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उत्पाद मैनुअल

**TEXTILES - BEDSHEETS, PILLOW
COVER AND BLANKET COVER – SPECIFICATION
IS 18739: 2024 के अनुसार**

**PRODUCT MANUAL
FOR TEXTILES - BEDSHEETS, PILLOW COVER
AND BLANKET COVER –SPECIFICATION
ACCORDING TO IS 18739 : 2024**

विभिन्न उत्पादों के लिए भारतीय मानक ब्यूरो (अनुरूपता मूल्यांकन) विनियम, 2018 की योजना -I के तहत प्रमाणन के संचालन में एकरूपता और पारदर्शिता के लिए इस उत्पाद मैनुअल का उपयोग सभी क्षेत्रीय / शाखा कार्यालयों और लाइसेंसधारियों द्वारा संदर्भ सामग्री के रूप में किया जाएगा। दस्तावेज़ का उपयोग बीआईएस प्रमाणन प्राप्त करने के इच्छुक संभावित आवेदकों द्वारा भी किया जा सकता है।

This Product Manual shall be used as reference material by all Regional/Branch Offices & licensees to ensure uniformity of practice and transparency in operation of certification under Scheme-I of Bureau of Indian Standards (Conformity Assessment) Regulations, 2018 for various products. The document may also be used by prospective applicants desirous of obtaining BIS certification.

1.	मानक संख्या IS No.	:	IS 18739 : 2024
	शीर्षक Title	:	Textiles — Bedsheets, Pillow Cover and Blanket Cover — Specification
	संशोधनों की संख्या No. of amendments	:	01
2.	नमूना दिशानिर्देश Sampling Guidelines		
a)	कच्चा माल Raw material	:	Sewing threads as mentioned in clause 3.4 of IS 18739 may be used. Note: This section indicates the requirements for raw material (if specified in the IS) for which compliance is to be established during Grant of Licence/Change in Scope of Licence/Factory Surveillance.
b)	समूहीकरण दिशानिर्देश Grouping Guidelines	:	Please refer to Annex-A

c)	नमूने का परिमाण Sample Quantity	:	2 pieces bedsheets; 06 Pieces pillow cover; 02 Blanket covers. (Dimensions of product to be mentioned.) Note: This section indicates the quantity of the sample of the product and/or the raw material (if applicable), required to be sent to the laboratory for testing, for the purpose of Grant of Licence/Change in Scope of Licence/ Factory Surveillance (in case of market surveillance, effort may be made to procure the required quantity of product sample, as far as possible since raw material sample may not be available in market)
3.	परीक्षण उपकरणों की सूची List of Test Equipment	:	Please refer to Annex-B
4.	निरीक्षण और परीक्षण की स्कीम Scheme of Inspection and Testing	:	Please refer to Annex-C
5.	एक दिन में संभावित परीक्षण Possible tests in a day		
	All tests are possible to be carried out in a day except Fibre content, Scouring Loss & Colour Fastness, provided that conditioned samples are available. Note: This section is for the guidance of BIS Certification Officers/Technical Auditors of BIS Authorized Outside Surveillance Agencies (OSAs) during factory inspection to provide ready reference regarding the tests which can be witnessed during the inspection in the factory by the officer/auditor.		
6.	लाइसेंस का दायरा/Scope of the Licence:		
	"Licence is granted to use Standard Mark as per IS 18739:2024 with the following scope:		
	Name of the product	Textiles – Bedsheets, Pillow Cover and Blanket Cover	
	Variety	1(Bedsheets and/or pillow covers)/2(Blanket covers)/3(Bedsheets and/or pillow covers)	
	Finishing Type	Scoured/bleached/dyed or printed	
	Optional requirements	i. Antimicrobial activity ii. Whiteness Index	

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ANNEX-A
GROUPING GUIDELINES

- i. Based on the constructional and performance requirements of fabric, 3 varieties of fabric have been defined in the Standard:**
 - a) Variety 1
 - b) Variety 2
 - c) Variety 3
- ii. Further, based on the type of finishing, there are 3 kinds of Bedsheets, Pillow Cover and Blanket Cover are defined:**
 - a) Scoured
 - b) Bleached
 - c) dyed or printed
- iii. Considering the above, following grouping guidelines for GoL/ CSoL have been developed:**
 - a) Sample for each variety (Variety1/2/3) of Bedsheets/Pillow Cover/Blanket Cover of the highest size of each finish (Scoured/Bleached/Dyed or Printed) intended to be covered in the licence shall be drawn and tested to cover all sizes for that variety and finish in the scope of the licence.
 - b) If samples of dyed or printed Bedsheets/Pillow Cover/Blanket Cover are drawn and tested, bleached Bedsheets/Pillow Cover/Blanket Cover may also be covered.
 - c) In case it is intended to cover the optional requirements for Antimicrobial activity & Whiteness Index in the scope, the samples shall be tested for Antimicrobial activity & Whiteness Index separately.
 - d) Scope of licence shall be restricted based on the manufacturing and testing facilities available.
 - e) During operation of licence, samples of each variety covered in the scope of licence, shall be tested in rotation, to the extent possible.

ANNEX-B

LIST OF TEST EQUIPMENTS

(INDICATIVE LIST, FOR GUIDANCE ONLY)

Sl. No.	Tests Used in with Clause Reference	Test Equipment/Chemicals
1.	Fibre content and fabric content cl 3.1, Table 1, cl 3.2	i) For preliminary identification Alcohol 92%, Phloroglucinol, Hydrochloric acid ii) For physical inspection Compound Microscope (100X-500X), Dissecting Needles, glass slides, cover glasses, and cross sectioning device iii) By Staining Test or Dissolution test Mixture of dyestuffs (e.g. Zinc chlor-ide, Detex, Shirlastain etc.), Known Dyed Samples or Sulphuric acid 80%, Cuprammonium hydroxide, NaOH 5%, Balance (capable of weighing to $\pm 10 \mu\text{g}$) Quantitative Chemical Analysis: Reagents of analytical grade as per Table A.1 of ISO 1833-1: 2020 Water, grade 3 Conical flask, minimum capacity 500 ml, glass-stoppered. Heating apparatus suitable for maintaining the temperature of the flask at $(50 \pm 5) ^\circ\text{C}$ Glass filter crucible, capacity 30 ml to 40 ml, with sealed-in sintered disk filter with pore size of 90 μm to 150 μm. Stoppered weighing bottles Vacuum flask Desiccator Ventilated oven Analytical balance, with a resolution of 0.000 2 g or better. Soxhlet extraction apparatus
2.	Count of Yarn cl 3.1, Table 1	Weighing Balance (L.C.-0.001 g), Scissor/blade/cutter, Calibrated Steel Ruler (L.C.-1 mm)
3.	Weave cl 3.1, Table 1	Magnifying lens
4.	Ends/picks per cm cl 3.1, Table 1	Conditioning Chamber, Thread counter equipped with a low power micro- scope of suitable magnification and a pointer which traverses along a graduated base or Counting Glass, Flat Table

5.	Mass Fabric Constructional,cl 3.1, Table 1	<u>Method A-Conditioned Mass Method</u> Horizontal, Flat Smooth Table, Graduated Steel Scale, Balance (L.C. 0.005 g), Conditioning Chamber, Calibrated Steel Rule of at least 2 m <u>Method B- Oven-Dry Method</u> Horizontal, Flat Smooth Table, Graduated Steel Scale, Drying Oven (Suitable for drying sample to constant mass at 105 to 110°C), Balance (L.C. 0.005 g), T-Square
6.	Breaking load on 5.0 cm x 20 cm strips (raveled strip method) cl 3.1, Table 2	Constant-rate-of-extension (CRE) Tensile testing machine capable of constant rates of extension of 20 mm/min and 100 mm/min, with an accuracy of $\pm 10\%$, equipment for cutting samples, Equipment for cutting test specimen and for fraying them to obtain the required width, Conditioning Chamber
7.	Tear Strength cl 3.1, Table 2	Pendulum testing machine, Sharp knife, Equipment for cutting test specimens
8.	Fabric skew and Bow cl 3.1, Table 2	Set square, Metallic ruler
9.	Dimensional change cl 3.1, Table 2	Watertight Tray or Container, Steel Rule, Means of Marking Reference Points, Two Pieces of Plate Glass (each measuring at least 600 × 600 mm), Sodium Hexametaphosphate, An Efficient Wetting Agent (for example sodium di-octyl sulphosuccinate or dodecyl benzene sodium sulphonate), Conditioning Chamber, Towel
10.	Scouring loss cl 3.1, Table 2	Soxhlet Apparatus, Drying Oven (Capable of maintaining a temperature of 105 °C $\pm$ 3 °C), Weighing Balance (capable of weighing to an accuracy of 0.001g), Desizing Enzyme, Sodium Chloride, Caustic Soda, Acetic Acid Solution, Chloroform, Weighing Bottle, Diastase, Conical Flask, Hot Plate
11.	pH value cl 3.1, Table 2	Distilled or Deionized Water, Potassium Chloride Solution, Buffer Solutions, Stoppered Glass or Polypropylene flasks, Mechanical Shaker, Beakers, Rods, pH Meter with a glass electrode, Balance, Volumetric Flask, Sample Preparation/Cutting Equipment
12.	Resistance to pilling cl 3.1, Table 2	Pill testing box (pilling box), Auxiliary materials like Polyurethane test specimen tubes, Mounting jig, Self-adhesive polyvinyl chloride (PVC) tape, Sewing machine
13.	Colour fastness to Light cl 3.1, Table 3	Laboratory exposure devices (Weather-O-Meter/ Xenon Arc Light Tester) as per Cl. 5.2 of IS/ISO 105- B02, Light Source (Xenon arc lamp), Thermometer (Black–Standard Thermometer (BST) / Black-Panel Thermometer), Humidity chamber, Covers, Colour Matching Lamps, Assessment cabinet, Sample mounting card, Assessment mask, Grey scale for assessing change in Colour, Blue wool reference materials (Cl 5.1), Humidity test control fabric, Grade 3 water (Minimum) in accordance with ISO 3696 to maintain humidity
14.	Colour fastness to Washing cl 3.1, Table 3	Suitable mechanical laundering device, Balance (0.01 g),Mechanical stirrer, Non-corrodible (stainless steel balls), Means of heating the soap solution, Soap, Sodium Carbonate, Soap Solution, Grade 3 water, Adjacent fabrics, Multifibre adjacent fabric, Two single fibre adjacent fabrics, Non-dyeable fabric,Grey scales for Colour & Staining or

		Spectrophotometer, Viewing Cabinet, Conditioning Chamber
15.	Colour fastness to Bleaching: Hypochlorite cl 3.1, Table 3	Glass or glazed porcelain container, Hypochlorite solutions, Sodium hypochlorite solution or Lithium hypochlorite Solution, Hydrogen peroxide solution, soap solution, Grey scale, Grade 3 water
16.	Colour fastness to Rubbing cl 3.1, Table 3	Suitable colour fastness to rubbing tester, Cotton rubbing cloth, Soft-back waterproof abrasive paper, Grey scale, distilled water, Rubber band, Viewing Cabinet
17.	Colour fastness to Perspiration, acidic and alkaline cl 3.1, Table 3	Test devices as per cl 4.1 of IS/ISO 105-E04, Oven, Alkaline (cl 4.3) and Acid (cl 4.4) solution as per of IS/ISO 105-E04, Adjacent fabrics in accordance with clause 4.5 of IS/ISO 105-E04, Grey scale for assessing change in colour, Grey scale for assessing staining, Spectrophotometer or colorimeter for assessing change in colour and staining, A set of 11 glass or acrylic resin plates, Flat-bottomed dish made of inert materials.
18.	Sewing Thread, cl 3.4	Weighing Balance (L.C. 0.001 g), Pin or any suitable sharp item, Calibrated Steel Ruler, Conditioning Chamber
19.	Hems, cl 3.5	Calibrated Steel Ruler (L.C. 1 mm)
20.	Sewing, cl 3.6	Magnified Pick glass
21.	Dimensions of bedsheets, cl 3.7, Table 4	Watertight Tray or Container, Steel Rule, Means of Marking Reference Points, Two Pieces of Plate Glass, Sodium Hexametaphosphate, An Efficient Wetting Agent (like sodium dioctyl sulphosuccinate or dodecyl benzene sodium sulphonate)
22.	Soil Release Efficiency, cl 3.8	White Blotting Paper, Corn Oil, Glassine Paper or Equivalent, Timer, Weight, Amber Bottle, Washer (Reference washing machine Type A – Horizontal axis, front-loading type), Dryer (Type A1 tumble dryer – Vented), Granular Commercial Detergent (Reference detergent 3), Ballast, Lighting and Evaluation Area, Table, Stain Release Replica, Thermometer, Weighing balance,
23.	Antimicrobial Activity (optional), cl 3.9	Apparatus: Spectrophotometer, Incubator, Water baths, Stomacher, Clean bench, Washing machine, humidity chamber, Luminescence photometer, Printing apparatus, Refrigerator, Freezers, Weighing Balance, Filtering apparatus, Pipette, Vials, 30 ml glass bottles, Petri dishes, Glass rod, Anti-bumping granules (glass beads), Erlenmeyer flask, Cutting template, Disposable plastic bags, Tweezers, Stainless-steel cylinder, Metal wire basket, Aluminium foil, Reciprocal incubation shaker, Autoclave, pH meter Reagents: Water, Tryptone soya broth (TSB), Tryptone soya agar (TSA), Agar for transfer, Nutrient broth (NB), Peptone salt solution, Physiological saline, Soybean-Casein Digest Broth with

		Lecithin & Polysorbate 80 (SCDLP) medium, Dilution buffer for shake-out bacterial suspension, Enumeration agar (EA), Agar for printing, Cryoprotective solution for bacterial species, Stock solution of ATP standard reagent, Buffer solution for ATP luminescent reagent, ATP luminescent reagent, ATP extracting reagent, ATP eliminating reagent, SCDLP or other medium for preparing ATP reference solution, Shake-out physiological saline, Reference strains (Staphylococcus aureus and Klebsiella pneumoniae)
24	Whiteness Index (optional) cl 3.10	Colorimeter, Square standard tiles (white, and black) with the instruments, Working standard white square plate
25	Sizes cl 3.4 Heading of Towels cl 3.5 Transverse Ends or End Hems cl 3.7 Side Edges cl 3.8	Calibrated Steel Ruler

ANNEX C

SCHEME OF INSPECTION AND TESTING

1. QUALITY ASSURANCE PLAN

1.1 It is expected that during operation of BIS licence, manufacturers will implement a Quality Assurance Plan (QAP) i.e. a plan of regular testing and in-process controls, designed to ensure that the product bearing the Standard Mark conforms to all requirements of the Indian Standard.

1.2 The manufacturers shall define a Quality Assurance Plan (QAP) defining the control unit (i.e. lot/batch etc.), the levels of control (i.e. the frequency and number of samples for conducting the different tests as per the Indian Standard) and declare the arrangement for testing i.e. whether in-house or subcontracting/sharing for each applicable test and submit the same to BIS Branch Office for information. The manufacturer shall comply with the QAP and maintain test records in accordance with para 2.1.

1.3 RECOMMENDED LEVELS OF CONTROL/CONTROL UNIT:

1.3.1 For the guidance of manufacturers, the recommended definition of control unit is: the entire quantity of bedsheet/pillow cover/blanket cover of the same type, variety, manufactured under similar conditions from the same raw material coming out of the same dyeing/bleaching/washing or finishing machine.

1.3.2 For the guidance of manufacturers in preparing the Quality Assurance Plan, recommended levels of control are given in **Table 1**. Manufacturer has the discretion of declaring their own levels of control or accept the levels of control given in this document.

1.3.3 The manufacturer shall ensure inspection and testing as per the Quality Assurance Plan submitted by them on the whole production of the factory which is covered by this plan.

2. ENSURING COMPLIANCE THROUGH TESTING- manufacturers shall ensure compliance of their products to all the requirements of the Indian Standard for which they may have in-house test facilities. However, there is no obligation to maintain in-house laboratory. Licensee may use alternative arrangements for tests of the production as per the declared QAP. Various alternatives are available for operation of BIS certification as given below and the relevant guidelines for availing such relaxations by the manufacturers, as amended from time to time, are to be referred :

- i) Shared testing resources like common facility,
- ii) Cluster based testing facility,
- iii) Sub-contracting to outside laboratories which may either be:
 - a) BIS recognised/empanelled laboratories, or
 - b) Any accredited laboratory as per ISO/IEC 17025

2.1 TEST RECORDS- The manufacturers shall maintain test records for the tests carried out (either in-house or at a sub-contracted or at shared test facility) to establish conformity of the product to the Standard for operation of licence. For the tests being subcontracted or conducted at a shared test facility, test results issued by the laboratories or test facilities, shall be made available for inspection by BIS.

3. PACKING AND MARKING - The Standard Mark as given in the Schedule of the licence shall

be incorporated legibly and indelibly on each sheeting, ticking, bedsheets, pillow covers and blanket covers, provided always that the material so marked conforms to each requirement of the specification.

3.1 Packing and Marking shall be done as per the Indian Standard.

3.2 **Additional Marking requirements:** Additionally, the following shall also be marked on each sheeting, ticking, bedsheets, pillow covers and blanket covers:

a) "For BIS certification details please visit www.bis.gov.in"

4. REJECTION - The production which conforms to the Indian Standard and covered under the scope of this licence shall be marked with the Standard Mark. Disposal of non-conforming product shall be done in such a way so as to ensure that there is no violation of provisions of BIS Act, 2016.

TABLE 1
(ONLY FOR GUIDANCE PURPOSE)

(1)				(2)		
TEST DETAILS				Levels of Control		
Clause	Requirements	Test Method		No. of Samples	Frequency	Remarks
		Clause	Reference			
3.1 and Table 1	Constructional Particulars					
3.1 and Table 1	Count of yarn	----	IS 3442 and IS 7703 (Part1)	Firm to have adequate in-process controls to check compliance of this parameter as per the tolerances given in the Indian Standard. However, appropriate records shall be maintained by the manufacturer for evidence of conformity.		
3.1 and Table 1	Weave	----	Visual	Firm to have adequate in-process controls to check compliance of this parameter as per the Indian Standard. However, appropriate records shall be maintained by the manufacturer for evidence of conformity.		
3.1 and Table 1	Ends/cm and pick/cm	----	IS 1963	Firm to have adequate in-process controls to check compliance of this parameter as per the tolerances given in the Indian Standard. However, appropriate records shall be maintained by the manufacturer for evidence of conformity.		
3.1 and Table 1	Mass, gsm	----	IS 1964	Firm to have adequate in-process controls to check compliance of this parameter as per the tolerances given in the Indian Standard. However, appropriate records shall be maintained by the manufacturer for evidence of conformity.		
3.1	Tapes used for blanket cover	3.1	IS 18739	Firm to have adequate in-process controls to check compliance of this parameter as per the tolerances given in the Indian Standard. However, appropriate records shall be maintained by the manufacturer for evidence of conformity.		

3.1 and Table 2	Performance Requirements for fabrics					
3.1 and Table 2	Breaking load	----	IS 1969 (Part 1)	One	Each control unit	
3.1 and Table 2	Tear Strength	----	IS 6489 (Part 1)	One	Each control unit	
3.1 and Table 2	Fabric skew and bow	----	ISO 13015	One	Each control unit	
3.1 and Table 2	Dimensional change	----	IS 2977	One	Each control unit	
3.1 and Table 2	Scouring loss	----	IS 1383	One	Each control unit	
3.1 and Table 2	pH value	----	IS 1390	One	Each control unit	
3.1 and Table 2	Resistance to pilling	----	IS 10971 (Part 1)	One	Once in a month Or Whenever there is change in raw material	
3.1 and Table 3	Colour Fastness Requirement					
Table 3, SI No. i	Colour fastness to light a) Warp direction b) Weft direction	----	IS/ISO 105-B02	One	Once in 6 months Or Whenever there is change in raw material	Applicable only for dyed or printing fabric
Table 3, SI No. ii	Colour fastness to washing a) Change in colour b) Staining of adjacent fabrics	----	IS/ISO 105-C10	One	Each control unit	Applicable only for dyed or printing fabric

Table 3, SI No. iii	Colour fastness to Bleaching: Hypochlorite	----	IS/ISO 105-N01	One	Each control unit	Applicable only for dyed or printing fabric
Table 3, SI No. iv	Colour fastness to rubbing a) Dry b) Wet	----	IS/ISO 105-X12	One	Each control unit	Applicable only for dyed or printing fabric
Table 3, SI No. v	Colour fastness to Perspiration, acidic and alkaline: a) Change in colour b) Staining of adjacent fabrics	----	IS/ISO 105-E04	One	Each control unit	Applicable only for dyed or printing fabric
Table 3, 3.2 and Table 1	Fibre Content	3.2	IS 667 & 3416	One	Each batch of fabric	
3.3	Freedom from Defects	3.3	IS 18739	Whole fabric	Each control unit	
3.4	Sewing Thread	--	IS 1720 & IS 1315	One	Each batch of sewing thread	
3.5	Hems	3.5	IS 18739	Five	Each control unit	
3.6	Sewing	3.6	IS 18739	Five	Each control unit	
3.7	Dimensions	3.7	IS 18739	Ten	Each control unit	
3.8	Soil Release Efficiency	Annex C	IS 18739	The manufacturer shall perform the testing for the final product every quarter and whenever there is a change in the raw material, manufacturing premises, and the supplier of the raw material.		
3.9	Antimicrobial Activity	----	ISO 20743 (Absorption method)	The manufacturer shall perform the testing for the final product every quarter and whenever there is a change in the raw material, manufacturing premises, and the supplier of the raw material.		

3.10	Whiteness Index	Annex D	IS 18739	Five	Each control unit	
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