwise agreed between the buyer and the seller, the number of pieces to be selected at random shall be in accordance with col 3 and col 5 of Table 2. To ensure randomness of selection IS 4905 may be used.

### 9.3 Number of Test Specimens and Criteria for Conformity:

Number of test specimens and criteria for conformity shall be as given in Table 3.

**Table 2 Sample Size and Criteria for Conformity**

(Clause 9.2)

Sl No.	Lot Size	Sample Size	Permissible Number of Non-Conforming Pieces	Sub-sample Size
(1)	(2)	(3)	(4)	(5)
i)	Up to 50	3	0	2
ii)	51 to 150	5	0	2
iii)	151 to 300	8	1	3

iv)	301 to 500	13	2	5
v)	501 and above	20	5	3

**Table 3 Number of Tests and Criteria for Conformity**  
(Clause 9.3)

<b>Sl No.</b>	<b>Characteristics</b>	<b>Number of Samples</b>	<b>Criteria for Conformity</b>
(1)	(2)	(3)	(4)
i)	Ends, picks, mass, width, visual defects and weave	According to col 3 of Table 4	Number of non-conforming pieces shall not exceed the corresponding number given in column 4 of Table 2.
ii)	Length, breaking strength, relaxation shrinkage, blend composition, colour fastness ratings, mothproofing and pH value of aqueous extract, pilling resistance	According to col 5 of Table 4	-do-
iii)	All other requirements	According to col 4 of Table 4	All the test pieces shall meet the requirement

ANNEX A  
(Clause 2)

LIST OF REFERRED INDIAN STANDARDS

<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 1390 : 2022	Textiles — Determination of pH of aqueous extract ( <i>third 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 4390 : 2001	Textiles — Method for estimation of solvent soluble matter in textile material ( <i>first revision</i> )
IS 5910 : 2023	Fineness grades of wool ( <i>second revision</i> )
IS 10014 (Part 2) : 1981	Methods of tests for man-made staple fibres Part 2 Determination of linear density
IS 10971 (Part 1) : 2022	Textiles — Determination of fabric propensity to surface pilling fuzzing or matting Part 1: Pilling box method ( <i>second revision</i> )
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 - X12 : 2016	Textiles — Tests for colour fastness Part X12 Colour fastness to rubbing ( <i>first revision</i> )
IS/ISO 105 - D 01 : 2010	Textiles — Tests for colour fastness Part D01 Colour fastness to drycleaning using perchloroethylene solvent
IS 1954 : 2024 / ISO 22198 : 2006	Textiles — Fabrics — Determination of width and length ( <i>third 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 4905 : 2015 / ISO 24153 : 2009	Random sampling and randomization procedures ( <i>first revision</i> )
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(Please use A4 size sheet of paper only and type within fields indicated. Comments on each clause/sub clause/table/fig etc. be started on a fresh box. Information in column 3 should include reasons for the comments and suggestions for modified working of the clauses when the existing text is found not acceptable. Adherence to this format facilitates Secretariat's work)

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**DOCUMENT NO:** TXD 04 (26228)

Item, Clause Sub-Clause No. Commented upon (Use Separate Box afresh)	Comments	Specific Proposal (Draft clause to be add/amended)	Remarks	Technical References and justification on which (2), (3), (4) are based
(1)	(2)	(3)	(4)	(5)