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Jawaharlal Nehru

“Step Out From the Old to the New”

IS 854 (1991): Handloom cotton turkish, honeycomb and huckaback towels and towelling cloth (Amalgamating IS 855:1979 and IS 856:1971) [TXD 8: Handloom and Khadi]



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Bhartrhari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”

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भारतीय मानक
हथकरघा निर्मित सूती तर्किश, हनीकोम्ब व ह्काबैक
तौलिये ओर तौलियों का कपड़ा — विशिष्टि
(दूसरा पुनरीक्षण)

Indian Standard

HANDLOOM COTTON TURKISH,
HONEYCOMB AND HUCKABACK TOWELS
AND TOWELLING CLOTH — SPECIFICATION
(*Second Revision*)

UDC 677.074

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BUREAU OF INDIAN STANDARDS
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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 Textile Division Council.

This standard was first published in 1956 and subsequently revised in 1981. This standard has been again revised in order to overcome certain difficulties encountered by the handloom industry in implementation of this standard.

Following are the important changes carried out while revising this standard:

- a) Keeping in view the end-use, Indian Standards IS 855 : 1979 Specification for handloom cotton honeycomb towels and towelling cloth (*first revision*) and IS 856 : 1971 'Specification for handloom cotton huckaback towels (*first revision*)' have been amalgamated with this standard. Accordingly, title of this standard has been modified.
- b) Use of cotton yarn conforming to IS 171 : 1985 'Cotton and cotton regenerated cellulosic fibre blended grey yarn (*third revision*)' has been specified.
- c) Constructional particulars have been modified taking into consideration present production patterns prevailing in the handloom industry.
- d) Only negative tolerances have been specified on ends/dm, picks/dm and mass g/m² to ensure minimum desirable construction. There being no tolerance on positive side on these requirements, it would provide flexibility to industry to adjust construction of towels depending upon market demands.
- e) Breaking load requirement for honeycomb and huckaback towels has been specified as optional requirement. This is to be enforced in case it is not possible to establish that cotton yarn conforming to IS 171 : 1985 has been used in the production of towels. For turkish towels, breaking load requirement has not been specified.
- f) For determining the conformity of the towels and towelling cloth to the requirements laid down in this standard, a provision has been incorporated to allow testing of specimens in prevailing atmospheric condition. However, in all cases of disputes specimens shall be tested after conditioning in the standard atmospheric conditions.
- g) Provision has been incorporated for agreement between the buyer and seller with respect to permissible number of defects in the towels.

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

HANDLOOM COTTON TURKISH, HONEYCOMB AND HUCKABACK TOWELS AND TOWELLING CLOTH — SPECIFICATION

(Second Revision)

1 SCOPE

1.1 This standard prescribes constructional particulars and other requirements for seven, five and four varieties of handloom cotton turkish, honeycomb and huckaback towels respectively.

1.2 The constructional particulars and other requirements specified in this standard shall also be applicable to towelling cloth.

1.3 This standard does not specify the general appearance, feel, finish, etc.

2 REFERENCES

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

3 ATMOSPHERE CONDITIONS FOR TESTING

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

4 MANUFACTURE

4.1 Yarn

The cotton yarn used in the manufacture of towels shall conform to the requirements specified in IS 171 : 1985.

4.2 Towels

The towels shall be free from dressing and filling materials and from substances liable to cause subsequent tendering.

4.2.1 In case of turkish towels, the ground to pile ratio shall be 1 : 3, 1 : 4 or 1 : 5 or as agreed to between the buyer and the seller.

4.2.2 Each transverse end of the towel shall be either finished with a fringe 4 to 5 cm in length, or hemmed to a depth of not less than 15 mm, the raw edges having a turn-in of 10 mm before the hem is formed. The cotton sewing thread (see IS 1720 : 1978) of 100 d tex \times 6 (60^s /6) shall be used in hemming and the number of stitches shall not be less than 4 per centimetre.

5 REQUIREMENTS

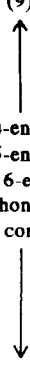
5.1 The turkish, honeycomb and huckaback towels shall conform to the requirements specified in Table 1, Table 2 and Table 3 respectively.

Table 1 Constructional Particulars of Handloom Cotton
Turkish Towels and Towelling Cloth

Variety No.	Count of Yarn Universal Count (Cotton Count)		Ends/dm	Picks/dm	Mass g/m ²	Weave
	Warp (Ground and Pile)	Weft				
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	30 tex \times 2 (20 ^s /2)	30 tex (20 ^s)	157	173	300	Terry Weave
2	30 tex \times 2 (20 ^s /2)	60 tex (10 ^s)	118	118	317	
3	30 tex \times 2 (20 ^s /2)	30 tex (20 ^s)	250	200	400	
4	30 tex \times 2 (20 ^s /2)	50 tex (12 ^s)	220	190	500	
5	30 tex \times 2 (20 ^s /2)	60 tex (10 ^s)	126	173	500	
6	30 tex \times 2 (20 ^s /2)	30 tex (20 ^s)	240	168	350	
7	30 tex \times 2 (20 ^s /2)	60 tex (10 ^s)	216	144	550	
Tolerance, Percent	—	—	—5	—5	—5	—
Method of Test	—	—	IS 1963 : 1981		IS 1964 : 1970 or Annex C	Visual

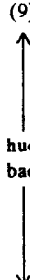
1For guidance only.

Table 2 Constructional Particulars and Breaking Load Requirement for Handloom Cotton Honeycomb Towels and Towelling Cloth*(Clause 5.1)*

Variety No.	Count of Yarn Universal Count (Cotton Count)		Ends/dm	Picks/dm	Mass g/m ²	Breaking Load (see 5.1.1)		Weave
	Warp	Weft				Warp	Weft	
(1)	(2)	(3)	(4)	(5)	(6)	(7) N	(8) N	(9)
1	30 tex × 2 (20 ⁸ /2)	60 tex (10 ⁶)	160	140	185	460	200	4-end or 5-end or 6-end honey- comb 
2	30 tex × 2 (20 ⁸ /2)	60 tex (10 ⁶)	160	160	200	460	220	
3	30 tex × 2 (20 ⁸ /2)	60 tex (10 ⁶)	176	160 (or 80 double)	220	480	220	
4	30 tex × 2 (20 ⁸ /2)	60 tex (10 ⁶)	176	176	240	480	240	
5	30 tex × 2 (16 ⁶)	60 tex (10 ⁶)	210	190	190	280	280	
Tolerance, Percent	—	—	—5	—5	—5	— 5 on average and —15 on individual reading		
Method of Test	—	—	IS 1963 : 1981 —————→ IS 1964 : 1970 or Annex C			IS 1969 : 1985	Visual	

1) For guidance only.

Table 3 Constructional Particulars and Breaking Load Requirement for Handloom Cotton Huckaback Towels and Towelling Cloth*(Clause 5.1)*

Variety No.	Count of Yarn Universal Count (Cotton Count)		Ends/dm	Picks/dm	Mass g/m ²	Breaking Load (see 5.1.1)		Weave
	Warp	Weft				Warp	Weft	
(1)	(2)	(3)	(4)	(5)	(6)	(7) N	(8) N	(9)
1	42 tex × 2 (14 ⁸ /2)	98 tex (6 ⁶)	180	120	290	600	286	hucka- back 
2	42 tex (14 ⁸)	98 tex (6 ⁶)	180 (double)	120	290	600	286	
3	42 tex (14 ⁸)	49 tex (12 ⁶)	180 (double)	120 (double)	290	600	286	
Market Variety	48 tex to 85 tex (7 ⁶ to 15 ⁶)	40 tex to 120 tex (5 ⁶ to 15 ⁶)	160 to 220	110 to 210	175 to 300	375	300	
Tolerance, Percent	—	—	—5	—5	—5	— 5 on average and — 15 on individual readings		—
Method of Test	—	—	IS 1963 : 1981		IS 1964 : 1970 or Annex C	IS 1969 : 1985	Visual	

1) For guidance only.

5.1.1 However breaking load requirement shall be an optional requirement. It shall be enforced only when conformance of cotton yarn to the requirements specified in IS 171 : 1985 is not known.

5.2 The towels shall also conform to the requirements specified in Table 4.

5.3 Dimensions

Length and width of the towels when determined in accordance with IS 1954 : 1990 shall be as agreed to between the buyer and the seller or as declared by the seller subject to the tolerances of ± 2 percent on length and width.

5.4 In order to illustrate or specify the indeterminable characteristics, such as general appearance, feel and shade of the towels, a sample has been agreed upon and sealed, the supply shall be in conformity with the sample in such respects.

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

6 INSPECTION

6.1 The towels when visually inspected shall be free from the major flaws listed at Annex B.

6.1.1 The number of permissible flaws per piece shall be as agreed to between the buyer and the seller.

6.2 For details of the flaws mentioned in 6.1, a reference may be made to IS 4125 : 1987.

7 MARKING

7.1 The towels shall be suitably marked with the following information :

- Name of the material and variety No.,
- Length (cm) and width (cm), and
- Indication of the source of manufacture.

7.1.1 The towels and towelling cloth may also be marked with the Standard Mark.

8 PACKING

Unless otherwise agreed upon by the buyer and the seller the towels shall be packed in bales or cases in conformity with the procedure laid down in IS 1347 : 1972 or IS 293 : 1980.

9 SAMPLING

9.1 Lot

The quantity of the towels of the same variety delivered to one buyer against one despatch note shall constitute a lot.

9.2 The conformity of the lot to the various requirements specified in the standard shall be determined on the basis of tests carried out on the samples selected from the lot.

9.3 Unless otherwise agreed, the number of pieces selected at random for inspection shall be in accordance with Table 5.

Table 4 Other Requirements for Handloom Cotton Turkish Towels, Honeycomb Towels and Huckaback Towels

(Clause 5.2)

Sl No.	Characteristic	Requirement	Method of Test
(1)	(2)	(3)	(4)
1	Dimensional change, percent, <i>Max</i>	4	IS 2977 : 1989
2	Scouring loss, percent, <i>Max</i>		IS 1383 : 1977 (mild method)
	a) Loomstate	6	
	b) Finished	2.5	
3	Colour fastness:		
	a) Light	5 or better	IS 686 : 1985 or IS 2454 : 1985
	b) Washing : Test 4		
	i) Change in colour	4 or better	IS 765 : 1979
	ii) Staining on fabric	4 or better	
	c) Bleaching	4 or better	IS 762 : 1988
	d) Rubbing	4 or better	IS 766 : 1988
4	Wettability, <i>Max</i>	10 seconds	IS 2349 : 1963

Table 5 Sample Size and Permissible Number of Non-conforming Pieces.

(Clause 9.3)

Lot Size	Sample Size	Permissible Number of Non-conforming Pieces	Sub-sample Size
(1)	(2)	(3)	(4)
Up to 25	3	0	2
26 to 50	5	0	2
51 to 150	8	0	3
151 to 300	13	1	3
301 to 500	20	1	5
501 to 1 000	32	2	5
1 001 and above	50	3	8

9.3.1 For selection of samples at random from the lot, procedure given in IS 4905 : 1968 may be followed.

9.4 Number of Samples and Criteria for Conformity

It shall be as follows :

Characteristics	Number of Samples	Criteria for Conformity
Ends, picks, mass, length; width and visual inspection	According to col 2 of Table 5	Number of non-conforming pieces shall not exceed the corresponding number given in col 3
Colour fastness, scouring loss, dimensional change wettability and breaking load	According to col 4 of Table 5	All the test pieces shall meet the requirement

ANNEX A

(Clause 2.1)

LIST OF REFERRED INDIAN STANDARDS

IS No.	Title	IS No.	Title
171 : 1985	Cotton and cotton regenerated cellulosic fibre blended yarn (<i>third revision</i>)	1383 : 1977	Methods for determination of scouring loss in grey and finished cotton textile materials (<i>first revision</i>)
293 : 1980	Code for seaworthy packaging of cotton yarn and cloth (<i>third revision</i>)	1954 : 1990	Methods for determination of length and width of fabrics (<i>first revision</i>)
686 : 1985	Methods for determination of colour fastness of textile materials to daylight (<i>first revision</i>)	1963 : 1981	Methods for determination of threads per unit length in woven fabrics (<i>second revision</i>)
762 : 1988	Method for determination of colour fastness of textile materials to bleaching (<i>first revision</i>)	1964 : 1970	Methods for determination of weight per square metre and weight per linear metre of fabrics (<i>first revision</i>)
765 : 1979	Method for determination of colour fastness of textile materials to washing : Test 4 (<i>second revision</i>)	1969 : 1985	Methods for determination of breaking load and elongation of woven textile fabrics (<i>second revision</i>)
1347 : 1972	Inland packaging of cotton cloth and yarn (<i>first revision</i>)	2349 : 1963	Methods for determination of wettability of cotton fabrics

<i>IS No.</i>	<i>Title</i>	<i>IS No.</i>	<i>Title</i>
2454 : 1985	Methods for determination of colour fastness of textile materials to artificial light (xenon lamp) (<i>first revision</i>)		than wool) on soaking in water (<i>first revision</i>)
2977 : 1989	Method for determination of dimensional changes of woven fabrics (other	4125 : 1987	Glossary of terms pertaining to defects in fabrics (<i>first revision</i>)
		4905 : 1968	Methods for random sampling

ANNEX B

(Clause 6.1)

LIST OF MAJOR FLAWS

One or more ends missing in the body of the material throughout its length, more than three ends missing at a place or prominently noticeable double end running throughout the piece.	Conspicuous broken pattern.
Undressed snarls noticeable over a length exceeding 5 percent of the length of the piece.	Gout due to foreign matter, usually lint or waste woven into the fabric.
Smash definitely rupturing the texture of the fabric.	Prominent selvage defect.
Hole, cut or tear.	Significant shading or listing in fabrics having a gradual change in tone or depth of shade of fabric (excluding selvage or border running parallel to the selvage).
Reed marks prominently noticeable over a length exceeding 5 percent of the piece.	Coloured flecks.
Defective or damaged selvage noticeable over a length exceeding 5 percent of the length of the piece.	Blurred or dark patch.
Weft crack or two or more bar due to the difference in raw material, count, twist, lustre, colour, shade or spacing of adjacent groups of yarns (starting mark).	Patchy, steaky or uneven dyeing.
More than two adjacent ends running parallel, broken or missing and extending beyond 10 cm.	Dye bar.
Noticeable warp or weft float in the body of the fabric.	Fuzzy appearance.
Noticeable oil or other stain in the fabric.	Prominent pileless spot and uneven or loose pile in case of turkish towels.
Oily weft in the fabric.	Absence of heading (where heading is required) or defective heading.
Prominently noticeable slub.	Defective hemming.
	Another flaw which would mar the appearance or affect the serviceability and/or durability of the towels.

ANNEX C

(Table 1)

METHOD FOR DETERMINATION OF MASS OF FABRIC

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

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Doc : No. TXD 8 (2589)

Amendments Issued Since Publication

Amend No.	Date of Issue	Text Affected

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