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Jawaharlal Nehru

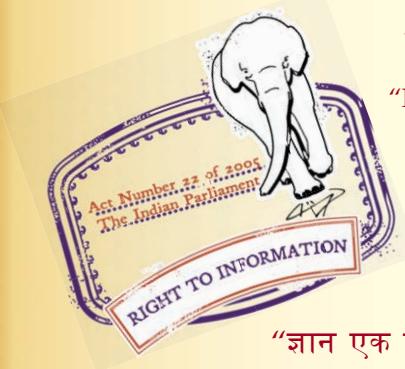
“Step Out From the Old to the New”

IS 13472 (1992): Textiles - Woven terry towelling fabrics and towels made of man-made fibres and their blends [TXD 31: Man-Made Fibres, Cotton and their Products]

“ज्ञान से एक नये भारत का निर्माण”

Satyanaaranay Gangaram Pitroda

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“ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है”

Bhartṛhari—Nītiśatakam

“Knowledge is such a treasure which cannot be stolen”



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भारतीय मानक

वस्त्रादि – मानवनिर्मित रेशों और उनके संमिश्रों से बुना
टेरी तौलिए का कपड़ा और तौलिए – विशिष्ट

Indian Standard

TEXTILES – WOVEN, TERRY TOWELLING
FABRICS AND TOWELS MADE OF MAN-MADE
FIBRES AND THEIR BLENDS – SPECIFICATION

UDC 645.486.2 : 645.486.42

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BUREAU OF INDIAN STANDARDS
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002

FOREWORD

This Indian Standard was adopted by the Bureau of Indian Standards, after the draft finalized by the Man-Made Fibre and Products Sectional Committee had been approved by the Textile Division Council.

A large variety of man-made fibres and their blends are being used for the manufacture of household kitchen and bath towel woven fabrics. From the consumer point of view, the formulation of a standard for their performance requirements needs no emphasis.

This standard specifies requirements for general appearance, flammability and soil release efficiency of fabrics (*see 3.1, 3.2, 4.1.1 and Table 1*) which call for a prior agreement between the buyer and the seller.

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 : 1960 'Rules for rounding off numerical values (*revised*)'. 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 – WOVEN, TERRY TOWELLING FABRICS AND TOWELS MADE OF MAN-MADE FIBRES AND THEIR BLENDS – SPECIFICATION

1 SCOPE

1.1 This standard specifies the performance requirements for woven terry towelling fabrics and towels made from man-made fibres and their blends used in the manufacture of beach, bath, hand, finger tip and kitchen towels and face cloths.

1.2 It is not applicable to woven terry fabrics used for apparel.

2 REFERENCES

2.1 The Indian Standards listed in Annex A are necessary adjuncts to this standard.

3 REQUIREMENTS

3.1 The woven fabrics intended for manufacture of household kitchen and bath towels shall conform to the requirements given in Table 1. The requirements for flammability and soil release efficiency are optional and shall be applicable, when an agreement has been reached between the buyer and the seller.

3.2 For the purpose of fashion or aesthetics, one or more of the requirements given in Table 1 may be modified as per the agreement between the buyer and the seller.

3.3 Towels

3.3.1 Dimensions of Towels

The dimensions of towels shall be as follows or as specified by the purchaser:

Width (cm)	Length (cm)	Max Heading/Depth (cm)
40	60	6.5
50	100	6.5
60	125	6.5
66	112	6.5
75	150	6.5
80	155	6.5

3.3.2 Transverse Ends or End Hems

Fabric shall have 13 mm hem with a full turn-in at each end.

3.3.3 Side Edges

Fabric shall either have selvedges or hems of 13 mm with a full turn-in.

3.3.4 Sewing Thread

Suitable spun polyester sewing thread or cotton sewing thread shall be used. In case of dyed towels, the thread shall be of similar shade and colour fastness as that of towel fabric.

4 SEALED SAMPLE

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

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

5 MARKING

5.1 Each piece of fabric shall be marked on both ends with the following:

- Name of the material and its composition, in case of blends;
- Indication of the source of manufacture;
- Month and year of manufacture;
- Dimensions (length and width) of the fabric or towel; and
- Mass of fabric (g/m²).

5.1.1 In the case of towels, the marking specified in **5.1** may be done on a cloth label which is securely sewn on one corner.

Table 1 Requirements for Woven Terry Household Kitchen and Bath Towel Woven, Fabrics
(Clauses 3.1 and 3.2)

Sl No.	Characteristic	Requirement	Method of Test
(1)	(2)	(3)	(4)
1.	Dimensional change, percent, <i>Max</i> , on:		
	a) Washing (after 5 cycles)	3	IS 1299 : 1984
	b) Dry heat at $105 \pm 2^\circ\text{C}$	2	IS 12170 : 1987
2.	Minimum colour fastness ratings to:		
	a) Washing		IS 764 : 1979
	i) Change in colour	4	
	ii) Staining	3	
	b) Dry-cleaning, change in colour	4	IS 4802 : 1988
	c) Rubbing		IS 766 : 1988
	i) Dry	4	
	ii) Wet	3	
	d) Perspiration		IS 971 : 1983
	i) Change in colour	4	
	ii) Staining	3	
	e) Light (change in colour)	4	IS 2454 : 1985
3.	Wettability, seconds, <i>Max</i>	10	IS 2349 : 1963
4.	Pilling resistance after 5 hours of test, <i>Min</i>	4	IS 10971 : 1984
5.	Flammability, average time of flame spread, <i>Min</i>	5 seconds or more for unraised fabrics and 7 seconds or more for raised fabrics	IS 11871 : 1986 (45° inclination flame test)
6.	Soil Release Efficiency, percent, <i>Min</i>	80	IS 11813 : 1986
7.	Breaking strength on $5.0 \times 20 \text{ cm}$ strips, kgf (N), <i>Min</i> in both directions	35 (340)	IS 1969 : 1985

5.2 A suitable cloth label indicating symbols for proper care of fabrics during washing, dry-cleaning, drying and ironing should also be attached with each piece of fabric or towel according to IS 4418 : 1967. The manufacturer may also arrange for leaflets giving instructions for care maintenance of fabrics.

5.3 The fabric/towel may also be marked with the Standard Mark.

6 PACKING

6.1 The fabric/towels shall be packed in bales or cases in conformity with the procedure laid down either in IS 2194 : 1963 or in IS 2195 : 1964 or as agreed to between the buyer and the seller.

7 DECLARATION AND TOLERANCE

7.1 The manufacturer shall declare the constructional particulars, namely, linear density of warp and weft yarn, number of ends and picks per decimetre, mass (g/m^2), length and width of fabric/towels and the chemical composition of the fabric in case of blends.

7.2 The tolerance as given below shall be permitted on these particulars:

Nominal linear density of warp and weft yarn in tex	± 5 percent
Ends/dm and picks/dm	± 5 percent
mass (g/m^2)	+5 percent -2.5 percent
Length	+5 percent -0 percent
Width	± 15 mm
Chemical composition, in case of blends	± 2 percent units

8 INSPECTION

8.1 The fabric shall be inspected for serious and major flaws (see IS 11881 : 1986) and shall be considered as satisfactory if the following conditions are satisfied:

Serious flaws	Nil
Major flaws	5 per 100 linear metres

8.1.1 All the defects shall be flagged by appropriate coloured threads on either of the selvedges (see also IS 4125 : 1987).

9 SAMPLING

9.1 Lot

The quantity of fabric/towels purporting to be of one definite type delivered to a buyer against one despatch note shall constitute a lot.

NOTE — The sampling plan given in Table 2 shall give desired protection to the buyer and the seller provided the lot submitted for inspection is homogenous. To ensure homogeneity of the lot, it is recommended to follow the methods given in IS 4905 : 1968.

9.2 The conformity of the lot to the requirements of this standard shall be adjudged on the basis of the tests carried out on the samples selected from it.

9.3 Unless otherwise agreed to between the buyer and the seller the number of pieces to be selected from a lot shall be in accordance with col 1 and 2 of Table 2.

Table 2 Sample Size

(Clause 9.3)

Lot Size	Sample Size	Permissible No. of Non-conforming Pieces	Sub-Sample Size	Sub-Sub-Sample Size
(1)	(2)	(3)	(4)	(5)
Up to 50	5	0	3	2
51 to 150	8	0	5	3
151 to 300	13	1	5	3
301 to 500	20	1	8	5
501 and above	32	2	8	5

10 CRITERIA FOR CONFORMITY

10.1 The fabric shall be declared conforming to the requirements of this standard if the conditions given below are satisfied:

Sl No.	Characteristic(s)	Number of Test	Criteria for Conformity
1.	Serious and major flaws	According to col 2 of Table 2	Permissible numbers of defective pieces not to exceed corresponding numbers given in col 3 of Table 2
2.	Ends, picks, mass, length, width and chemical composition	According to col 4 of Table 2	do
3.	Breaking load, dimensional change, colour fastness, flammability, pilling resistance, bursting strength, soil release efficiency and wettability	According to col 5 of Table 2	All the test specimens shall satisfy the relevant requirements given in Table 1

ANNEX A

(Clause 2.1)

LIST OF REFERRED INDIAN STANDARDS

IS No.	Title	IS No.	Title
764 : 1979	Method for determination of colour fastness of textile materials to washing: Test 3 (second revision)	4125 : 1987	materials to artificial light (xenon lamp) (first revision)
766 : 1988	Method for determination of colour fastness of textile materials to rubbing (first revision)	4418 : 1967	Glossary of terms pertaining to defects in fabrics (first revision)
971 : 1983	Method for determination of colour fastness of textile materials to perspiration (first revision)	4802 : 1988	Guide for care-labelling of textiles for laundering and dry-cleaning
1299 : 1984	Method for determination of dimensional changes on washing of fabrics woven from rayon and synthetic fibres (second revision)	4905 : 1968	Method for determination of colour fastness of textile materials to dry-cleaning (first revision)
1969 : 1985	Methods for determination of breaking load and elongation of woven textile fabrics (second revision)	10971 : 1984	Methods for random sampling
2194 : 1963	Code for seaworthy packaging of man-made fibre fabrics	11813 : 1986	Method for determination of pilling resistance of fabrics
2195 : 1964	Code for inland packaging of man-made fibre fabrics and man-made fibre yarn	11871 : 1986	Method for determination of soil resistance and soil release efficiency of finished textile fabrics
2349 : 1963	Method for determination of wettability of cotton fabrics	11881 : 1986	Methods for determination of flammability and flame resistance of textile fabrics
2454 : 1985	Methods for determination of colour fastness of textile	12170 : 1987	Men's and boys' woven shirting made of man-made fibres and their blends
			Method for determination of dimensional stability of textile fabrics to dry heat treatments

Standard Mark

The use of the Standard Mark is governed by the provisions of the *Bureau of Indian Standards Act, 1986* and the Rules and Regulations made thereunder. The Standard Mark on products covered by an Indian Standard conveys the assurance that they have been produced to comply with the requirements of that standard under a well defined system of inspection, testing and quality control which is devised and supervised by BIS and operated by the producer. Standard marked products are also continuously checked by BIS for conformity to that standard as a further safeguard. Details of conditions under which a licence for the use of the Standard Mark may be granted to manufacturers or producers may be obtained from the Bureau of Indian Standards.

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BUREAU OF INDIAN STANDARDS

Headquarters:

Manak Bhavan, 9 Bahadur Shah Zafar Marg, New Delhi 110002
Telephones : 331 01 31, 331 13 75

Telegrams : Manaksansta
(Common to all Offices)

Regional Offices :

Central : Manak Bhavan, 9 Bahadur Shah Zafar Marg
NEW DELHI 110002

Telephone

{ 331 01 31
 331 13 75

Eastern : 1/14 C. I. T. Scheme VII M, V. I. P. Road, Maniktola
CALCUTTA 700054

{ 37 84 99, 37 85 61,
 37 86 26, 37 86 62

Northern : SCO 445-446, Sector 35-C, CHANDIGARH 160036

{ 53 38 43, 53 16 40,
 53 23 84

Southern : C. I. T. Campus, IV Cross Road, MADRAS 600113

{ 235 02 16, 235 04 42,
 235 15 19, 235 23 15

Western : Manakalaya, E9 MIDC, Marol, Andheri (East)
BOMBAY 400093

{ 632 92 95, 63 27 80,
 632 78 91, 632 78 92

Branches : AHMADABAD, BANGALORE, BHOPAL, BHUBANESHWAR, COIMBATORE,
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