

वस्त्रादि — हथकरघे से निर्मित
सूती मलमल — विशिष्टि
(दूसरा पुनरीक्षण)

**Textiles — Handloom Cotton
Malmal — Specification**
(Second Revision)

ICS 59.080.30

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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 Textiles Division Council.

This standard was originally published in 1955 and was subsequently revised in 1984. The standard has again been revised to incorporate the following major changes:

- a) Method of test for count of yarn along with its tolerance has been specified;
- b) Tolerances for ends/dm, picks/dm and mass have been modified;
- c) Test method for identification of material has been incorporated;
- d) Sampling plan has been updated;
- e) BIS certification marking clause has been modified; and
- f) References to Indian Standards have 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 COTTON
MALMAL — SPECIFICATION**

(*Second Revision*)

1 SCOPE

1.1 This standard prescribes the constructional particulars and other requirements of eight varieties of handloom cotton malmal. The cloth may be grey, bleached, striped or checked.

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

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 TERMINOLOGY

3.1 Malmal — An Indian term generally applied to fine cotton fabric slightly heavier than muslin.

4 MANUFACTURE

4.1 Yarn

The yarn used in the manufacture of malmal cloth shall conform to the requirements of IS 171.

4.2 Cloth

The cloth shall be free from substances liable to cause subsequent tendering.

5 REQUIREMENTS

5.1 The constructional particulars of malmal shall

conform to those given in Table 1.

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

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

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

6 INSPECTION

6.1 The cloth when visually inspected should be reasonably free from the major flaws listed in Annex B.

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

7 SAMPLING

7.1 Lot

The quantity of handloom cotton malmal of same variety, width and colour delivered to a buyer at a time 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 shall be selected at random for inspection shall be in accordance with the Table 3.

Table 1 Constructional Particulars of Handloom Cotton Malmal

(Clause 5.1)

Sl No.	Variety No.	Count of Yarn (for Guidance Only) Cotton Count, Ne (tex)		Ends/dm	Picks/dm	Mass g/m ²	Length m	Width cm	Weave
		Warp	Weft						
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
i)	1	100s (5.9 tex)	100s (5.9 tex)	320	320	39	20 or as declared	90, 114, 119, 120, or as agreed	Plain
ii)	2	100s (5.9 tex)	100s (5.9 tex)	400	400	48			
iii)	3	80s (7.4 tex)	80s (7.4 tex)	270	270	42			
iv)	4	80s (7.4 tex)	80s (7.4 tex)	320	310	49			
v)	5	60s (9.8 tex)	80s (7.4 tex)	270	270	50			
vi)	6	60s (9.8 tex)	80s (7.4 tex)	290	330	56			
vii)	7	60s (9.8 tex)	60s (9.8 tex)	280	240	54			
viii)	8	60s (9.8 tex)	60s (9.8 tex)	320	280	62			
Tolerance, Percent	—	± 5	± 5	± 5	± 5	± 5	<i>see</i> Note	± 2	—
Method of Test, Ref to	—	IS 3442		IS 1963		IS 1964	IS 1954		Visual

NOTE — The length shall not be less than the declared or marked value.

Table 2 Requirements of Handloom Cotton Malmal*(Clause 5.2)*

SI No.	Characteristics	Requirements	Method of Test, Ref to
(1)	(2)	(3)	(4)
i)	Dimensional change, percent, <i>Max</i> a) Loomstate b) Processed	5.0 4.0	IS 2977
ii)	Scouring loss, percent, <i>Max</i> a) for loomstate cotton malmal b) for processed cotton malmal	6.0 2.5	IS 1383
iii)	Colour fastness (for dyed malmal only) to: a) Light	4 or better	IS/ISO 105-B01 or IS/ISO 105-B02
	b) Washing Test (4): 1) Change in colour 2) Staining on cotton	3 or better 3 or better	IS/ISO 105-C10
	c) Perspiration: 1) Change in colour 2) Staining on cotton	4 or better 4 or better	IS/ISO 105-E04
	d) Bleaching (hypochlorite): 1) Change in colour 2) Staining on cotton	4 or better 4 or better	IS/ISO 105-N01
iv)	Fibre identification	100 percent cotton	IS 667

Table 3 Sample Size and Permissible Number of Non-Conforming Pieces*(Clause 7.3)*

SI 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 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

7.4 For Selection of samples at random from the lot, procedure given in IS 4905 may be followed.

7.5 Number of Tests and Criteria for Conformity

<i>Sl No.</i>	<i>Characteristics</i>	<i>Number of Tests</i>	<i>Criteria for Conformity</i>
(1)	(2)	(3)	(4)
i)	Ends, picks, mass, length and width, indeterminable characteristics and visual inspection	According to col 1 (2) of Table 3	Number of non-conforming pieces shall not exceed the corresponding number given in col 1 (3) of Table 3
ii)	Dimensional change, colour fastness to light, washing, perspiration, bleaching, scouring loss and fibre identification	According to col 1 (4) of Table 3	All the test specimens shall meet the requirements

8 MARKING

8.1 The cloth shall be marked or labelled with the following information:

- a) Name of the material and variety number;
- b) Manufacturer's name, initials or trade-mark, if any;
- c) GSM (g/m²);
- d) Length (m) and width (cm); and
- e) 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 products may be marked with the Standard Mark.

9 PACKING

Unless otherwise agreed upon the buyer and the seller, the cloth shall be packed in bales or cases in conformity with the procedure laid down in IS 1347 or IS 293.

ANNEX A

(Clause 2)

LIST OF REFERRED STANDARDS

<i>IS No.</i>	<i>Title</i>	<i>IS No.</i>	<i>Title</i>
IS 171 : 1993	Textiles — Ring spun grey cotton yarn for weaving — Specification (<i>fourth revision</i>)		dimensional changes on soaking in water (<i>first revision</i>)
IS 293 : 1980	Code of seaworthy packaging of cotton yarn and cloth (<i>third revision</i>)	IS 3442 : 2023	Textiles — Method for determination of crimp and linear density of yarn removed from fabric (<i>second revision</i>)
IS 667 : 1981	Methods for identification of textile fibres (<i>first revision</i>)	IS 4905 : 2015/ ISO 24153 : 2009	Random sampling and randomization procedures (<i>first revision</i>)
IS 1347 : 1972	Specification for inland packaging of cotton cloth and yarn (<i>first revision</i>)	IS/ISO 105-B01 : 2014	Textiles — Tests for colour fastness: Part B01 Colour fastness to light: Daylight
IS 1383 : 1977	Methods for determination of scouring loss in grey and finished cotton textile materials (<i>first 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 1954 : 1990	Determination of length and width of woven fabrics — Methods (<i>second revision</i>)	IS/ISO 105-C10 : 2006	Textiles — Tests for colour fastness: Part C10 Colour fastness to washing with soap or soap and soda
IS 1963 : 1981	Methods for determination of threads per unit length in woven fabrics (<i>second revision</i>)	IS/ISO 105-N01 : 1993	Textiles — Tests for colour fastness: Part N01 Colour fastness to bleaching: Hypochlorite
IS 1964 : 2001	Textiles — Methods for determination of mass per unit length and mass per unit area of fabrics (<i>second revision</i>)	IS/ISO 105-E04 : 2013	Textiles — Tests for colour fastness: Part E04 Colour fastness to perspiration (<i>first revision</i>)
IS 2977 : 1989	Fabrics (other than wool) — Method for determination of		

ANNEX B

(Clause 6.1)

LIST OF MAJOR FLAWS

- | | |
|---|---|
| a) Weft crack or more than two missing picks across the width of the material; | h) Smash rupturing the texture or the fabric; |
| b) Prominently noticeable weft bar due to the difference in raw material, count, twist lustre, etc; | j) Undressed snarls noticeable throughout the piece; |
| c) More than two adjacent ends running parallel, broken or missing and extending beyond 15 cm; | k) Conspicuous gout due to foreign matter usually lint or waste woven into cloth; |
| d) Prominent selvedge defects; | m) Conspicuous broken pattern; |
| e) Noticeable warp or weft float in the body; | n) Dyeing defects (bars, streaks and patches); and |
| f) Noticeable oil or other stains; | p) Any other flaw which would mar the appearance or affect the serviceability and/or durability of the cloth. |
| g) Noticeable hole, cut or tear up to 3 mm in size; | |

ANNEX C

(Foreword)

COMMITTEE COMPOSITION

Handloom and Khadi Sectional Committee, TXD 08

<i>Organization</i>	<i>Representative(s)</i>
Weavers Service Centre, Delhi	SHRI VISHESH NAUTIYAL (Chairperson) SHRI VIKAS KUMAR (<i>Alternate</i>)
Baster Adimjati Sewak Sangh, Baster	SHRI SUMIT DAS SHRI AMIT DAS (<i>Alternate</i>)
Central Pollution Control Board, New Delhi	SHRI P. K. MISHRA SHRI RISHABH SRIVASTAV (<i>Alternate</i>)
Central Reserve Police Force, New Delhi	SHRI D. P. UPADHYAY SHRI SANJEEV KUMAR SINGH (<i>Alternate</i>)
Department of Handlooms & Textiles, Chennai	SHRI T. P. RAJESH DR K. KARNAN (<i>Alternate</i>)
Gandhigram Rural Institute, Dindigul	REPRESENTATIVE
Haryana Khadi Gramodyog Sangh, Karnal	SHRI PAWAN GARG SHRI R. S. YADAV (<i>Alternate</i>)
ICAR – Central Institute for Research on Cotton Technology, Mumbai	DR SUJATA SAXENA DR A. S. M. RAJA (<i>Alternate</i>)
Indian Institute of Handloom Technology, Varanasi	DR P. THENNARASU
Indian Institute of Handloom Technology, Jodhpur	DR J. SIVAGNAMAM
Indo Tibetan Border Police, New Delhi	SHRI UTTAM KUMAR SHRI ANAND KUMAR (<i>Alternate</i>)
Jan Sewa Ashram, Aligarh	SHRI R. K. SHARMA SHRI AKHILESH KUMAR AWASTHI (<i>Alternate</i>)
Karnatka Khadi Gramodyog Samyuktha Sangha, Hubli	SHRI K. V. PATTAR SHRI SHIVANANDA S. (<i>Alternate</i>)
Khadi & Village Industries Commission, New Delhi	SHRI P. NALLAMUTHU SHRI RAM NARAYAN (<i>Alternate</i>)
Khadi Dyers & Printers, Mumbai	SHRI D. N. BHATT SHRI V. D. JOSHI (<i>Alternate</i>)
Khadi Gramodyog Mandal, Rampur	SHRI RAKESH CHAUDHARY SHRI PRINCE CHAUDHARY (<i>Alternate</i>)
Kshetriya Khadi Gramodyog Samiti, Dausa	SHRI R. K. SINGH
Madhya Bharat Khadi Sangh, Gwalior	SHRIMATI NEELU MEKLE SHRI HARISH MEKLE (<i>Alternate</i>)
Mahatma Gandhi Institute for Rural Industrialization, Wardha	REPRESENTATIVE

<i>Organization</i>	<i>Representative(s)</i>
Metpalli Khadi Gramodyog Pratisthan, Metpalli	SHRI G. MADHAV
Ministries of Defence (DGQA), New Delhi	SHRI ARVIND COMPATHANE SHRI N. SENTHIL KUMAR (<i>Alternate</i>)
Ministries of Health, New Delhi	REPRESENTATIVE
National Handloom Development Corporation Ltd, Gautam Budh Nagar	DR SAKTHIVEL PERUMALSAMY SHRI JITENDRA TOLAMBIYA (<i>Alternate</i>)
Northern Railways, New Delhi	SHRI SUDHANSHU KUMAR GUPTA
Northern India Textile Research Association, Ghaziabad	DR M. S. PARMAR SHRI SANJEEV SHUKLA (<i>Alternate</i>)
Office of The Development Commissioner for Handlooms, New Delhi	SHRI SIDDHARTH SINGH SHRI VINAY KUMAR (<i>Alternate</i>)
Rastriya Khadi Gramodyog Federation, Moradabad	SHRI ANIL KUMAR SINGH SHRI KULDEEP SINGH (<i>Alternate</i>)
Sushil Gramodyog Sanstha, Ghaziabad	SHRI SUNIL TYAGI
Swastik Gramodyog Samiti, Delhi	SHRI M. L. PATHAK SHRI ABHISHEK DIXIT (<i>Alternate</i>)
Textiles Committee, New Delhi	SHRI KARTIKAY DHANDA SHRIMATI SHILPI CHAUHAN (<i>Alternate</i>)
The Cotton Textiles Export Promotion Council (TEXPROCIL), Mumbai	DR SIDDHARTHA RAJAGOPAL SHRI RAJESH SATAM (<i>Alternate</i>)
The Handloom Export Promotion Council, Chennai	DR M. SUNDAR EXPORT PROMOTION OFFICER (<i>Alternate</i>)
The Tamil Nadu Handloom Weavers' Cooperative Society Ltd, Chennai	SHRI T. N. VENKATESH SHRI K. KATHIRESAN (<i>Alternate</i>)
In Personal Capacity (148, II Floor, Sector 8, Faridabad, 121006)	SHRI B. B. PAUL
BIS Directorate General	SHRI J. K. GUPTA, SCIENTIST 'E'/DIRECTOR AND HEAD (TEXTILES) [REPRESENTING DIRECTOR GENERAL (<i>Ex-officio</i>)]

Member Secretary
SHRI SWAPNIL
SCIENTIST 'B'/ASSISTANT DIRECTOR
(TEXTILES), BIS

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