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BUREAU OF INDIAN STANDARDS

AGENDA

Made-up Textiles (Including Ready-Made Garments) Sectional Committee, TXD 20 **26th Meeting**

Date	Time	Venue
20 August 2024 (Tuesday)	11:00 h	Video Conference through CISCO Webex

CHAIRMAN: Dr Arindam Basu, Director General
Northern India Textile Research Association, Ghaziabad

MEMBER SECRETARY: Shri Gourav Mishra, Scientist B, Textiles
Bureau of Indian Standards, New Delhi

Item 0 WELCOME & INTRODUCTORY REMARKS

Item 1 CONFIRMATION OF THE MINUTES OF THE PREVIOUS MEETING

1.1 The minutes of the 25th meeting of the Committee held on 19 April 2024, through video conferencing (Cisco Webex) were circulated vide BISDG letter no. TXD 20/A2.25 email dated 02 May 2024. No comments have been received.

1.1.1 The Committee may **CONFIRM** the minutes as circulated.

Item 2 SCOPE AND COMPOSITION OF TXD 20

2.1 The present scope and composition of the Committee is given in **Annex 1 (Pages 5-6)**.

2.1.1 The Committee may **REVIEW**.

2.2 M/s Northern Railway has requested for the membership of TXD 20 sectional committee. The brochure of Northern Railway is given in **Annex 2(a) (Page 7)** to the agenda.

2.2.1 The committee may **DECIDE**.

2.3 M/s Indian Sleep Products Federation has requested for the membership of TXD 20 sectional committee. The brochure of ISPF is given in **Annex 2(b) (Page 8)** to the agenda.

2.3.1 The committee may **DECIDE**.

2.4 Shahi Garg, Gujarat has requested for the membership of TXD 20 sectional committee. The CV of Shahi Garg is given in **Annex 2(c) (Pages 9-10)** to the agenda.

2.4.1 The committee may **DECIDE**.

2.5 As per the recommendations of the Search Committee, the division council in its 26th meeting decided to co-opt H&M Hennes and Mauritz India Private Limited, Bengaluru and Pearl Global Industries Limited, Gurugram in TXD 20 sectional committee.

2.5.1 The committee may please **NOTE**.

2.6 As per the directives of competent authority BIS, the memberships of the organizations which did not participated in the last two sectional committee meetings was terminated. The list of all such organizations is given below.

i) Reliance Industries Limited, Mumbai
ii) National Textile Corporation, New Delhi
iii) Intertek Testing Services, New Delhi
iv) Indian Institute of Technology, Delhi
v) Apparel Export Promotion Council, Gurugram

M/s Apparel Export Promotion Council, Gurugram has expressed interest in continuation of their membership in the technical committees and remain keen to participate in the standardization work.

2.6.1 The committee may please **NOTE** and **DECIDE**.

2.7 Revised nomination has been received from Textile committee, Mumbai for principal and alternate members.

a. Shri K. Veluchamy will represent as principal member; and
b. Shri Chirag Dhingra will represent as an alternate member.

2.7.1 The committee may please **NOTE**.

Item 3 ISSUES ARISING OUT OF PREVIOUS MEETING OF TXD 20

3.1 Summary of actions taken on the various decisions of the 25th meeting is given in **Annex 3 (Page 11)**.

Item 4 DRAFT STANDARD FOR FINALIZATION

4.1 As per the decision of the committee in the 25th meeting, the draft Indian Standard for Polyester Fibre Filled Pillows was wide circulated for a period of one month after incorporating the inputs

received from NITRA for the compression recovery (compressive set). The wide circulation draft as issued given in **Annex 4 (Pages 12-27)** to the agenda**.** The comments received from M/s Reliance (Shri Rahel Qureshi) are given in **Annex 5 (Pages 28-29)** to the agenda.

Sl No.	Doc No.	Title
1	TXD 20/25789	Textiles — Polyester Fibre Filled Pillows — Specification

4.1.1 The committee may **DELIBERATE** AND **DECIDE**.

Item 5 TRANSFER OF INDIAN STANDARDS

5.1 Industrial Fabrics Sectional Committee, TXD 33 recommended to transfer **IS 9481 : 1980 Specification for pillows, air** and **IS 9491 : 1980 Specification for mattress, air** from TXD 33 to TXD 20 and same was approved by the Textile Division Council in its 26th committee meeting.

5.1.1 The Committee may **DECIDE**.

Item 6 REVIEW OF PUBLISHED STANDARDS

6.1 In the last meeting , committee decided to reaffirm and revise the below listed standards and also decided to circulate review analysis/performas to all committee members. The review analysis/performas were circulated to the committee members for eliciting comments/inputs/suggestions through BIS portal.

Sl No.	IS No.	Title	Status
1.	IS 13489 : 2000	Textiles — Bed mattress — Specification (*first revision*)	Revised draft prepared for wide circulation
2.	IS 14351 : 1996	Textiles — Ground sheets (light weight) — Specification	No inputs received
3.	IS 14354 : 1996	Textiles — Waterproof covers — Specification	No inputs received

A revised draft for IS 13489:2000, incorporating the available inputs from different stakeholders has been prepared which is given in **Annex 6** (Pages 30 to 37).

6.1.1 The committee may **DELIBERATE** and **DECIDE**.

6.2 As per procedure of BIS, standards which were published/reaffirmed five years ago or before are required to be reviewed to assess adequacy of the requirements specified. Review is carried out keeping in view the changes in technology, current industrial practices and the

needs/expectations of the consumers/users so as to decide regarding further reaffirmation/ revision/withdrawal/amendment of the standards under review.

6.2.1 The list of Indian Standards due for review is given below and review perfoma is given in **Annex 7** (Pages 38-40) to the agenda.

Sl No.	IS No.	Title
1.	IS/ISO 8559-1 : 2017	Textiles — Size designation of clothes — Anthropometric definitions for body measurement

6.2.2 The committee may **DECIDE**.

6.3 In the 25th meeting, the committee approved the ToR for the R&D Project for **revision of IS 10228:1982, 'Specification for School Bag'.** The approved ToR had been forwarded to the BIS internal committee for further actions based on the R & D guidelines.

This standard was transferred from PCD 13 and it was due for review. As, it was already considered for revision through R & D project which will take another 6-8 months for report submission.

In the view of the above ,Chairman of TXD 20, on the behalf of the committee had approved (vide mail dated 06 August,2024) the reaffirmation of IS 10228:1982 standard since its due date with revision.

6.3.1 The committee may please **NOTE**.

Item 7 DATE AND PLACE OF NEXT MEETING

Item 8 ANY OTHER BUSINESS

ANNEX 1

(*Item* 2.1)

Scope & Composition of Made-up Textiles (Including Ready-Made Garments) Sectional Committee, TXD 20

Scope: To formulate Indian Standards for terminology and specifications for made-up textiles including ready-made garments.

Meeting(s) held	**Date & Place**
23rd Meeting	19 July 2022 (Video Conferencing)
24th Meeting	05 April 2023 (Video Conferencing)
25th Meeting	19 April 2024 (Video Conferencing)

Sl No.	NAME OF THE ORGANISATION	REPRESENTED BY	ATTENDANCE
1.	Northern India Textile Research Association, Ghaziabad	Dr. Arindam Basu (Chairman)	3/3
2.	Ahmedabad Textile Industries Research Association, Ahmedabad	Ms. Deepali Plawat Dr. Fahim Khatib (Alternate)	2/3
3.	Apparel Export Promotion Council, Gurugram	Shri Saurabh Kumar	1/3
4.	CSIR - Central Leather Research Institute, Chennai	Shri K Krishnaraj Dr. R. Mohan (Alternate)	3/3
5.	Directorate General of Quality Assurance, CQA (Textiles and Clothing), Kanpur	Shri Col Jeevender Singh Shri Anuj Shukla (Alternate)	2/3
6.	H&M Hennes and Mauritz India Private Limited, Bengaluru	Shri Saroj Kumar Singh	0/0
7.	Ministry of Communications, Department of Posts, New Delhi	Shri S Buchchan Shri Kailash Sankhla (Alternate)	3/3
8.	National Institute of Fashion Technology, Chennai	Nomination Awaited Prof. Monika Gupta (Alternate)	2/3
9.	Northern India Textile Research Association, Ghaziabad	Shri Vivek Agarwal Dr. Neha Kapil (Alternate)	3/3
10.	Office of the Textile Commissioner, Mumbai	Shri C R Kalesan Shri B K Sahoo (Alternate)	2/3
11.	SGS India Private Limited, Mumbai	Dr. Karthikeyan K. Ms. Mahalakshmi R (Alternate)	2/3
12.	Shahi Exports Private Limited, Faridabad	Shri J D Giri Shri Rajneesh Rai (Alternate)	3/3

13.	Shriram Institute for Industrial Research, Delhi	Shri Vinay Kumar Samania Shri Bhuvneshwar Rai (Alternate)	2/3
14.	Textiles Committee, Mumbai	Shri K. Veluchamy Shri Chirag Dhingra	1/3
15.	The South India Textile Research Association, Coimbatore	Shri Sounder Raj (Alternate)	2/3
16.	Pearl Global Industries Limited, Gurugram	Nomination Awaited	0/0

ANNEX 2(a)
(*Item* 2.2)

Co-option request:

Northern Railway had undertaken extensive exercise to revamp its bed linen being provided to railway passengers. In this regard, the strategy undertaken involved comprehensive review of existing specifications, identification of problem statements, and gathering feedback from stakeholders through Rail Madad and other channels. Premier textile institutions like IIT Delhi, BIS, CQA (MoD), Textile Committee, IOFS were consulted, followed by an industry consultation meeting with reputed textile mills. Samples from major manufacturers were analyzed to finalize specifications in terms of feel and finish, with specifications subsequently validated through reverse engineering and testing at NITRA lab.
These Pillow along with pillow protector specification made by Northern Railway were given to BIS through email dated 10.11.2023 for standardization. This material is extensively used by Northern Railway and Indian Railways as whole, and the standardized specification has been made for entire Indian Railways. The team of officers involved in this extensive exercise consists of:

Name	Sh. Sanjeev Kumar Jain	Sh. Rajesh Kumar	Sh. Sandeep Kumar Singh
Designation	Principal Chief Materials Manager	Chief Materials Manager	Dy. Chief Materials Manager
Email	cos@nr.railnet.gov.in	rajesh.kumar3112@gov.in	sk.singh90@gov.in
Mobile No.	9839877637	9794935117	9411821896
Organization	Northern Railway	Northern Railway	Northern Railway

We have actively participated in every TXD-20 meeting held after 02.11.2023. We have also answered all the queries raised regarding specification from other esteemed members or participants from industry. It is requested to please add these above names as Co-Op members from Northern Railway in standard which is under publication or going to be published for Pillows.

Regards
Sandeep Kumar Singh, IRSS
Dy. Chief Materials Manager
Northern Railway

ANNEX 2(b)
(*Item* 2.3)

Greetings from ISPF !!!

We are pleased to inform you that we are an association of Mattress Manufacturers with about 175 members.
We would like to be represented in the TXD 20 Committee.
We propose the following persons.

Primary Member

Mr. S. Sundaresan, Secretary - ISPF, with more than 40 years of experience in the Mattress Industry. He was the President of All India Coir Mattress Manufacturers' Association for more than 33 years.
Communication Address:
A/5, Veerabahu Nagar,
Pettai, Tirunelveli - 627 004,
Tamil Nadu.
Email ID: ispf.0813@gmailcom
Mobile Number: 98408 24627

Alternative Member

Mr. Vipul Kumar, Vice President - Product Innovation, Duroflex
Communication Address:
M/S. DUROFLEX PVT LTD.,
NR TRIDENT TECH PARK,
125, 2ND FLOOR,
HOSUR ROAD,
SECTOR 06,
HSR LAYOUT,
BENGALURU – 560 068.
Email ID: vipul.kumar@duroflexworld.com
Mobile Number: 9880316054

I request you to recommend to the Director, BIS and kindly confirm our membership in the TXD Committee.

Thanking you,

S. SUNDARESAN,
SECRETARY - ISPF.

ANNEX 2(c)
(*Item* 2.4)

SHAHI GARG

shahigarg220@gmail.com,
7990483766

Kakadiya complex, ghod dod road,
Surat-395007; GUJARAT.

OBJECTIVE

I seek challenging opportunities where I can fully use my skills for the success of the organization.

EDUCATION

2017	**St.Mark's High School** SSC 77%
2019	**H.M.Bachkaniwala High School** HSC 61%
2023	**The Maharaja Sayajirao University** Bachelor of Engineering 82%

PROJECTS

- Influence of different alkali on dyeing of cotton with homo-functional reactive dyes

SKILLS

- Communication skills, Computer knowledge, Time management, Leadership skill.

ACHIEVEMENTS & AWARDS

- Gold medalist in B.E. Recevied 1st Rank certificate from MSU vision. Awarded by ACTI (Association of chemical Technologists-India) for 1st Rank. Got Miss Fresher Award. Proudly, I had represented my university (MSU) in National Integration Camp and State

camp. I have served as National Service Scheme (NSS) Coordinator. Our project got published in IJSRD (International Journal for Scientific Rearch and Development**).**

ACTIVITIES

- I have a strong background in community service, including visits to orphanages, old age homes, slum areas, and shelters for disabled individuals. Additionally, I have organized webinars, awareness camps, leadership camps, gaushala & many more. Industrial visits to companies like Hare Krishna Diamond Hub, Balaji Wafers, Aglon Inds. Pvt. Ltd., Donear Ind. Ltd., Ecotex, Nobletex. My active involvement with community has allowed me to organize, manage, and volunteer in various social activities. I have also attended exhibitions to broaden my understanding of diverse fields.

LANGUAGES

- English
- Hindi
- Gujarati

EXPERIENCE

10/06/2022	**ALOK IND.LTD.** Intern
18/06/2022	Grey inspection Scouring & Desizing & Bleaching Dyeing & printing Lab instruments & Testing
1/11/2023 - Till date	**Ventara Hi-Tech fabric-MNC** Quality control Manager/Lab Incharge /Lab Executive

HOBBIES

- Nature walk
  Fashion
  Music
  Reading books
  Spirituality

DECLARATION

- I have ensured that the information provided by me in this resume is true to my knowledge.

ANNEX 3

(*Item* 3.1)

SUMMARY OF ACTIONS TAKEN ON THE MINUTES OF THE LAST MEETING

Item No.	Decision	Action Taken
2.1	**Updated representation in committee**	Updated scope and composition are given in Annex 1.
4	**NEW WORK ITEM PROPOSAL** The committee considered the new work item proposal received from Northern Railways to formulate a new standard on "Textiles — Polyester Fibre Filled Pillows — Specification".	Coming up for discussion under agenda item **4.1**.
5	**COMMENTS ON PUBLISHED INDIAN STANDARD** The committee considered the comments on IS 13489 : 2000, Textiles — Bed mattress — Specification	Revised draft has been prepared Coming up for discussion under agenda item **6.1.**
6	**RESEARCH AND DEVELOPMENT PROJECT** The committee considered the proposed Terms of Reference (ToR) for revision of IS 10228:1982, 'Specification for School Bag'.	Coming up for discussion under agenda item **6.3.**

ANNEX 4
(*Item* 4.1)

भारतीय मानक ब्यूरो
BUREAU OF INDIAN STANDARDS

Draft for comments only Doc No.: TXD 20 (25789)
June 2024

भारतीय मानक मसौदा

वस्त्रादि — पॉदिएस्टर रेशे से भरे तदकए — विशिष्टि

Draft Indian Standard

TEXTILES — POLYESTER FIBRE FILLED PILLOWS — SPECIFICATION

ICS: 59.060.20, 59.060.01, 97.160

Made-up Textiles (Including Ready-Made Garments) Sectional Committee, TXD 20

Last date for receipt of comments is 03 July 2024

FOREWORD

(Formal clauses will be added later)

A pillow functions primarily as a means of support for the head, typically utilized during sleep, or for the body support when placed on a couch or chair. Pillow composed of filler materials such as polyester, cotton, foam, feathers, down etc. which is encased within a sealed stitched casing fabric. Pillows or cushions often have a conventional shape that is either rectangular or square.

This standard covers specifications for filling fibres and casing fabric of the pillow along with specifications for outer protective cover. Attempts have been made to synchronize the requirements of the standard with the needs of organized consumers, including railways and the hospitality industry. In preparation of this standard considerable assistance has been derived from Northern Railway's requirements for pillow specifications.

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.

1 SCOPE

1.1 This standard specifies the requirements for polyester fibre filled pillows and outer protective cover.

1.2 This standard does not specify the general appearance, feel, shade, etc, of the pillow and outer protective cover.

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 the standards indicated in Annex A.

3 ATMOSPHERIC CONDITIONS FOR TESTING

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

4 TERMS AND DEFINITIONS

For the purpose of this standard, the following definitions shall apply:

4.1 Casing/Inner Primary Cover

A textile fabric covering that encloses the filled fibre material.

4.2 Filler

The fibres used to be uniformly packed in the casing.

4.3 Pillow

An assembly composed of filler material enclosed within a casing.

4.4 Outer Protective Cover

A sewn fabric cover that contains a pillow and is easily removable for washing purposes.

4.5 Piping

A cord sewn on all four sides of the casing pillow as a decorative trim and also helps the pillow to maintain its desired shape.

5 MANUFACTURES

5.1 A pillow shall consist of a casing made of either one piece of fabric or two equally sized pieces of fabric to encase a synthetic-fibre filler material. The casing fabric shall be stitched on two sides for the one piece of fabric and on three sides for two pieces of fabric.

5.2 The filler material used shall be virgin siliconized hollow conjugate polyester fibre. The filler polyester fibre used for filling shall be a carded web opened on a roller-type card or blow-filled into the casing after opening on suitable opening machines. After filling, the open side of the casing shall be stitched in the same manner as for the other sides of the casing. All the sides may be secured with piping as agreed to between the buyer and the seller.

5.3 The outer protective cover shall be laminated from the inside using TPU film with a minimum thickness of 20 microns. The lamination shall be applied uniformly to the base fabric. The dimensions of the outer protective cover shall be as agreed to between the buyer and the seller. The base fabric of outer protective cover shall be of polyester fibre and nominal GSM of base fabric shall be 90 g/m^2.

6 WORKMANSHIP AND FINISH

6.1 The pillow and the outer protective cover shall be made of uniform shape, finish, and workmanship throughout;

1. Free from defects that could affect their appearance and/or their serviceability;
2. Made such that all seams are smooth and sewing is free from pleats and puckers, sufficiently extensible to prevent seam-cracking;
3. Made such that all ends of sewing have been trimmed and loose threads removed;
4. Capable of being cleaned in accordance with the care instructions without giving rise to any defect, such as puckering, lumpiness, tears etc.; and
5. Delivered in a clean and commercially dry condition.

7 REQUIREMENTS

7.1 Casing

The casing shall conform to the general and performance requirements as specified in Table 1 and Table 2.

Table 1 Casing Fabric General Requirements

(*Clause* 7.1)

Sl No.	Type	Fiber Type	Nominal Count of yarn		Ends/cm	Picks/cm	Mass g/m^2, *Min* (*see* Note 2)
			Warp	weft			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
i)	1	100% micro polyester	80 D	150 D	49	27	95
ii)	2	100% polyester	80 D	40s	51	26	90
iii)	3	100% cotton	40s	40s	55	34	135
iv)	4	65% polyester and 35% cotton	40s	40s	55	34	135
v)	Tolerance	± 3 %	± 5 %	± 5 %	± 4	± 3	
vi)	Method of Test, Ref to	IS 667 and IS 3416	IS 3442 and IS 7703 (part 1)	IS 3442 and IS 7703 (part 1)	IS 1963	IS 1963	IS 1964

Table 2 Casing fabric performance requirement

(*Clause* 7.1)

Sl No.	Characteristics		Requirements			Method of Test, Ref to
		Type 1	Type 2	Type 3	Type 4	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
i)	Breaking Load, kgf, *Min* a) Warp b) Weft	 40 40	 35 25	 15 15	 20 15	IS 1969 (Part 1)
ii)	Tear Strength, kgf, *Min* a) Warp b) Weft	 1.8 1.8	 1.8 1.0	 0.8 0.8	 0.8 0.8	IS 6489 (Part 1)
iii)	Dimensional Change (after 3 washes), *percent* a) Warp b) Weft	 + 3 to -3	 + 3 to -3	 + 3 to -5	 + 3 to -5	IS 15370/ISO 6330
iv)	pH value of aqueous extract	6.0 - 8.0	6.0 - 8.0	6.0 - 8.0	6.0 - 8.0	IS 1390

v)	Colour fastness to: (only for dyed fabric)					
vi)	a) Light			4 or better		IS/ISO 105-B02
vii)	b) Washing 1) Colour change 2) Staining			4 or better		IS/ISO 105-C06
viii)	c) Rubbing 1) Dry 2) Wet			4 or better		IS/ISO 105-C06
ix)	d) Perspiration (acidic and alkaline) 1) Color change 2) Staining			4 or better		IS/ISO 105-E04
x)	Seam strength, N, *Min*	60	60	60	60	IS/ISO 13935-1
xi)	Pilling resistance (1000 revolution)	3 or better	3 or better	3 or better	3 or better	IS 10971 (Part 2)

7.2 The outer protective cover shall conform to the requirements as specified in Table 3.

Table 3 Outer Protective cover requirements

(*Clause* 7.2)

Sl No.	Characteristic	Requirement	Method of Test, Ref to
(1)	(2)	(3)	(4)
i)	Areal Density (base fabric + lamination), Min, g/m^2	135	IS 1964
ii)	Hydrostatic pressure head test, Rate 60cm/min, Min	300 cm H_2O	IS 391
iii)	Pilling resistance (1000 revolution)	4 or better	IS 10971 (Part 2)
iv)	pH of aqueous extract	6.0 - 8.0	IS 1390
v)	Coating adhesion strength, Min, 50mm	0.8 kgf	IS 7016 (Part 5)
vi)	Colour fastness to saliva and Perspiration (for dyed fabric only)	Resistant to saliva and perspiration	IS 15626
vii)	Dimensional Change (after 3 washes), *percent* a) Warp b) Weft	+ 3 to -3	IS 15370/ISO 6330

viii)	General appearance after washing	No seam opening or broken stitches, no delamination and breakage of TPU layer	Visual

7.3 Filler

The filling fibre shall be siliconized virgin hollow conjugate polyester fibre. The nominal fibre denier of filler fibre may be either 15, 7, 5, 4, or 3 as specified in Table 4. The filler fibre shall be identified by the methods specified in IS 667 and for the hollowness determination as prescribed in Annex C.

NOTE — The pillow manufacturer may obtain a certificate from the fibre manufacturer along with a test report indicating that the fill fibre is siliconized hollow conjugate polyester fibre for every lot of fibre purchased.

Table 4 Requirements of Hollow Conjugate Siliconised Polyester Fill Fibre

(*Clause* 7.3)

Sl No.	**Properties**	**Specifications & Limits**					**Method of Test, Ref to**
		3 Denier	**4 Denier**	**5 Denier**	**7 Denier**	**15 Denier**	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
i)	Fibre linear density (Denier)	3 ± 0.5	4.0 ± 0.5	5.0 ± 0.50	7.0 ± 1.0	15.0 ± 1.0	IS 10014 (Part 2)
ii)	Nominal Hollowness (%)	12 – 18		14 – 20			Annex C

7.4 Dimensions and Fill Mass of Pillow

Unless otherwise specified, the nominal dimensions of the pillow casing and the mass of the filled fibres shall be as specified in Table 5. The actual dimensions of the pillow casing when tested by method prescribed in Annex B shall not be less than nominal dimensions. The mass of filled fibres shall be calculated by opening the seam and weighing the entire filled fibres on an electronic balance to an accuracy of 0.1 g.

Table 5 Unfilled Casing Dimensions and Mass of Fill Fibres

(*Clause* 7.4)

Sl No.	Pillow Size	Nominal Dimensions, cm		Nominal mass of Fill Fibers in g	
		Length	Width	3 – 7 D	≥ 15 D
(1)	(2)	(3)	(4)	(5)	(6)
i)	1	60	40	500	450
ii)	2	55	40	450	400
iii)	3	66	51	670	620
iv)	4	76	51	760	710
v)	5	92	51	930	870
vi)	Tolerance	+ 2 cm - 0 cm	+ 1 cm - 0 cm	+ 5 % - 2 %	+ 5 % - 2 %
vii)	Method of Test, Ref to	Annex B			

NOTE — The others dimensions and filled mass shall be as agreed to between buyer and seller. The tolerance specified in table 5 shall be applicable on the declared dimensions and mass of fill fibres.

7.4.1 The compressive set of the pillow when tested as per Annex D shall be maximum 10 percent.

7.5 Requirements for Hemming

7.5.1 An opening across the complete width of the outer pillow protective cover shall be provided to facilitate the insertion of the pillow. The location of the opening and overlap shall be as agreed to between the buyer and the seller. Unless otherwise specified, minimum length of flap shall be 140 mm.

7.5.2 To prevent the unraveling of the threads across the opening side, raw edges shall be turned in to provide a hem of minimum 1 cm.

7.5.3 *Sewing thread*

Unless otherwise specified, a nominal 30 tex polyester 3 ply sewing thread with a minimum tensile strength of 10 N shall be used for both the casing and pillow protective cover. In the case of dyed fabric, the thread shall be of a similar shade.

7.5.4 *Sewing and stitches*

The sewing shall be of even tension and the loose ends shall be finished securely and neatly. The number of stitches shall not be less than 4 per cm for casing and pillow protective cover, when tested by a needle and counting glass.

7.5.5 *Piping (Optional)*

100 percent polyester or polyester/cotton (65:35 percent) or 100 percent cotton cord may be used as piping on all four sides of the pillow/cushion.

8 SEALED SAMPLE

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

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

9 MARKING

9.1 The casing shall be suitably marked on a suitable printed cloth label in legible and indelible marking, which shall be securely attached to an edge of, or on top (near one of the comers) of each pillow:

a) Type of fill fibre;
b) Dimensions of the pillow;
c) Mass of filled fibre;
d) Type of casing fabric (blend composition);
e) Manufacturer's name, initials, or trademark;
f) Indication of the source of manufacture; and
g) Any other information as required by the law in force.

9.1.1 The outer protective cover shall be suitably marked with the following information:

a) Blend composition of outer protective cover;
b) Manufacturer's name, initials, or trademark;
c) Indication of the source of manufacture; and
d) Any other information as required by the law in force.

Another suitable cloth label indicating symbols for proper care of pillow during washing, drycleaning, drying and ironing shall also be attached with each piece of pillow casing and outer protector as per IS 14452 at a conspicuous place, for example, at corner.

9.2 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 there under, and the products may be marked with the Standard Mark.

10 PACKING

Unless otherwise agreed upon by the buyer and the seller the pillow shall preferably be packed individually in a LLDPE, LDPE bag of thickness not less than 40 microns. A suitable number of such pillows shall then be packed in a suitable bulk container. Pillows of the same nominal dimension and that contain the same type of filling shall be packed together in a bulk container.

11 SAMPLING

11.1 Lot

The number of pieces of the pillow of the same size, filling fibre and same quality of casing fabric delivered to a buyer against one dispatch note shall constitute a lot.

11.2 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 sample selected from the lot.

11.3 Unless otherwise agreed, the number of pieces selected at random for inspection shall be in accordance with Table 6.

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

11.4 Number of Samples and Criteria for Conformity

It shall be as follows:

Table 6 Sample Size
(Clauses 11.3, 11.4.1 and 11.4.2)

Sl No.	Lot Size	Sample Size	Sub-sample Size	Permissible Number of Non-conforming Pieces
(1)	(2)	(3)	(4)	(5)
i)	Up to 50	5	3	0
ii)	50 to 150	8	5	0
iii)	151 to 280	13	8	0

iv)	281 to 500	20	8	0
v)	501 to 1 200	32	13	0
vi)	1 201 to 3 200	50	13	0
vii)	3 201 to above	80	20	1

11.4.1 The number of pieces to be selected for ends/dm, picks/dm, freedom from defect, number of stitches, visual colour of fabric and sewing threads shall be in accordance with col (3) of Table 6.

For all other tests such as Blend composition, Breaking load, tear strength, colour fastness, mass per square meter of fabric, pH value, fiber fineness, pilling resistance, dimensional stability, count and strength of sewing thread, thickness of the lamination, seam strength, filling mass of fibre, the number of pieces selected shall be as given in col (4) of Table 6.

11.4.2 The lot shall be considered as conforming to the requirements of this standard if all the samples tested in accordance with col (3) of Table 6 found conforming and also the total number of defective pieces is less than or equal to the acceptance number given in col (5) of Table 6 for sub sample size.

ANNEX A

(*Clause* 2)

LIST OF REFERRED STANDARDS

IS No.	*Title*
IS 391 : 2020	Textile fabrics — Determination of resistance to water penetration — Hydrostatic pressure test (*second revision*)
IS 667 : 1981	Methods for identification of textile fibres (*first revision*)
IS 1390 : 2022	Textiles Determination of pH of aqueous extract (*third revision*)
IS 1963 : 1981	Methods for determination of threads per unit length in woven fabrics (*second revision*)
IS 1964 : 2001	Textiles — Methods for determination of mass per unit length and mass per unit area of fabrics (*second revision*)
IS 1969 (Part 1) : 2018	Textiles — Tensile properties of fabrics — Part 1 Determination of maximum force and elongation at maximum force using the strip method (*fourth revision*)
IS 3416 : 2024	Textiles — Quantitative Chemical Analysis — Mixtures of Certain Cellulose Fibres with Certain Other Fibres (Method Using Sulphuric Acid) (*third revision*)
IS 3442 : 2023	Textiles method for determination of crimp and linear density of yarn removed from fabric
IS 4905 : 2015	Random sampling and randomization procedures (*first revision*)
IS 6489 (Part 1) : 2011	Textiles — Tear properties of fabrics Part 1 Determination of tear force using ballistic pendulum method (Elmendorf) (*second revision*)
IS 7016 (Part 5) : 2019	Methods of test for coated and treated fabrics: Part 5 rubber — Or plastics — Coated fabrics — Determination of coating adhesion (*third revision*)
IS 7703 (part 1) : 1990	Methods of test for man-made fibres continuous filament flat yarn — Part 1 Linear density (*first revision*)
IS 10014 (Part 2) : 1981	Methods of tests for man-made staple fibres Part 2 Determination of linear density
IS 10971 (Part 2) : 2022	Textiles — Determination of fabric propensity to surface pilling fuzzing or matting Part 2: Modified martindale method (*second revision*)
IS/ISO 13935-1 : 2014	Textiles — Seam tensile properties of fabrics and made-up textile articles Part 1 Determination of maximum force to seam rupture using the strip method (*first revision*)
IS 14452 : 2023	Textiles — Care Labelling Code Using Symbols
IS 15370 : 2023	Textiles — Domestic Washing and Drying Procedures for Textile Testing (*second revision*)

IS 15626 : 2006	Textiles — Method for determination of colour fastness of textiles to saliva and perspiration
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-C06 : 2010	Textiles — Tests for colour fastness Part C06 Colour fastness to domestic and commercial laundering (*first revision*)
IS/ISO 105-E04 : 2013	Textiles — Tests for colour fastness — Part E04 : Colour fastness to perspiration

ANNEX B

(*Clause* 7.4 and *Table* 5)

METHODS OF TEST FOR UNFILLED CASING DIMENSIONS AND MASS OF FILL FIBRES IN THE PILLOW/CUSHION

B-1 UNFILLED CASING DIMENSIONS

B-1.1 Open the pillow/cushion and take out the fill fibres from it completely. Lay the pillow/cushion casing flat on a plain surface. Gently smoothen the casing with the hands until it is free from all storage folds, creases and wrinkles.

B-1.2 Use an accurately graduated steel tape of length greater than the length of the pillow/cushion casing to determine, to the nearest cm, at approximately three equal intervals in each direction, the width and the length of the pillow/cushion.

B-1.3 Calculate the arithmetic mean of each set of measurements and record the results as the width and the length, respectively, of the pillow.

B-2 MASS OF FILL FIBRE IN THE PILLOW/CUSHION

B-2.1 Weigh all the fill fibre mass obtained in **B-1.1** in an electronic balance capable of measuring to the nearest mg.

B-2.2 Repeat similarly for all other samples selected as per Table 6 and calculate the arithmetic mean of all measurements

ANNEX C
(*Clause* 7.3 and *Table* 4)

METHODS OF TEST FOR FILL FIBRE PROPERTIES

C-1 TEST FOR HOLLOWNESS

C-1.1 Definition

C-1.1.1 Hollowness

Ratio of the area of the inner hole of the hollow fibre to the total cross - sectional area of the fibre.

C-1.2 Apparatus

C-1.2.1 Microscope (with software program for cross sectional area measurement)

C-1.3 Procedure

C-1.3.1 Prepare a microscopic cross-section slide of a bunch of fibre.

C-1.3.2 Put the slide under microscope and focus the specimen with proper magnification.

C-1.3.3 Select a single fibre cross section and select the inner hole area.

C-1.3.4 Run the special software program for determining the area.

C-1.3.5 Similarly select the total area and determine its value.

C-1.3.6 Calculate the percentage ratio of hollow fibre area to the total fibre area to find the hollowness percentage.

C-1.3.7 Calculate percentage hollowness for 20 such fibres at random and then calculate their average value and report this value as hollowness percentage.

ANNEX D

(*Clause* 7.4.1)

METHOD FOR DETEMINATION OF COMPRESSION SET

D-1 TEST SPECIMEN

The test piece shall consist of the entire pillow sample, excluding the outside protective cover.

D-2 APPARATUS

The compression testing apparatus shall be capable of applying a constant load and have a load measuring device of suitable capacity for measuring the load required to be applied. The essential parts of the testing apparatus are an adjustable/moveable top jaw with flat plate surface that can be moved vertically up or down and a fixed smooth flat plate surface, between the parallel faces of the top and bottom flat plates, the test piece is compressed.

D-3 PROCEDURE

3.1 Raise the upper plate to a height greater than the thickness of the specimen (pillow).Place the pillow sample horizontally on the lower platform/plate, so the test sample is placed between the parallel plates. The dimensions of the plates shall be larger than the test piece. Sufficient care shall be taken to avoid displacement of the test piece.

3.2 To determine the initial thickness of the test sample, gradually lower the upper plate and apply 100 grams force load on the specimen to measure the initial thickness. i.e T_o. The readings will be displayed on the monitor of the UTM or the thickness can be measured manually by a calibrated steel scale (capable of measuring dimensions up to 30 cm with an accuracy of 1 mm) as the distance between the top and bottom plates at 100 gram force load.

3.3 After recording the initial thickness of the sample (T_o) gradually lower the upper plate until the loading on the sample reaches 5 kgf, as determined by a suitable load measuring sensor. When the load reaches 5 kgf, maintain a steady load of 5 kgf on the test sample for a duration of 8 hours.

3.4 After 8 h of applying a compressive force of 5 kgf , release the load from the test piece by lifting the top plate above the height of the test specimen, ensuring that it does not make contact with the pillow surface. Allow the test sample to recover for 30 minutes at ambient temperature. After a 30 minutes recovery period, measure the final thickness after recovery of the test sample by lowering the top plate and applying 100 grams force load on the sample and measure the distance between top plate and lower plate same as 3.2. Test at least two test pieces and take the average of the test results.

D-4 CALCULATION

Calculate the compression set using the following formula:

$$C_s = (T_o - T_r)/ T_o \times 100$$

where

C_s = compression set expressed as percentage;
T_o = initial thickness of the test piece; and
T_r = final thickness after recovery of the test piece.

ANNEX 5
(*Item* 4.1)

COMMENTS RECEIVED ON WIDE CIRCULATION DRAFT

a) Comment received from M/s Reliance industries (Shri Rahel Qureshi) , on 'Textiles — Polyester Fibre Filled Pillows — Specification'

Dear Sir,

As informed to you, please add the below sizes in the BIS draft for the Pillows of Railways.

Fibre filling dimensions are as follows :

1) 50 x 36 cms – Filling of 274 Grams -- Height of pillow upon fresh filling : 15 cms.
2) 55 x 40 cms – Filling of 300 Grams -- Height of pillow upon fresh filling : 16 cms.

Recovery percentage after keeping for 30 days :- 75% Recovery.

Recovery percentage after keeping 45 days :- 70% Recovery.

Please note the pillow has to be kept open for atleast 2 hours and then beaten and fluffed to get the complete shape back.

b) Comment received from M/s Reliance industries (Shri Rahel Qureshi) , on 'Textiles — Polyester Fibre Filled Pillows — Specification'

Please find below the testing specs for the fibre used in the pillows.

Properties/ Test	Specifications & Limits - Fiberfill for Pillow					Test Method	Remarks (RIL) Important parameter
		3 Denier	4 Denier	7 Denier	15 Denier		
Fibre linear density (Denier)	-	3 ± 0.5	4.0 ± 0.5	7.0 ± 0.1	15.0 ± 1.0	IS 10014 (Part 2)	
Den,CV	%	<10	<10	<10	<12	IS 10014 (Part 2)	Add

CPCM	%	1.7±.3	1.6±.3	1.6±.3	0.9 - 1.5	IS 17263: 2022 Annex C	Add
CR (Crimp removal)	%	Min 22	Min 22	Min 27	Min 35	IS 17263:2022	Add
Cutlength	mm	±3	±3	±3	±3	IS 10014 (Part -1)	Add
Hollowness	%	Min 18	Min 18	Min 18	Min 25	IS 17263: 2022 Annex C	Correct specification by RIL
B/V Melting Point (Material Confirmation)	-	> 245°C	> 245°C	> 240°C	> 240°C	Annex J of IS 16481	ADD
L Colour Value, Min		Min 88	Min 88	Min 88	Min 88	IS 17263: 2022 Annex J	ADD
Whiteness Index (WI)		Min 75	Min 75	Min 75	Min 75	IS 17263: 2022Annex J	ADD
Finish Type	-	Siliconized	Siliconized	Siliconized	Siliconized	IS 17263: 2022 Annex J	ADD

Annex 6
(*Item* 6.1)

Working Draft

TEXTILES — BED MATTRESS — SPECIFICATION

(Second Revision)

1 SCOPE

This standard covers requirements for bed mattresses made from rubberized coir, flexible polyurethane or latex foam sheets, viscoelastic foam, re-bounded foam, bonnel/pocket spring or any of the combination of these materials.

2 REFERENCES

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

3 TYPES

Bed mattress shall be of the following types :

Type 1 — Bed mattress made from medium grade rubberized coir sheet as cushioning material, mainly used by defence services, paramilitary organizations, police, railways, public works departments, etc.

Type 2 — Bed mattress made from rubberized coir, flexible polyurethane or latex foam sheet, Re-bounded foam, bonnel/pocket spring either singly or in combination sas core/cushioning materials.

4 REQUIREMENTS

The materials used for cushioning/core layers of bed mattress shall conform to the requirement as specified in Table 1, Table 2, Table 3 and Table 4.

Table 1
(*Clause* 4)
Physical requirement of Top Quilt fabric used in Mattresses

SI No	Requirements		Method of Test
		GSM , *Min*	
i)	Knitted polyester	180	IS 1964
ii)	Woven Polyester cotton blended	130	IS 1964
iii)	Woven polyester	90	IS 1964
iv)	Woven Cotton	150	IS 1964
v)	Jacquard weave fabric	130	IS 1964

NOTE : Any other suitable fabric may be used as per the agreement between the buyer and the seller

Table 2

(*Clause* 4)

Physical requirement of Cushioning/Core layers used in Mattresses

Sl No.	Components	Material Requirement
(1)	(2)	(3)
i)	Cushioning/Core layers	a) Rubberized coir sheet conforming to IS 8391 (Part 1) b) Latex foam sheet conforming to IS 1741 c) Flexible polyurethane foam sheet conforming to IS 7933 d) Polyurethane Visco-elastic foam conforming to IS 7933 e) Re-bonded foam having minimum density 50kg/m3 and conforming to IS 7933.

Table 3

(*Clause* 4)

Physical Requirements of Bonnel spring used in mattresses

SI No	Requirements		Tolerance
i)	Wire diameter	2.0 to 2.4	±0.02 mm

ii)	Outer diameter	85 to 90 mm	-
iii)	OD of spring in centre	45 to 50 mm	-
iv)	Height of spring	120 to 160 + / - 10 mm	±10 mm
v)	No of turns	4 to 6	

Table 4
(*Clause* 4)

Physical requirements of Pocket spring used in mattresses

SI No	Requirements		Tolerance
i)	Wire diameter	1.7 mm to 2.2 mm	±0.02 mm
ii)	End ring diameter	42 to 47 mm	-
iii)	Outer diameter	50 to 70 mm	-
iv)	Height of spring before pocketing	150 to 200	± 10 mm
v)	No of turns	5 to 8	-

5 DIMENSIONS

5.1 Type 1 Mattress

The principal dimensions of the finished mattress when measured to nearest 5 mm shall be as follows (*see* Fig. l):

Length, mm	2000 ± 15
Width, mm	910 ± 15
Thickness, mm, *Min*	75

5.2 Type 2 Mattress

The principal dimensions of the finished mattress shall be as specified in the contract or order, subject to the following tolerance when measured to nearest 5 mm

Length, mm	± 15 mm
Width, mm	± 15 mm
Thickness, mm	± 05 mm

NOTE — In case more than one material is used for cushioning, thickness of the finished mattress shall conform to the requirements given above and the order of layering of cushion materials shall also be indicated.

6 MANUFACTURE

6.1 The top and bottom pieces of the mattress case may be made from a single piece of fabric. One joint parallel to the length may, however, be permitted both in the top and bottom of the case but no piece less than 18 cm in width shall be used. The sides, shall also be made from the same fabric which shall have a maximum of four joints. However, no lateral joint of any cushioning material shall be allowed parallel to length/width. The mattress case shall be plain or quilted with single or multilayers of foam.

6.2 The piping shall be made by encasing a 4 mm hemp line or shroud-laid cotton line in a 50 mm wide strip of fabric used for case. The top portion of the piping and the side border shall be stitched together by one row of machine stitching. The stitching shall be at least 5 mm away from the raw edges. Similarly, the bottom portion of the piping and the border (sides) shall also be machine stitched.

NOTE : Piping and hemp line is only applicable to hand stitched mattresses.

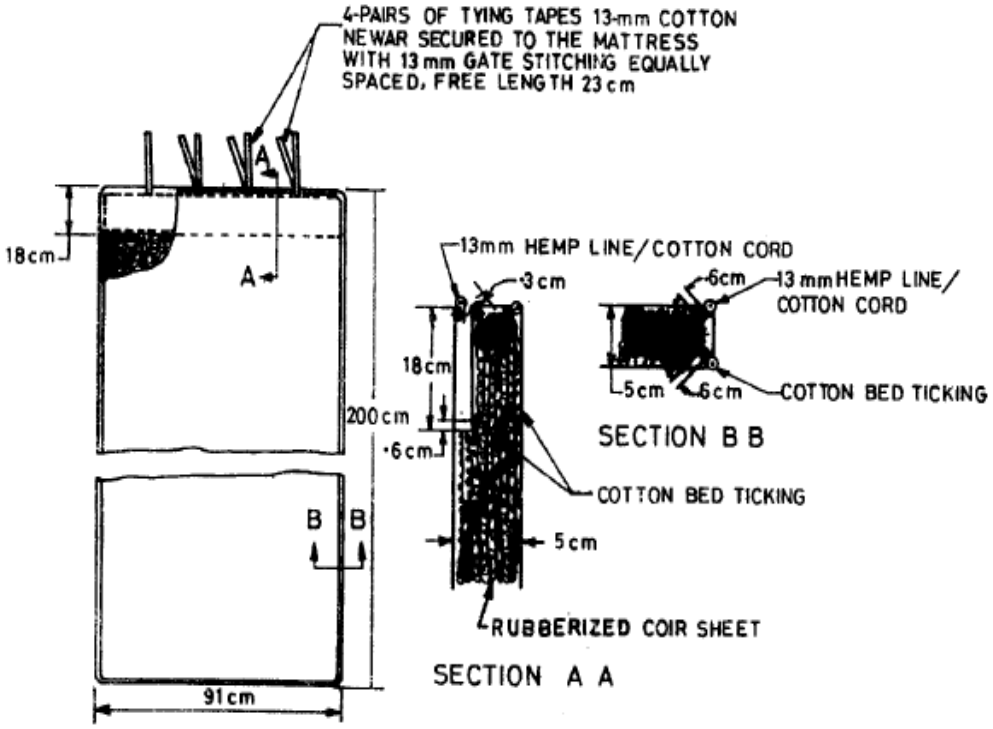

Fig 1 Bed mattress (Hand stitched)

6.3 The mattress shall be assembled throughout with lock stitch or chain stitch regulated at 37 to 43 stitches per decimetre for cotton sewing thread and minimum 25 stiches per decimeter for polyester or nylon sewing thread. All loose ends shall be securely fastened.

6.4 for the hand stitched mattresses, one of the ends shall however be unstitched and kept open for insertion of cushioning material. For Type 1, the free edge of the bottom and the piping shall be stitched with the lower edge of the border to which a flap of 18 cm width has been stitched. Four pairs of 13 mm tying tapes shall be stitched, as indicated in Fig. 1, one tape each to the free edge of the bottom and the other to the lower edge of the border. The other side of the flap shall be hemmed 10 mm wide with one row of stitching. The sheet of cushioning material shall be inserted into the case through the open end. The open end shall be closed by the flap and secured by tying tapes.

For Type 2 mattress, after inserting the cushioning material, the free edge of the bottom and the piping shall be stitched with the lower edge of the border after hemming it to 10 mm with single row of stitching.

NOTE: For the mattresses stitched using tape edge machine requirements listed in clause 6.4 shall not be applicable.

6.5 If a sealed sample is stipulated in the contract/ order, the mattress shall conform to the same in respect of workmanship, finish, etc.

7 MARKING

7.1 Each mattress shall be marked with the following:

a) Name of manufacturer,
b) Type,
c) Dimensions,
d) Type of cushioning/core material used, and

NOTE — In case more than one material is used for cushioning, thickness and grade of each shall be indicated separately.

e) Other information stipulated in the contract/ order.

7.2 BIS Certification Marking

The bed mattresses may also be marked with Standard Mark.

7.2.1 The Mattresses 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 mattresses may be marked with the Standard Mark.

8 PACKING

8.1 Type 1 mattress shall be packed as detailed in 8.1.1 to 8.1.3 when so specified in the contract or order:

8.1.1 *Materials*

a) Polythene film, 0.04 mm thick (*see* IS 2508)
b) Cloth heavy cee (*see* IS 3751) or Cloth hessian (Medium), 305g/m^2 [*see* IS 2818 (Part 2)]
c) Twine jute, 3-ply (*see* IS 1912) or String cord As specified in contract/order contract/order

8.1.2 *Method*

One mattress shall be wrapped with an inner layer of polythene film 0.04 mm thick (Min) and an outer layer of cloth heavy cee or equivalent hessian cloth to form a compact bale of rectangular shape as far as possible. The overlap of the inner wrapping shall be at least 10 cm so as to ensure full protection to the contents of the bale. The overlap of the outer layer of the hessian cloth shall be such that it can he properly and securely sewn around the bale. The hale shall be stitched with double 3-ply-jute twine, with not less than 12 stitches per decimetre taking care not to pierce the inner wrapping while stitching. Sufficient hessian cloth shall be provided at each corner to form `ears' of about 15 cm in length to facilitate easy handling during transit.

8.1.3 Each bale shall be legibly marked by stencil with indelible marking ink/paint showing the following details:

a) Manufacturer's name and address,
b) Name and type,
c) Quantity packed in the bale,
d) Lot number and serial number of the bale,
e) Month and year of packing,
f) Gross mass of the bale in kg,
g) Name and address of consignee, and
h) Any other information required by the buyer.

8.2 Type 2 mattresses may be supplied loose or packed in a manner as specified in the contract or order.

9 SAMPLING

9.1 Lot

The number of pieces of the mattresses of the same type and same quality delivered to a buyer against one dispatch 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 sample 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.

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

9.5 Number of Samples and Criteria for Conformity

It shall be as follows:

Table 5 Sample Size

(*Clauses* 9.3 , 9.6 , 9.7)

Sl No.	**Lot Size**	**Sample Size**	**Sub-sample Size**	**Permissible Number of Non-conforming Pieces**
(1)	(2)	(3)	(4)	(5)
i)	Up to 50	5	3	0
ii)	50 to 150	8	5	0
iii)	151 to 280	13	8	0
iv)	281 to 500	20	8	0
v)	501 to 1 200	32	13	0
vi)	1 201 to 3 200	50	13	0
vii)	3 201 to above	80	20	1

9.6 The number of pieces to be selected for dimensions, stitches/dm shall be in accordance with col (3) of Table 5.

For all other tests such as Blend composition, identification of different components used in mattresses selected shall be as given in col (4) of Table 5.

9.7 The lot shall be considered as conforming to the requirements of this standard if all the samples tested in accordance with col (3) of Table 5 found conforming and also the total number of defective pieces is less than or equal to the acceptance number given in col (5) of Table 5 for sub sample size.

ANNEX A

(*Clause* 2)

LIST OF REFERRED INDIAN STANDARDS

IS No.	*Title*
IS 175 : 2023	Specification for sheeting ticking and bed sheets (*third revision*)
IS 1720 : 1978	Specification for cotton sewing thread (*second revision*)
IS 1741 : 2019	Specification for latex foam rubber products
IS 1895 : 1982	Specification for cotton NEWAR (*second revision*)
IS 1920: 2023	Specification for hemp lines (*second revision*)
IS 1912: 2023	Country jute twine (*second revision*)
IS 2508 : 2016	Low density polythene films
IS 2818 (Part 2) : 2015	Indian hessian : Part 2 305 and 229 g/m^2 at 16 percent contract regain (*first revision*)
IS 3252: 2023	Specification for shroud-laid cotton line (*second revision*)
IS 3751: 1993	Heavy cee jute cloth — Specification (*first revision*)
IS 7933: 2022	Specification for flexible polyurethane foam for domestic mattresses
IS 8391 : 2019	Rubberized coir sheets for cushioning (*first revision*)

ANNEX 7
(*Item* 6.2)

I) IS/ISO 8559-1 : 2017

REVIEW ANALYSIS OF INDIAN STANDARD
(To be submitted to the Sectional Committee)

1. **Sectional Committee No. & Title:** TXD 20 [Made-up Textiles (Including Ready-made Garments) Sectional Committee]

2. **IS No:** IS/ISO 8559-1 : 2017

3. **Title:** Textiles — Size Designation of Clothes — Anthropometric Definitions for Body Measurement

4. **Date of review:** 09 August 2024

5. **Review Analysis**

i) Status of standard(s), if any from which assistance had been drawn in the formulation of this IS.

Standard (No. & Title)	Whether the standard has since been revised	Major changes	Action proposed
ISO 8559-1 : 2017 Size designation of clothes — Part 1: Anthropometric definitions for body measurement	Same Version	NA	NA

ii) Status of standards referred in the IS

Referred standards (No. & Title)	IS No. of this standards since revised	Changes that are of affecting the standard under review	Action proposed
NA	NA	NA	NA

iii) Any other standards available related to the subject & scope of the standard being reviewed (International/regional/other national/association/consortia, etc or of new or revision of existing Indian Standard)

Standard (No. & Title)	**Provisions that could be relevant while reviewing the IS**	**Action proposed**
NA	NA	NA

iv) Technical comments on the standard received, if any

Source	**Clause of IS**	**Comment**	**Action proposed**
NA	NA	NA	NA

v) Information available on technical developments that have taken place (on product/processes/practices/use or application/testing/input materials, etc)

Source	**Development**	**Relevant clause of the IS under review that is likely to be impacted (Clause & IS No.)**	**Action proposed**
NA	NA	NA	NA

vi) Issues arising out of changes in any related IS or due to formulation of new Indian Standard

Related IS and its Title (revised or new)	**Provision in the IS under review that would be impacted & the clause no. or addition of new clause/provision**	**Changes that may be necessary in the Standards under review**	**Action proposed**
NA	NA	NA	NA

vii) Any consequential changes to be considered in other IS

Related IS to get impacted	Requirements to be impacted
NA	NA

1. Recommendations:

Based on the above observations, the committee may reaffirm the standard for a further period of 5 years.