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BUREAU OF INDIAN STANDARDS

AGENDA

Wool, Wool Products and Textile Floor Coverings Sectional Committee, TXD 04 **29th Meeting**

Date	Time	Venue
14 November, 2024 (Thursday)	1100 h	Through videoconferencing

CHAIRMAN: Dr. D.B. Shakyawar, Director, ICAR-National Institute of Natural Fibre Engineering and Technology, Kolkata

MEMBER SECRETARY: Shri Himanshu Shukla, Scientist B, Textile Department

ITEM 0 WELCOME & INTRODUCTORY REMARKS

ITEM 1 CONFIRMATION OF THE MINUTES OF THE PREVIOUS MEETING

1.1 The minutes of the 28th meeting of TXD 04 held on 25 April 2024 through video conferencing were circulated vide BIS DG letter no. TXD 04/A2.28 dated 02 May 2024. No comments were received.

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

ITEM 2 SCOPE AND COMPOSITION OF TXD 04

2.1 The present scope and updated composition of the committee is given in **Annex 1** **(Pages 4-6).**

2.1.1 The Committee may **REVIEW.**

2.2 A co-option request has been received from Northern Railways, New Delhi. The details as received from Northern Railways, New Delhi are given in **Annex 2** **(Page - 07).**

2.2.1 The committee may **CONSIDER** and **DECIDE.**

ITEM 3 ISSUES ARISING OUT OF PREVIOUS MEETING OF TXD 04

3.1 Summary of actions taken on the various decision of the 28th meeting is given in **Annex 3** **(Pages 08-10).**

3.1.1 The Committee may **NOTE**.

ITEM 4 DRAFT STANDARD FOR FINALIZATION

4.1 As decided by the committee in the last meeting, the following draft standards were issued in wide circulation for a time period of two months, eliciting technical comments from stake holders dated 25 July 2024, with last date of comment on 23 September 2024:

i) Textiles Floor Coverings — State of the Art on Maintenance and Cleaning [Doc. No. (26145)]
ii) Textiles Floor Coverings — Blanketing Cloth — Specification [Doc. No. (26228)]
iii) Textiles Floor Coverings — Carpet Yarn Made from Pure New Wool — Specification [Doc. No. (26229)]

Draft standards as issued in wide circulation are given in **Annex 4** **(Pages 11-34).**

Comments have been received from Dr. Betty Dasgupta, IICT, Bhadohi, Shri Srinath Vanaparti, Welspun India Ltd., Hyderabad, Shri Mayank Jaiswal, Obeetee Pvt. Ltd., Bhadohi, Shri Aditya Das, BIS. Comments as received on the aforementioned drafts are given in **Annex 5** **(Pages 35 - 40).**

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

Item 5 R&D PROJECT UNDER TXD 04

5.1 An R&D project was awarded by BIS to Dr. Betty Dasgupta, IICT, Bhadohi on 'Study of constructional and performance requirements for handmade wool blended carpet used in floor covering applications and packaging practices of carpets. The date of award of project was 18 July 2024.

As per the R&D guidelines of BIS, second instalment to the extent of 50 percent of the approved estimated cost would be released on the submission of progress report along with the report on utilization of the 75 percent of the fund and acceptance of the same by the Sectional Committee.

The progress report, statement of expenditure and fund utilization certificate as received from Dr. Betty Dasgupta, IICT, Bhadohi are given in **Annex 6** **(Pages 41 - 53).**

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

6. REVIEW OF STANDARDS

6.1 In the last meeting, the committee decided that following standards shall be reviewed thoroughly by the experts of relevant field in today's context, to suggest suitable modification/changes in the text within 30 days. The word copies of the standards were circulated to all the committee members for their review and sharing their comments.

Sl. No.	IS Number	IS Title
1	IS 11206 : 1984	Glossary of textile terms — Wool and other animal fibres, their processing and products
2	IS 12811 : 1989	Worsted lohis — Specification
3	IS 12812 : 1989	Worsted shawls — Specification
4	IS 12838 : 1989	Blazer cloth — Specification
5	IS 14291 : 1995	Textiles — Woollen shoddy yarn — Specification
6	IS 14292 : 1995	Textiles — Shoddy woollen barrack blankets — Specification
7	IS 1530 : 1981	Specification for baize cloth (*second revision*)
8	IS 675 : 1973	Bunting, worsted
9	IS 677 : 1974	Drab cloth mixture, woollen, water-resistant
10	IS 741 : 1971	Code for inland packaging of woollen and worsted yarn and cloth

Comments were received from National Woollen & Finishers, Panipat, and are given in **Annex 7 (Pages 54 - 56).**

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

Item 7 ANY OTHER BUSINESS

ANNEX 1

(*Item* **2.1**)

Scope & Composition of Wool, Wool Products and Textile Floor Coverings Sectional Committee, TXD 04

Scope: To formulate Indian Standards for terminology, grading, packaging and specifications for wool, wool products and textile floor coverings.

Meetings held	Date and Place
26th Meeting	27 October 2023, (Video conferencing)
27th Meeting	12 January 2024, (Video conferencing)
28th Meeting	25 April 2024, (Video conferencing)

SL NO.	ORGANIZATION REPRESENTED	NAME OF THE REPRESENTATIVE PRINCIPAL/(ALTERNATE)	ATTEN DANCE
1.	**Chairman**	**Dr D B Shakyawar** ICAR - National Institute of Natural Fibre Engineering and Technology, Kolkata	3/3
2.	All India Carpet Manufacturers' Association, Bhadohi	Nomination awaited	0/0
3.	Carpet Export Promotion Council, New Delhi	Dr. Smita Nagarkoti (Shri Anuj Jangira)	3/3
4.	Central Silk Board, Bangalore	Dr. S. Periyasamy (Dr. Prakash N. Bhat)	3/3
5.	Central Wool Development Board, Jodhpur	Shri Anurag Purohit (Shri Ramesh Kumar Bundela)	3/3
6.	Crafts Development Institute, Srinagar	Director (CDI, Srinagar) (Dr. Hina Quazi)	3/3
7.	Department of Animal Husbandry, Jaipur	Dr. Praveen Kumar	3/3
8.	Directorate General of Quality Assurance, Ministry of Defence, Kanpur	Shri R. K. Boruah (Shri D. K. Pujari)	2/3
9.	Export Promotion Council for Handicraft, New Delhi	Shri Rajesh Rawat (Shri Deepesh Kumar Sharma)	0/0
10.	Ganga Acrowools Ltd., Ludhiana	Dr. Ravinder Verma	0/0

11.	ICAR - Central Sheep & Wool Research Institute, Avikanagar	Dr. Ajay Kumar (Dr. Vinod Kadam)	3/3
12.	Indian Institute of Carpet Technology, Bhadohi	Dr. (Smt) Betty Dasgupta (Prof. R. K. Malik)	3/3
13.	Indian Institute of Carpet Technology, Srinagar	Dr. Zubair Ahmad	3/3
14.	Indian Institute of Technology, Delhi	Prof. R. Chattopadhyay (Prof. Vijaykumar Narayandas Baheti)	2/3
15.	Intertek Private Limited, Gurgaon	Shri Hemant Parab (Shri Sanjay B Kumar)	3/3
16.	M/s Bikaner Woollen Mills Pvt. Ltd., Bikaner	Shri Shreyansh Bothra	2/3
17.	Khadi & Village Industries Commission, Mumbai	Shri S. K. Sinha (Shri S P Gupta)	0/3
18.	National Institute of Natural Fibre Engineering and Technology, Kolkata	Dr. Sanjay Debnath (Dr. Manik Bhoumick)	3/3
19.	National Woollen & Finishers, Panipat	Shri Suresh Singhal (Shri Aditya Singhal)	1/1
20.	Obeetee Pvt. Ltd., Bhadohi	Shri Makarand Mehndale (Shri Mayank Jaiswal)	3/3
21.	Office of the Development Commissioner (Handicraft), New Delhi	Ms. Pooja Venugopal (Shri Sandeep Kumar Patel)	3/3
22.	Office of the Textile Commissioner, Mumbai	Shri Sourabh Kulkarni (Shri Pranav Parashar)	3/3
23.	Raymonds Limited, Thane	Dr. Keshav Singh (Shri Rajeev Hichkad)	3/3
24.	Sher-e-Kashmir University of Agricultural, Sciences and Technology of Kashmir, Srinagar	Dr. Asif Hassan Sofi (Dr. Sheikh Rafi)	1/3
25.	TAHFUZ Society, Srinagar	Shri Rauf Wadera (Shri Mohammad Rafiq Sofi)	3/3
26.	Textiles Committee, Mumbai	Shri Govind Prakash (Shri Abhishekh Sharma)	3/3
27.	Welspun India Ltd., Hyderabad	Shri Srinath Vanaparti	3/3
28.	Wilton Weavers, Kerala	Smt. Malini Gautham (Shri Vinod Kumar)	1/1
29.	Wool & Woollens Export Promotion Council, New Delhi	Shri Suresh Thakur	1/3

30.	Wool Research Association, Thane	Shri Shishir Tyagi (Shri Mayur Basuk)	3/3

ANNEX 2

(*Item* **3.1**)

CO-OPTION REQUEST FROM NORTHERN RAILWAYS, NEW DELHI

Request for addition as Co-Op member in Blanket Committee TXD-04

Subject: Request for addition as Co-Op member in Blanket Committee TXD-04

Northern Railway had uundertaken 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 mill made blanket specification made by Northern Railway were given to BIS through email dated 02.11.2023 for standardization. This material is extensively used by Northem 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 Materials Manager	Chief Chief Manager	Dy. Chief Materials Manager
Email	cos@nr.railnet.gov.in	rajeshkumar3112@gov.in	sk.singh90@gov.in
Mobile No.	9839877637	9794935117	9411821896
Organization	Northern Railway	Northern Railway	Northern Railway

We have participated in every TXD-04 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 Blankets.

Regards

Sandeep Kumar Singh, IRSS

Dy. Chief Materials Manager

Northern Railway

ANNEX 3

(*Item* **3.1**)

SUMMARY OF ACTIONS TAKEN ON THE DECISIONS TAKEN IN THE LAST AND PREVIOUS MEETING

Item No.	Decision	Action taken
2.1	Scope and Composition of TXD 04	Updated composition of TXD 04 is given in Annex 1.
4.1	**DRAFT STANDARD FOR FINALIZATION** In the last meeting the committee finalized the wide circulation draft on 'Textiles — Wool/Polypropylene and Wool/Nylon Blended Blankets — Specification' for publication after incorporating the changes mentioned under 4.1 to the minutes.	Published as IS 12848 : 2024
5.1	**WORKING DRAFT ON HANDMADE PASHMINA CARPET FOR P-DRAFT APPROVAL** In the last meeting, the committee decided to circulate the preliminary draft on 'Handmade Pashmina Carpet' to all committee members for 15 days to eliciting technical comments.	To be circulated.
6.1	**INTERNATIONAL ACTIVITIES** In the last meeting, the committee decided to wide-circulate the draft on 'ISO/TS 21868 : 2023 Textile Floor Coverings — State of the Art on Maintenance and Cleaning' to all committee members for two months.	The draft was issued in wide circulation for a time period of two months. Coming for discussion under Agenda item 4.1.
7.1	**NEW WORK ITEM PROPOSALS** The committee considered the new work item proposal on Broadloom Wool Carpet along with the inputs/technical data sheet received from Wilton Weavers, Kerala. After detailed deliberation, the committee decided to constitute a panel with the following composition to prepare the working draft on the aforementioned subject:	Inputs were received from Wilton Weavers, the inputs were discussed in the panel meeting held on 18 July 2024. The working draft yet to be prepared by the panel.

	i) Dr. Betty Das Gupta, IICT Bhadohi **(Convenor)** ii) Shri Srinath Vanaparti, Welspun Flooring Ltd. Hyderabad iii) Shri Mayur Basuk, Wool Research Association, Thane iv) Shri Makarand Mehndale, Obeetee Pvt. Ltd, Bhadohi v) Shri Ajay Kumar, CSWRI, Avikanagar vi) Shri Himanshu Shukla, BIS The committee further requested Wilton Weavers, Kerala to share the detailed test results, raw material requirements etc. covering all the varieties of broadloom wool carpets for discussion/deliberation in the panel meeting.	
7.2	In the last meeting, the committee considered the list of following new subjects on textile floor coverings identified during a consultative meeting organized with standardization cell of Ministry of Textiles and officials of Ministry of Home Affairs for framing Rolling Annual Action Plan 2024-25 on Friday, 01 March 2024 through videoconferencing: i) Polyamide carpet and floor covering with special finishes like anti- soil, anti-microbial, anti-odor, anti- stain, anti-static ii) Polyamide carpet and floor covering with special finishes like water repellent iii) Polyamide carpet and floor covering with fire-retardant properties iv) Polyester carpet and floor covering with special finishes like anti- soil, anti-microbial, anti-odor, anti- stain, anti-static v) Polyester carpet and floor covering with special finishes like water repellent vi) Polyester carpet and floor covering with fire-retardant properties vii) Polypropylene carpet and floor covering with special finishes like anti-soil, anti-microbial, anti- odor, anti-stain, anti-static	A meeting of panel was held on 18 July 2024 to discuss the issue. Inputs are awaited for discussion in the next panel meeting.

	viii) Polypropylene carpet and floor covering with special finishes like water repellent ix) Polypropylene carpet and floor covering with fire-retardant properties x) Polyamide carpet and floor covering with special finishes like UV stabilizer and heat resistant xi) Polypropylene carpet and floor covering with special finishes like UV stabilizer and heat resistant xii) Polyethylene carpet and floor covering with special finishes like UV stabilizer and heat resistant After deliberation, the committee decided to refer the above subjects to panel constituted under item 7.1 to discuss and suggest the possible inclusion of subject/varieties in the following existing standards: a) IS 17478 : 2020 Wall to Wall Carpets Made of Polyamide (Nylon) Yarn b) IS 17479 : 2023 Carpet Tiles Made of Synthetic Yarn c) IS 18158 : 2023 Artificial Grass Carpet made of Synthetic Yarn for Landscape	
8.1	**REVIEW OF STANDARDS** In line with the decision of the committee, the word copies of the pre-2000 standards were circulated to all the committee members for their review and sharing their comments.	Coming for discussion under Agenda Item **6.1**.

ANNEX 4
(*Item* **4.1**)

WIDE CIRCULATION DRAFTS

Doc: TXD 04 (26145) WC
July 2024

भारतीय मानक ब्यूरो

BUREAU OF INDIAN STANDRADS

DRAFT FOR COMMENTS ONLY

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भारतीय मानक मसौदा

वस्त्रादि फर्श आवरण – रखरखाव और सफाई पर अत्याधुनिक विधियाँ

Draft Indian Standard

Textile Floor Coverings — State of the Art on Maintenance and Cleaning

ICS 97.150

Wool, Wool Products and Textile Floor Coverings Sectional Committee, TXD 04	Last date for receipt of comments is 23 September 2024

NATIONAL FOREWORD

(Formal clauses will be added later)

This Indian Standard intended to be adopted is identical with ISO/TS 21868 : 2023 ‘Textile floor coverings — State of the art on maintenance and cleaning’ issued by the International Organization for Standardization (ISO).

The text of ISO standard has been approved as suitable for publication as Indian Standard without deviations. Certain conventions are however not identical to those used in Indian Standards.

Attention is particularly drawn to the following:

a) Wherever the words 'International Standard' appears referring to this standard, they should be read as `Indian Standard'.
b) Comma (,) has been used as a decimal marker while in Indian Standards, the current practice is to use a point (.) as the decimal marker.

In reporting the result of a test or analysis made in accordance with this standard, if the final value, observed or calculated, is to be rounded off, it shall be done in accordance with IS 2 : 2022 'Rules for rounding off numerical values (second revision)'.

Extract of ISO/TS 21868:2023 'Textile floor coverings — State of the art on maintenance and cleaning'

Foreword

This second edition cancels and replaces the first edition (ISO/TS 21868:2021), which has been technically revised.

The main changes are as follows:

i) clarifications to the terms and definitions were added;

ii) clarifications to the requirements were added;

iii) Table 1 "Fibre identification burn test" was deleted.

Introduction

This document is designed for legislators, related enterprise associations, textile floor coverings manufacturers, and textile floor covering maintenance and cleaning enterprises to develop their own specific textile floor covering maintenance or/and cleaning standards or procedures in accordance with the local conditions. Due to diversity of different regions in climates, customs and developing levels in the world, it is extremely difficult to create a specific textile floor covering maintenance and cleaning standard as a template which is globally workable. In addition, the factors which impact the result of cleaning are so abundant and the combinations of these factors are so tremendous that particular programmes are necessary to acquire the best result of textile floor covering cleaning.

This guidance standard manages to list all the factors which affect the final results of cleaning, against which legislators, relative enterprises associations and textile floor covering maintenance and cleaning enterprises are able to establish the above-mentioned particular programmes (procedures or criteria) in their standards accordingly. Therefore, this standard is not intended to be used by end-users to perform any specific maintenance and cleaning jobs.

This comprehensive guidance standard is intended to pave the way for legislators and related enterprise associations to establish specific standards for:

i) regulating the development of the textile floor covering cleaning industry,

ii) promoting the development of the textile floor covering cleaning detergent and equipment industry,

iii) improving textile floor covering cleaning techniques, and

iv) improving sales of textile floor coverings,

since specific textile floor covering maintenance and cleaning standards are still absent in most nations.

NOTE — The term "textile floor coverings" applies to wall-to-wall carpets, broadloom carpets, rugs, mat and tile carpets.

1 Scope

This document gives guidelines for the development of specific textile floor covering maintenance and cleaning standards, procedures and criteria to reflect local specific conditions. This document specifies the factors which will impact the final results of textile floor covering cleaning, defining maintenance and cleaning terms to highlight differences. It establishes textile floor covering maintenance and cleaning as achieving a low-cost, non-residue and environmentally friendly cleaning under the premise of maximizing the use value of textile floor covering.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

i) ISO Online browsing platform: available at https://www.iso.org/obp

ii) IEC Electropedia: available at https://www.electropedia.org/

3.1 Soil

Any matter that is foreign to the construction of the textile floor covering
Note 1 to entry: Soil includes spill, spot, stain, and residue.

3.2 Spill

Wet, dry, oily or combination states of matter that are accidentally deposited on the textile floor covering

Note 1 to entry: Depending on the composition of the spill, quick response time and cleaning procedures can assist in minimizing the probability of a spill becoming a spot or a stain.

3.3 Spot

Foreign material on the surface of a fibre, usually changing the texture of the fibre

EXAMPLE:

Sticky, oily, greasy, stiff.

Note 1 to entry: Spots can usually be removed. However, some spots, if left untreated for too long, can become stains.

3.4 Stain

Indication of the addition of colour, frequently in liquid or pigment form that has been strongly attracted to the textile floor covering fibre

Note 1 to entry: This added dye or pigment can bind to a dye site and actually alter the structure of the fibre. Not all stains respond positively to removal efforts.

3.5 Residue

The foreign materials left in the cleaned textile floor coverings, which is originated from the detergents

3.6 Interim cleaning

Removal of topical appearance soil from textile flooring and return of the textile floor covering to a dry and usable state within a short period of time

3.7 Restorative cleaning

Thorough removal of soil both on the textile floor covering surface and embedded within the textile floor covering construction

FORMAT FOR SENDING COMMENTS ON BIS DOCUMENTS

(Please use A4 size sheet of paper only and type within fields indicated. Comments on each clause/sub clause/table/fig etc. be started on a fresh box. Information in column 3 should include reasons for the comments and suggestions for modified working of the clauses when the existing text is found not acceptable. Adherence to this format facilitates Secretariat's work)

Please e-mail your comments to txd@bis.gov.in or faxed on 011-23231282.

NAME OF THE COMMENTATOR/ORGANIZATION:
DOCUMENT NO: TXD 04 (26145)

Item, Clause Sub-Clause No. Commented upon (Use Separate Box afresh)	**Comments**	**Specific Proposal (Draft clause to be add/amended)**	**Remarks**	**Technical References and justification on which (2), (3), (4) are based**
(1)	**(2)**	**(3)**	**(4)**	**(5)**

Doc. No: TXD 04 (26228) WC
July 2024

भारतीय मानक ब्युरो

BUREAU OF INDIAN STANDARDS

DRAFT FOR COMMENTS ONLY

भारतीय मानक मसौदा

वस्त्रादि – कंबल बनाने का कपड़ा – विशिष्टि

(IS 1531:1993 *का तीसरा पुनरीक्षण)*

Draft Indian Standard

Textiles — Blanketing Cloth — Specification

(Third Revision of IS 1531:1993 *)*

ICS 59.080.30

Wool, Wool Products and Textile Floor Covering Sectional Committee, TXD 04	Last date for receipt of comment is **23 September 2024**

FOREWORD

(Formal clauses will be added later)

The present revision has been made in the light of experience gained since its last revision and to incorporate the following major changes:

a) Scope of the standard has been modified to define the varieties;
b) Amendment No. 1 has been incorporated in the standard;
c) References to Indian Standard given in Annex A has been updated;
d) Requirement for yarn used in the manufacturing of cloth has been modified to exclude the usage of any admixture of non-woollen fibre;
e) Cloth weave as 2/2 twill has been specified;
f) Use of mothproofing chemicals for example; permethrin, bifenthrin, chlorofenapyr, sulcofuran, fibronil or any suitable chemicals has been specified;
g) Length and width of the cloth has been modified to keep it as per agreement between buyer and seller in addition to the specified values;

h) Requirement for colour fastness to rubbing, pilling resistance and pH value have been specified;
i) Marking and Sampling clauses have been modified; and
j) Packaging clause has been modified.

1 SCOPE

1.1 This standard prescribes the constructional particulars and other requirements of two varieties of blanketing cloth.

a) *Variety* 1 — For its use as insulating lining material;
b) *Variety* 2 —For its use in making coats, coarse rugs and covers for tank mules.

1.2 This standard does not specify the indeterminable characteristics like general appearance, feel, finish and shade of cloth (*see* also **6**).

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 these standards.

3 TERMINOLOGY

For the purpose of this standard, the definitions as given in IS 11206 shall apply.

4 MANUFACTURE

4.1 Yarn

The yarn used in the manufacture of the cloth shall be free from admixture of non-woollen fibre and shall be such that the cloth produced complies with the requirements of this standard. The particulars regarding the grade of wool fibres, count of yarn and finish for the manufacture of cloth are given in Table 1.

4.2 Cloth

4.2.1 The cloth shall be woven in a 2/2 twill weave. It shall be shall be milled, and given raised finish.

4.2.2 The cloth shall be clean, scoured and free from grease, soap, filling or any other admixture which might give fictitious mass, substance or firmness. The cloth shall be uniformly woven with firm selvedges.

4.2.3 The wool fibres shall be of natural colour and may be brown, grey or a mixture of brown and grey as agreed to between the buyer and the seller.

4.2.4 The cloth shall be manufactured using stock-dyed wool and may be piece dyed to an agreed shade; if made from natural white fibre. Material other than wool fibres up to 5 percent may be used to provide a decorative or ornamentation effect (*see* IS 1793).

4.2.5 *Freedom from Defects*

The cloth when visually examined both against light and on a surface shall not have more than one objectionable flaw per 8 m length. The objectionable flaws shall be those which strike immediately the eyes of the person examining the cloth and shall be deemed to include:

a) missing ends and picks;
b) floats;
c) cuts and holes;
d) stains;
e) weft bars and warp section marks;
f) big slubs, knots and specks;
g) dyeing defects (streaks, patches, etc.); and
h) thick and thin places.

4.2.5.1 All objectionable flaws shall be marked by means of a thread sewn in the selvedge opposite the flaw, and an allowance of 10 m shall be given for each such flaw. Only one selvedge shall be used for tagging.

4.2.5.2 A reference may be made to IS 4125 for details of these defects.

4.2.6 *Moth-proofing*

The cloth packages shall be rendered moth-proof with permethrin, bifenthrin, chlorofenapyr, sulcofuran, fibronil or otherwise by any suitable chemicals which will not have toxic effect on human body. The manufacturer shall declare the mothproofing chemicals used, its minimum residual content and the method of test for determining the same.

5 REQUIREMENTS

The constructional particulars and other requirements of the cloth shall conform to those given in Table 1.

6 SEALED SAMPLE

6.1 If, in order to illustrate or specify the general appearance, feel, shade and finish, etc, of cloth, a sample has been agreed upon and sealed, the supply shall be in conformity with the sample in such respects.

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

Table 1 Constructional Particulars and Other Requirements of Blanketing Cloth
(*Clause*s 4.1 *and* 5)

Sl. No.	Characteristics	Requirement		Tolerance	Method of Test, Ref to
		Variety 1	Variety 2		
i)	Finess/Grade of Wool	44s	44s	-	IS 5910
ii)	Approximate count of basic yarn, tex (nm), *see* Note 1				IS 10014 (Part 2)
	a) Warp	400 (2.5)	500 (2.0)	-	
	b) Weft	400 (2.5)	500 (2.0)	-	
iii)	Ends/dm	60	60	± 5 percent	IS 1963
iv)	Picks/dm	70	65	± 5 percent	IS 1963
v)	Mass, g/m^2	490	745	± 5 percent	IS 1964
vi)	Breaking strength on 15 cm × 20 cm strip, N, *Min*			-	IS 1969 (Part 1)
	a) Warpway	660	470	-	
	b) Weftway	980	780	-	
vii)	Length, m (*see* Note 2)	36 or as agreed	36 or as agreed	- 1 percent	IS 1954
viii)	Width, m (Exclusive of Selvedges)	140 or as agreed	140 or as agreed	- 1 percent	IS 1954
ix)	Weave type	2/2 twill	2/2 twill	-	Visual
x)	Relaxation shrinkage, percent, *Max*			-	IS 665
	a) Warp way	4.0	4.0		
	b) Weft way	4.0	4.0		
xi)	Colour fastness to (in case of dyed cloth)				
	a) Light	4 or better	4 or better	-	IS/ISO 105-B02
	b) Washing			-	IS/ISO 105-C10
	i) Change in colour of test specimen	4 or better	4 or better	-	

	ii) Staining on adjacent fabric	4 or better	4 or better	-	
	c) Rubbing			-	IS/ISO 105-X12
	i) Dry rubbing	4 or better	4 or better	-	
	ii) Wet rubbing	3 or better	3 or better	-	
	d) Dry cleaning			-	IS/ISO 105-D01
	i) Change in colour of test specimen	4 or better	4 or better	-	
	ii) Staining on solvent	4 or better	4 or better	-	
xii)	Pilling resistance (1000 cycles)	3 or better	3 or better	-	IS 10971 (Part 1)
xiii)	Loss in weight, percent, *Max*	4	4		IS 4390
xiv)	*p*H value of aqueous extract	5-7	5-7	-	IS 1390

Notes
1 The approximate count of basic yarn is given for guidance only.
2 The number of short length pieces (measuring not less than 10 m) shall not exceed 5 percent of the total number of pieces in the lot.

7 MARKING

7.1 The cloth shall be marked with the followings:

a) Manufacturer's name, initials or trade-mark, if any;
b) Batch /lot number;
c) Description of the cloth, that is, ‘wool percent’, ‘length and width of the piece’.;
d) Net mass of the package;
e) Month and year of manufacture;
f) If desired by the buyer, the words ‘Treated for Moth-Resistance’; and
g) Any other information/instruction provided by the manufacture/required under law.

7.2 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 product(s) may be marked with the Standard Mark.

8 PACKING

The cloth shall be packed securely so as to allow normal handling and transport without tearing and exposing the contents. The yarn may be supplied in hanks, cones or cheeses as agreed to between the buyer and the seller and packed in suitable packaging material. Details of the packing shall be as agreed to between the buyer and the seller.

9 SAMPLING

9.1 Lot — The quantity of the cloth of the same variety, manufactured from the same quality of raw wool and delivered to the buyer against one dispatch note shall constitute a lot.

9.2 Unless otherwise agreed between the buyer and the seller, the number of pieces to be selected at random shall be in accordance with col 3 and col 5 of Table 2. To ensure randomness of selection IS 4905 may be used.

9.3 Number of Test Specimens and Criteria for Conformity:

Number of test specimens and criteria for conformity shall be as given in Table 3.

Table 2 Sample Size and Criteria for Conformity
(*Clause* 9.2)

Sl No.	Lot Size	Sample Size	Permissible Number of Non-Conforming Pieces	Sub-sample Size
(1)	(2)	(3)	(4)	(5)
i)	Up to 50	3	0	2
ii)	51 to 150	5	0	2
iii)	151 to 300	8	1	3
iv)	301 to 500	13	2	5
v)	501 and above	20	5	3

Table 3 Number of Tests and Criteria for Conformity
(*Clause* 9.3)

Sl No.	Characteristics	Number of Samples	Criteria for Conformity
(1)	(2)	(3)	(4)
i)	Ends, picks, mass, width, visual defects and weave	According to co1 3 of Table 4	Number of non-conforming pieces shall not exceed the corresponding

			number given in column 4 of Table 2.
ii)	Length, breaking strength, relaxation shrinkage, blend composition, colour fastness ratings, mothproofing and *p*H value of aqueous extract, pilling resistance	According to co1 5 of Table 4	-do-
iii)	All other requirements	According to co1 4 of Table 4	All the test pieces shall meet the requirement

ANNEX A

(*Clause* 2)

LIST OF REFERRED INDIAN STANDARDS

IS No.	*Title*
IS 665 : 1989	Textiles — Determination of dimensional changes of fabrics containing wool on soaking in water (*first revision*)
IS 1390 : 2022	Textiles — Determination of *p*H 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 4390 : 2001	Textiles — Method for estimation of solvent soluble matter in textile material (*first revision*)
IS 5910 : 2023	Fineness grades of wool (*second revision*)
IS 10014 (Part 2) : 1981	Methods of tests for man-made staple fibres Part 2 Determination of linear density
IS 10971 (Part 1) : 2022	Textiles — Determination of fabric propensity to surface pilling fuzzing or matting Part 1: Pilling box method (*second revision*)
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-C10 : 2006	Textiles — Tests for colour fastness Part C10 Colour fastness to washing with soap or soap and soda
IS/ISO 105 - X12 : 2016	Textiles — Tests for colour fastness Part X12 Colour fastness to rubbing (*first revision*)
IS/ISO 105 – D 01 : 2010	Textiles — Tests for colour fastness Part D01 Colour fastness to drycleaning using perchloroethylene solvent

IS 1954 : 2024 / ISO 22198 : 2006	Textiles — Fabrics — Determination of width and length (*third revision*)
IS 1969 (Part 1) : 2018 / ISO 13934-1	Textiles — Tensile properties of fabrics Part 1 Determination of maximum force and elongation at maximum force using the strip method (*fourth revision*)
IS 4905 : 2015 / ISO 24153 : 2009	Random sampling and randomization procedures (*first revision*)

FORMAT FOR SENDING COMMENTS ON BIS DOCUMENTS

(Please use A4 size sheet of paper only and type within fields indicated. Comments on each clause/sub clause/table/fig etc. be started on a fresh box. Information in column 3 should include reasons for the comments and suggestions for modified working of the clauses when the existing text is found not acceptable. Adherence to this format facilitates Secretariat's work)

Please e-mail your comments to txd@bis.gov.in or faxed on 011-23231282.

NAME OF THE COMMENTATOR/ORGANIZATION:
DOCUMENT NO: TXD 04 (26228)

Item, Clause Sub-Clause No. Commented upon (Use Separate Box afresh)	**Comments**	**Specific Proposal (Draft clause to be add/amended)**	**Remarks**	**Technical References and justification on which (2), (3), (4) are based**
(1)	**(2)**	**(3)**	**(4)**	**(5)**

Doc. No: TXD 04 (26229) WC
July 2024

भारतीय मानक ब्युरो

BUREAU OF INDIAN STANDARDS

DRAFT FOR COMMENTS ONLY

भारतीय मानक मसौदा

वस्त्रादि — शुद्ध नए ऊन से निर्मित कालीन धागा — विशिष्टि

(IS 10921:1984 *का पहला पुनरीक्षण)*

Draft Indian Standard

Textiles — Carpet Yarn Made from Pure New Wool — Specification

(First Revision of IS *10921:1984)*

ICS 59.080.20

Wool, Wool Products and Textile Floor Covering Sectional Committee, TXD 04

Last date for receipt of comment is **23 September 2024**

FOREWORD

(Formal clauses will be added later)

The present revision has been made in the light of experience gained since its publication and to incorporate the following major changes:

k) Title of the standard has been modified to substitute the ‘pure new wool’ for ‘virgin wool’ in line with the latest practices;
l) Scope of the standard has been modified;
m) References to Indian Standard given in Annex A has been updated;
n) Requirement for invoice mass has been modified and provision has been made to keep it as per agreement between buyer and seller in addition to specified value;
o) Requirements for colour fastness to shampooing and abrasion resistance have been added;
p) Provision has been made for the use of permethrin, bifenthrin, chlorofenapyr, sulcofuran, fibronil or otherwise any suitable chemicals as mothproofing agent;
q) Terminologies given in the standard have been modified;
r) Marking and Sampling clauses have been modified; and
j) Packaging clause has been modified.

1 SCOPE

This standard prescribes the manufacturing details and other requirements of yarn manufactured using pure new wool and used for the piles or tufts of carpets.

2 REFERENCE

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 these standards.

3 MANUFACTURE

The yarn shall be evenly spun from pure new wool having minimum fibre length of 45 mm and of hairiness grade III or better and fineness grade D or better when measured as per the method given in Annex B. The yarn shall also be fully scoured.

4 TERMINOLOGY

4.1 Wool Yarn — Woollen, semi-worsted, worsted spun yarn or hand spun, hand carded or felted yarns.

4.2 Metric count — Number of 1 000 metres hanks in, one kilogram.

4.3 Tex — Mass of 1000 metres of yarn in grams.

5 REQUIREMENTS

5.1 The carpet yarn made from virgin wool shall meet the requirements given in Table 1.

Table 1 Requirements for Wool Carpet Yarn
(*Clauses* 5.1 *and* 8.4)

Sl No.	Characteristic	Requirement	Method of Test, Ref to
(1)	(2)	(3)	(4)
(i)	Count of yarn, tex (metric count)	As declared ± 10 percent	IS 681
(ii)	Fibre length, mm, *Min*	45	IS 1377
(iii)	Fibre:		Annex B
	a) Hairiness grade b) Fineness grade	Between I and III Between A and D	
iv)	Twist		
iv)	a) Direction of twist, plied yarn b) Twist factor (*see* Note 1) 1) Single yarn 2) Plied yarn	Opposite to the direction of twist in single yarn As agreed between the buyer and the seller ±5 -do-	IS 832 (Part 1)
v)	Wool content, percent, *Min*	99	IS 8476
vi)	Extractable matter, percent, *Max*	1.0	IS 4390
vii)	Invoice mass	Shall conform to the correct invoice mass calculated at 17 percent commercial regain or as agreed between buyer and seller	IS 4902
viii)	Abrasion resistance (Weight loss after 1000 cycles), mg, *Max*	70	IS 12673 (Part 3)
ix)	Colour fastness to (for dyed yarn)		
	a) Light	4 or better	IS/ISO 105-B02
	b) Washing		IS/ISO 105-C10
	i) Change in colour of test specimen	4 or better	
	ii) Staining on adjacent fabric	4 or better	

	c) Rubbing		IS/ISO 105-X12
	i) Dry rubbing	4 or better	
	ii) Wet rubbing	3 or better	
	d) Shampooing		IS 11969
	i) Change in colour of test specimen	4 or better	
	ii) Staining on adjacent fabric	3 or better	

NOTE — Twist factor can be calculated as below by using turns per metre and linear density:

$$Twist\ Factor\ = \frac{Turns\ per\ metre}{100} \times \left(\sqrt{linear\ density\ in\ tex}\right)$$

6 PACKING

The yarn shall be packed securely so as to allow normal handling and transport without tearing and exposing the contents. The yarn may be supplied in hanks, cones or cheeses as agreed to between the buyer and the seller and packed in suitable packaging material. Details of the packing shall be as agreed to between the buyer and the seller.

7 MOTHPROOFING

The yarn packages shall be rendered moth-proof with permethrin, bifenthrin, chlorofenapyr, sulcofuran, fibronil or otherwise by any suitable chemicals which will not have toxic effect on human body. The manufacturer shall declare the mothproofing chemicals used, its minimum residual content and the method of test for determining the same.

8 MARKING

8.1 Each yarn package shall be marked with the followings:

h) Manufacturer's name, initials or trade-mark, if any;
i) Batch /lot number;
j) Description of yarn, that is, ‘carpet yarn made from pure new wool’;
k) Count of yarn;
l) Net mass of the package;
m) Month and year of manufacture;
n) If desired by the buyer, the words ‘Treated for Moth-Resistance’; and
o) Any other information/instruction provided by the manufacture/required under law.

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 product(s) may be marked with the Standard Mark.

9 SAMPLING AND CRITERION FOR CONFORMITY

9.1 Lot — The quantity of the carpet yarn of the same count and composition, manufactured from the same quality of raw wool and delivered to the buyer against one dispatch note shall constitute a lot.

9.2 Unless otherwise agreed between the buyer and the seller, the number of pieces to be selected at random shall be in accordance with col 1 and col 2 of Table 2. To ensure randomness of selection IS 4905 may be used.

9.3 Number of Test Specimens and Criteria for Conformity:

Number of test specimens and criteria for conformity shall be as given in Table 3.

Table 2 Sample Size and Criteria for Conformity
(*Clause* 9.2)

Sl No.	No. of Bales or Cases in the Lot	No. of Bales or Cases to be Selected	Permissible Number of Non-conforming Bales of Cases	Sub-sample Size
(1)	(2)	(3)	(4)	(5)
vi)	Up to 50	3	0	2
vii)	51 to 150	5	0	2
viii)	151 to 300	8	1	3
ix)	301 to 500	13	2	5
x)	501 and above	20	5	3

Table 3 Number of Tests and Criteria for Conformity
(*Clause* 9.3)

Sl No.	Characteristics	Number of Samples	Criteria for Conformity
(1)	(2)	(3)	(4)
i)	Fiber length, yarn count, fibre fineness, fibre hairiness, wool content, extractable matter, invoice mass, colour fastness (for dyed yarn), abrasion resistance	According to col 3 of Table 3	Number of non-conforming pieces shall not exceed the corresponding number given in column 4 of Table 2.

ii)	All other requirements	According to col 5 of Table 3	All the test pieces shall meet the requirement

ANNEX A

(*Clause* 2.1)

LIST OF REFERRED INDIAN STANDARDS

IS No.	*Title*
IS 681 : 2015	Textiles — Methods for determination of universal count of woollen and worsted yarn (*first revision*)
IS 1377 : 1971	Method for determination of mean fibre length of wool (*first revision*)
IS 4390 : 2001	Textiles — Method for estimation of solvent soluble matter in textile material *(first revision*)
IS 4902 : 1981	Method for determination of correct invoice weight of all wool materials (*first revision*)
IS 5910 : 2023	Fineness grades of wool (*second revision*)
IS 5911 : 2023	Fineness grades of wool tops (*second revision*)
IS 8476 : 1977	Method for determination of wool content in woollen textile materials
IS 12673 (Part 3) : 2014/ ISO 12947-3:1998	Textiles — Determination of the abrasion resistance of fabrics by the Martindale method Part 3 Determination of mass loss (*first revision*)
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-C10 : 2006	Textiles — Tests for colour fastness Part C10: Colour fastness to washing with soap or soap and soda
IS/ISO 105-X12 : 2016	Textiles — Tests for colour fastness Part X12: Colour fastness to rubbing (*first revision*)
IS 832 (Part 1) : 2021 / ISO 2061:2015	Textiles — Determination of twist in yarns Part 1 Direct counting method (*third revision*)
IS 4905 : 2015/ ISO 24153 : 2009	Random sampling and randomization procedures (*first revision*)
IS 11969 : 2020 ISO 18168 : 2020	Textile floor coverings — Colour fastness to shampooing (*first revision*)

ANNEX B

(*Clause* 3, Table 1)

METHOD FOR DETERMINATION OF HAIRINESS AND FINENESS GRADE OF WOOL FIBRE

B-1 GENERAL

This method specifies the quality grades of undyed medullated wools on the basis of their hairiness and the distribution of coarse fibres.

B-2 PRINCIPLE

The determination of grades of undyed medullated wools involves drawing and conditioning a representative sample, preparing slides, and examining fibers under a microscope. Fibers are categorized and counted to determine hairiness and coarseness distribution. Grades are then assigned based on these parameters.

B-3 GRADES OF UNDYED MEDULLATED WOOL

The specifications for various grades of undyed medullated wools are defined in Table 4.

Table 4 Fineness Grades of Undyed Medullated Wools on the Basis of Hairiness and Fibre Distribution

(*Clause* B-3)

Sl. No. (1)	**Hairiness Grade** (2)	**Maximum Hairiness Permissible (percent Hairy Fibres)** (3)	**Fineness Grade** (4)	**Fibre Distribution Permissible Limit: Percentage Fibres by Count** (5)		
				Below 40 µm *Min*	Below 60 µm *Min*	Below 80 µm *Min*
i)	I	20.0	A	70.0	-	1.0
ii)	II	35.0	B	60.0	-	3.0
iii)	III	45.0	C	-	90.0	5.0
iv)	IV	60.0	D	-	85.0	10.0
v)	V	70.0	E	-	80.0	15.0

B-4 METHOD OF TEST

B-4.1 Sampling and Preparation of Specimens — Draw a representative sample of wool, sliver or products made therefrom. Prepare test specimen as described in **7.2** of IS 744.

B-4.2 Condition the test specimen as described in **4.1** of IS 744.

B-5 PREPARATION OF SLIDES

B-5.1 Prepare slides by following the procedure as given in **8** of IS 744 and cover them with cover slips. Commence measurement after 30 minutes. Avoid the use of excessive mounting medium as it has a tendency to penetrate the medulla and impart the appearance of a true wool fibre to hairy fibres in course of time.

B-6 PROCEDURE

B-6.1 Examine the slides with the aid of a suitable projection microscope as defined in **5.1** and **9.1** of IS 744 at a magnification of 250 instead of 500.

B-6.2 Identify fibres projected on the entire screen and group them into two categories, namely: (a) hairy fibres, and (b) true plus heterotype fibres as illustrated in Fig. 1 and as defined in 2 above. Enter the data as illustrated in Table 5.

B-6.3 Count the fibres projected on the inner circle. Then measure and record the number or fibres above the stipulated limit of coarseness as illustrated in Table 5 by following the measurement technique as given in **9.1**, **9.2** and **9.3** of IS 744.

B-6.4 At least 5000 fibres should be examined for determining the percentage of hairy fibres according to **B-6.2** above (that is over 500 fibres per slide) and 2000 fibres should be examined according to **B-6.3** above for finding out the distribution of coarse fibres. In actual practice, this takes a lesser time than measuring the actual fibre fineness of 1000 fibres according to IS 744.

B-6.5 Calculate the grade according to hairiness and also according to the distribution of coarser fibres.

B-6.6 Care should be taken to ensure that the representative sample is cut once only; and under no circumstances the multiple cuts of the same sample should be included. In other words, the same fibre should not be measured twice.

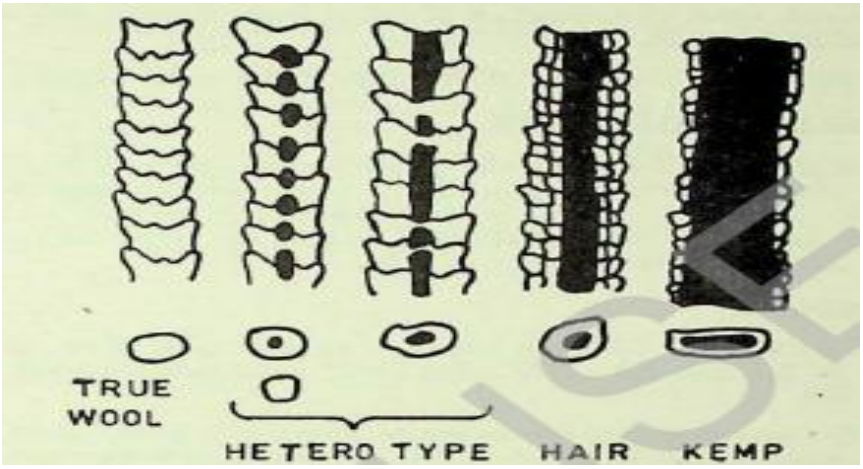

FIG. 1 CLASSIFICATION OF WOOL FIBRES ACCORDING TO MEDULLATION

Table 5 Example of the Record of Hairiness and Distribution of Coarse Fibres
(*Clause* B-6.2 *and* B-6.3)

Sl. No. **(1)**	**Fibre Appearance in Full Screen**			**No. of Fibres on the Inner Circle** **(3)**			
	No. of True Wool + Heterotype Fibres **(2)**	No. of Hairy Fibres **(3)**	Total No. of Fibres Viewed **(4)**	Below 40 µm **(5)**	40 to 60 µm (excluding 60 µm) **(6)**	Above 80 µm **(7)**	Total No. of Fibres Viewed **(8)**
1	15	2	17	2	0	0	3
2	22	7	29	3	1	1	6
3	10	1	11	3	1	0	5
4	7	3	10	2	0	0	3
5	18	4	22	4	2	0	7
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n	32	7	39	8	3	0	13
Total	+160	860	5020	1461	436	52	2180
percentage	82.9	17.1	100	67.0	20	2.4	100
Grade Assigned	I			B			

B-7 Assignment of Grade

B-7.1 Compare percentage of hairy fibres and assign grades I to V as specified in Table I.

B-7.2 Compare fibre distribution and assign grades A to E, whichever is higher according to fibres below 40 μm or 60 μm or above 80 μm. Fibres above 80 μm are usually kemps.

B-7.2.1 A few typical examples illustrating the assignment of grades are given below:

Example 1

Percentage of hairy fibres	16.8
Percentage of fibres below 40 μm	73.0
Percentage of fibres above 80 μm	0.3
GRADE ASSIGNED	I-A

Example 2

Percentage of hairy fibres	33.5
Percentage of fibres below 40 μm	68.0
Percentage of fibres above 80 μm	4.7
GRADE ASSIGNED	II-C

Example 3

Percentage of hairy fibres	49.7
Percentage of fibres below 60 μm	91.3
Percentage of fibres above 80 μm	2.5
GRADE ASSIGNED	IV-C

Example 4

Percentage of hairy fibres	3.8 (*see* note)
Percentage of fibres below 40 μm	69.0
Percentage of fibres above 80 μm	0.1
GRADE ASSIGNED	I-B

NOTE — Since the hairiness is low, that is, below 5 percent, this wool may be further assessed according to IS 5910 or IS 5911 depending upon whether wool or wool top; for assigning specific fineness grades for example 565, 485, 365, etc.

FORMAT FOR SENDING COMMENTS ON BIS DOCUMENTS

(Please use A4 size sheet of paper only and type within fields indicated. Comments on each clause/sub clause/table/fig etc. be started on a fresh box. Information in column 3 should include reasons for the comments and suggestions for modified working of the clauses when the existing text is found not acceptable. Adherence to this format facilitates Secretariat's work)

Please e-mail your comments to txd@bis.gov.in or faxed on 011-23231282.

NAME OF THE COMMENTATOR/ORGANIZATION:
DOCUMENT NO: TXD 04 (26229)

Item, Clause Sub-Clause No. Commented upon (Use Separate Box afresh)	Comments	Specific Proposal (Draft clause to be add/amended)	Remarks	Technical References and justification on which (2), (3), (4) are based
(1)	(2)	(3)	(4)	(5)

ANNEX 5

(*Item* **4.1**)

COMMENTS RECEIVED ON TEXTILES FLOOR COVERINGS — STATE OF THE ART ON MAINTENANCE AND CLEANING

Commentator: *Dr. Betty Dasgupta, IICT, Bhadohi*

Comment:

Dear all,

With reference to woollen handmade carpets, there are few additional instructions.

1) In dry vacuuming the head of vacuum cleaner should be adjusted so that brushes barelytouch the surface of carpet.

2) Stiff brush may cause excessive fuzzing.

3) When cleaning loop pile carpets, it’s best to use a cylinder vacuum cleaner with just thesuction attachment. beater heads and brushes can pull at the loops and cause the carpet tolook worn and pilled over time.

· 4) Utilizing bleach or aggressive cleaning agents can cause permanent harm to thedelicate structure of wool fibers. Always opt for cleaners specifically designed for wool

· 5) Wool's capacity to absorb water can lead to damage if the material remains damp foran extended period of time.

· 6) Shampoo cleaning method is not suitable for water sensitive carpets like latexed andadhesive bonded carpets.

· 7) environmental friendly and sustainable products are to be preferred.

Commentator: *Shri Srinath, Welspun India Limited, Hyderabad*

Comment:

Dear All,

Gone through the document of State of the Art of Maintenance & Cleaning of Textile Floor Coverings.

All ok.

We can include below as steps to take care aft er cleaning.

When you walk on a carpet that is wet, it will re-soil even aft er thorough cleaning. You should practice the habit of taking out your shoes before walking on the carpet so that you can maintain them for a long time.

Regards,

Srinath

COMMENT RECEIVED ON TEXTILES FLOOR COVERINGS — BLANKETING CLOTH — SPECIFICATION

Commentator: *Shri Aditya Das, BIS*

Comment:

SNo.	**Clause / Subclause No.**	**Paragraph No./Figure No./Table No.**	**Type of Comment**	**Attachment**
1	1.1	1	Technical	N/A
Comments/Suggestions along with Justification for the Proposed Change			This standard prescribes the constructional particulars and other requirements of two varieties of blanketing cloth. However, it is not specified what is the material of said cloth, although based on Cl. 4.2.4 it appears to be wool (95%). It should be specified that this standard pertains to woollen blanketing cloth and the minimum percentage of wool (in case of blends) should be specified.	

Proposed Change/Modified Wordings			This standard prescribes the constructional particulars and other requirements of two varieties of blanketing cloth. However, it is not specified what is the material of said cloth, although based on Cl. 4.2.4 it appears to be wool (95%). It should be specified that this standard pertains to woollen blanketing cloth and the minimum percentage of wool (in case of blends) should be specified.	
2	4.1	1	Technical	N/A
Comments/Suggestions along with Justification for the Proposed Change			The requirements relating to the yarn (grade of wool fibres, count of yarn) as well as that of the finished cloth are given in the same Table 1 Constructional Particulars and Other Requirements of Blanketing Cloth. For better clarity, requirements for yarn and cloth should be given separately.	
Proposed Change/Modified Wordings			The requirements relating to the yarn (grade of wool fibres, count of yarn) as well as that of the finished cloth are given in the same Table 1 Constructional Particulars and Other Requirements of Blanketing Cloth. For better clarity, requirements for yarn and cloth should be given separately.	
3	4.2.4	1	Technical	N/A
Comments/Suggestions along with Justification for the Proposed Change			It is stated that the cloth shall be manufactured using stock-dyed wool and may be piece dyed to an agreed shade; if made from natural white fibre. However, it is not indicated how it will be checked whether the input material is indeed wool. A suitable method such as IS 667 should be given for identification of wool fibre.	
Proposed Change/Modified Wordings			It is stated that the cloth shall be manufactured using stock-dyed wool and may be piece dyed to an agreed shade; if made from natural white fibre. However, it is not indicated how it will be checked whether the input material is indeed wool. A suitable method such as IS 667 should be given for identification of wool fibre.	
4	4.2.5	1	Technical	N/A
Comments/Suggestions along with Justification for the Proposed Change			Descriptive images should be given of the different objectionable flaws to help the user understand. Further, reference is given to IS 4125:1987 (Glossary of terms pertaining to defects in fabrics) which is withdrawn	
Proposed Change/Modified Wordings			Descriptive images should be given of the different objectionable flaws to help the user understand. Further, reference is given to IS 4125:1987 (Glossary of terms pertaining to defects in fabrics) which is withdrawn	
5	4.1	1	Editorial	N/A

Comments/Suggestions along with Justification for the Proposed Change			In Table 1 There is a typographical error – Fineness is mentioned as Finess. This may be corrected	
Proposed Change/Modified Wordings			In Table 1 There is a typographical error – Fineness is mentioned as Finess. This may be corrected	
6	4.1	1	Technical	N/A
Comments/Suggestions along with Justification for the Proposed Change			In Table 1, Fineness of wool is given as 44s for both varieties when tested as per IS 5910. However, Table 1 of IS 5910 specifies different ranges of average fibre diameter and standard deviation for imported and indigenous wool. Therefore, it should be specified in the appropriate clause that the blanketing cloth manufacturer shall declare the specific variety of wool used and whether the same is indigenous or imported. Further, when testing and grading, the grading of wool may either come to 44s or it may be coarser or finer than 44s. It is felt that while finer grades can be permitted, coarser may not. Therefore, the requirement may be modified to “44s or finer”	
Proposed Change/Modified Wordings			In Table 1, Fineness of wool is given as 44s for both varieties when tested as per IS 5910. However, Table 1 of IS 5910 specifies different ranges of average fibre diameter and standard deviation for imported and indigenous wool. Therefore, it should be specified in the appropriate clause that the blanketing cloth manufacturer shall declare the specific variety of wool used and whether the same is indigenous or imported. Further, when testing and grading, the grading of wool may either come to 44s or it may be coarser or finer than 44s. It is felt that while finer grades can be permitted, coarser may not. Therefore, the requirement may be modified to “44s or finer”	
7	4.1	1	Technical	N/A

Comments/Suggestions along with Justification for the Proposed Change			In Table 1, For testing Approximate count of basic yarn, the method given is IS 10014 (Part 2) : 1981 which is a Method of Test for determination of Linear Density whereas Methods for determination of universal count of woollen and worsted yarn is given in IS 681 : 2015 . The test method given may be reviewed.	
Proposed Change/Modified Wordings			In Table 1, For testing Approximate count of basic yarn, the method given is IS 10014 (Part 2) : 1981 which is a Method of Test for determination of Linear Density whereas Methods for determination of universal count of woollen and worsted yarn is given in IS 681 : 2015 . The test method given may be reviewed.	
8	7	1	Technical	N/A
Comments/Suggestions along with Justification for the Proposed Change			Type of wool used (imported or indigenous), as well as fineness should be part of the marking requirements	
Proposed Change/Modified Wordings			Type of wool used (imported or indigenous), as well as fineness should be part of the marking requirements	

COMMENT RECEIVED ON TEXTILES FLOOR COVERINGS — CARPET YARN MADE FROM PURE NEW WOOL — SPECIFICATION

Commentator: *Shri Mayank Jaiswal, Obeetee Private Limited, Noida*

Comment:

SNo.	Clause / Subclause No.	Paragraph No./Figure No./Table No.	Type of Comment	Attachment
1	5.1	Table 1, SI No. V	General	N/A
Comments/Suggestions along with Justification for the Proposed Change			Min percent of wool content should be 99.7 for Pure new wool. because max percent of vegetable matter should be 0.3%	

Proposed Change/Modified Wordings	99.7 instead of 99

ANNEX 6

(*Item* **5.1**)

PROGRESS REPORT, STATEMENT OF EXPENDITURE AND FUND UTILIZATION CERTIFICATE

1. Introduction

Carpets have been an integral part of human civilization, serving not only as functional floor coverings but also as artistic expressions. Handmade wool blended carpets hold a special place due to their unique blend of traditional craftsmanship and modern performance requirements. This study aims to explore the constructional and performance requirements of these carpets, focusing on their use in floor covering applications and the packaging practices employed to ensure their quality and durability.

Handmade wool blended carpets are renowned for their durability, aesthetic appeal, and comfort. The blending of wool with synthetic fibers enhances their performance, making them suitable for various applications, from residential to commercial settings. However, the construction and performance standards for these carpets need to be thoroughly understood to ensure they meet industry requirements and consumer expectations.

Despite their popularity, handmade wool blended carpets face several challenges, including inconsistencies in material quality, variations in manufacturing processes, and inadequate performance standards. Addressing these issues is crucial for improving the overall quality and marketability of these carpets.

Following are the major varieties being manufactured

Hand knotted (Persian &Tibetan)
Hand tufted
Handloom (loop and cut)
Dhurry (punja dhurry and pit loom)

Objectives of the Study

The primary objective of this study is to analyze the constructional and performance requirements of handmade wool blended carpets used in floor covering applications. Additionally, the study aims to evaluate the packaging practices employed to protect these carpets during transportation and storage.

This study will focus on handmade wool blended carpets produced in key manufacturing regions. It will examine various aspects of construction, such as material composition and manufacturing techniques, as well as performance criteria like durability and colour fastness to light, washing, rubbing etc.. The study will also explore current packaging practices and suggest improvements where necessary.

By addressing the constructional and performance challenges of handmade wool blended carpets, this study aims to contribute to the development of improved industry standards. The findings will benefit manufacturers, consumers, and researchers by providing valuable insights into the production and maintenance of high-quality carpets.

The characteristics of handmade wool carpets are proposed as shown in Table 2.

S. No.	Property	Old Test method	Current Test method
1.	Dimensions	IS 7877 (Part 5) : 1976	IS 7877 (Part 4) : 2023
2.	Wool Content of Pile Yarn	IS 8476: 1977.	IS 8476: 1977
3.	Pile Density	IS: 5641 (Annex D)	IS: 5641 (Annex D)
4.	Number of Knots	IS 7877 (Part 3) : 1976	IS 17858 : 2022
5	Pile Height	IS 7877 (Part 4) : 1976	IS 7877 (Part 3) : 2023

6	Colour Fastness	Light - IS 2454 : 1985 Water - IS 767 : 1988 Organic solvent - IS 688 : 1988 Rubbing (dry) - IS 766 : 1988	IS/ISO B02 : 2014 IS/ISO 105 E01 : 2013 IS 688 : 1988 IS/ISO 105 Part X12 : 2001
7	Moth Resistance	IS 11662 : 1986	IS 11662 : 2024
8	Labelling	-	-
9	Packing	IS 5756 : 1970	IS 5756 : 1970

The outcome of the R&D project will serve as the basis for revision of IS 5641:1993 to include the construction and performance requirements for wool blended carpet and align the standard as per the latest industry practices.

In the revised standards following parameters will be added.

1	Warp count
2	Weft count
3	Pile yarn count
4	Method of knotting
5	Selvedge
6	Dimension
7	Pile content
8	Pile density
9	Pile height
10	Colour fastness to light
11	Colour fastness to Water
12	Colour fastness to organic solvent
13	Colour fastness to dry rubbing
14	Colour fastness to wet rubbing
15	Colour fastness to staining
16	Hexapod abrasion
17	Abrasion resistance
18	Fire retardency

2. Literature review

Handmade wool carpet is textile floor covering that is manufactured using traditional hand knotting methods, with wool as the primary pile material. It finds its application mainly in living rooms, halls, offices or stair runners. There are several carpet manufacturing methods such as knotting, tufting, weaving, knitting, braiding, needle felting, fusion bonding and flocking. Handmade carpets are manufactured in three different ways: knotted (Persian, Tibatan etc.), flat weave (Broad loom carpets, Saggy, Durry etc.) and tufting (Hand tufting,

Needle tufting). Knotting is an extensively used method for carpet manufacturing. BIS has published IS 5641 in 1970 and subsequently revised in 1973, 1993, 2001, 2016 and 2020 for required specification of handmade wool carpets as well as handmade broad-loom roll carpets manufactured from pile yarns with minimum wool content of 95% wool for its use in floor covering applications [1].

The popular methods of knotting are given in IS 7877 (Part 2): 2023 as Single Knots (Type I and Type II), Double Knots (Type III, Type IV and Type V) and Tibetan Knot (Type VI) [2]. ISO also published a standard for hand-made carpets – Determination of types of knots. This standard described about Persian knots (Sehna or Sinneh knots), Turkish knots (Gordes, Tabriz or Izmir knots) and Double knots [3]. Wool in pile yarn is extensively used in handmade carpets because of excellent properties like hand, durability, stain-resistance, dyeability, flame resistance, insulation, static generation and biodegradability [4]. Nowadays manufacturers are using synthetic yarn blends in handmade wool carpets for further improvement of properties like resiliency, stain resistance and durability. Accordingly, the constructional and performance requirements for wool blended carpets have to be included in the subsequent revision of IS 5641:1993.

The current requirements for handmade wool carpets as per IS: 5641 are depicted in Table 1.

S. No.	Property	Test method	Tolerance
1.	Dimensions	IS 7877 (Part 5) : 1976	The length and width of a carpet shall be as agreed to between the buyer and the seller or as declared by the seller. A tolerance of 2.5 percent on the agreed/declared length and width of the carpet shall be permitted subject to maximum of 15 cm for length and 7.5 cm for width. The measurements of two diagonals of a carpet shall not differ by more than 2 percent.
2.	Wool Content of Pile Yarn	IS 8476: 1977.	The wool content of the pile yarn shall not be less than 95 percent.
3.	Pile Density	IS: 5641 (Annex D)	The pile density of the carpet shall be as agreed to between the buyer and the seller or as declared by the seller subject to a minimum of 90 $g/m^2/mm$ pile height. However, a tolerance of - 5 percent shall be permitted on the agreed or declared value of pile density.
4.	Number of Knots	IS 7877 (Part 3) : 1976	The number of knots in the carpet shall be as agreed to between the buyer and the seller or as declared by the seller

<table>
<tr><td></td><td></td><td></td><td>subject to a minimum of 12 000 knots per square metre. However, tolerances mentioned below shall be allowed on agreed/declared value of number of knots:
<table>
<tr><td>Number of Knots, m^2</td><td>Tolerance</td></tr>
<tr><td>Up to 320 000</td><td>-10 percent</td></tr>
<tr><td>Above 320 000</td><td>-5 percent</td></tr>
</table></td></tr>
<tr><td>5</td><td>Pile Height</td><td>IS 7877 (Part 4) : 1976</td><td>The pile height of the carpet shall be as agreed to between the buyer and the seller or as declared by the seller subject to a minimum of 5 mm. However, following tolerances shall be allowed on the agreed/declared value of pile height:
<table>
<tr><td>Number of Knots, m^2</td><td>Tolerance on Pile Height mm</td></tr>
<tr><td>Up to 320 000</td><td>±2</td></tr>
<tr><td>Above 320 000</td><td>±1</td></tr>
</table></td></tr>
<tr><td>6</td><td>Colour Fastness</td><td>Light - IS 2454 : 1985
Water - IS 767 : 1988
Organic solvent - IS 688 : 1988
Rubbing (dry) - IS 766 : 1988</td><td>4 or better
3 or better
3 or better

3 or better</td></tr>
<tr><td>7</td><td>Moth Resistance</td><td>IS 11662 : 1986</td><td>If required by the buyer or declared by the seller, the carpet shall be rendered moth resistant by a treatment specified in IS 11662 : 1986 or any other suitable treatment agreed to between the buyer and the seller. However, in case moth-resistant treatment not specified in IS 11662: 1986 is used, the type of preservative agent method of its application, amount applied and method of its determination shall be a matter of prior agreement between the buyer and the seller.</td></tr>
<tr><td>8</td><td>Labelling</td><td>-</td><td>A white cloth label or a paper sticker preferably not less than 15 cm x 15 cm in size marked with the following</td></tr>
</table>

			information shall be securely attached to one of the corners on the back of the carpet: a) Type of manufacturing, that is, handmade carpet b) Type and content of use surface, that is, wool c) Dimensions d) Pile density e) Pile height (mm) f) Number of knots g) Indication of the source of manufacture The following additional information may also be provided with the carpets: a) Specific treatments like moth-resistance, chemically washed b) Laying instruction; c) Instruction for cleaning/maintenance; d) Any other relevant information. The labels may also carry Standard Mark
9	Packing	IS 5756 : 1970	Unless otherwise agreed, the carpets shall be packed in accordance with the procedure laid down in IS 5756: 1970.

Carpets are transported in suitable packaging to ensure that product is protected during transportation, storage, and handling. The important aspects of packaging of carpet include material selection, packaging methods, handling instructions, labelling and protection from moisture and damage. BIS has published IS 5756:1970 ‘Code for packaging of carpets’ which specifies the procedure of packaging of handmade or tufted carpets in the form of rolls or bales using polyethylene, hessian and jute twine. Nowadays industries are using innovative packaging materials like synthetic cushioning materials, paperboard, synthetic wrappings, labels, tags, recyclable or ecofriendly materials etc. Chaturvedi S. studied carpet packaging at M/S Jaipur Rugs Private Limited, Jaipur and explained the processes of carpet packing as follows: -

1. Four bamboos are taken as central core, for support.
2. The manufactured carpet is rolled around the bamboos.
3. A white transparent plastic sheet is wrapped around the carpet.
4. An adhesive tape is tied around to secure the plastic over the carpet.

5. The brand identification mark on a silken tag is sewn below the pile. The tag carries the logo and name of the company along with the care instructions.

Packaging options Available:

1. Cardboard patchwork
2. Cylinder roll
3. Transparent Prism
4. Rectangular Cardboard
5. Rectangular wood pack
6. Panel Flap Cardboard
7. Fabric Drawstring
8. Hexagon wood pack
9. Cylinder Timber

The conclusion of the study was that hexagon wood pack was considered more durable than other package options.

3. Field Survey

Finishes given to carpets:

1. Moth proofing chemical name and stage of application
   Permethrin based products applied during dyeing and after dyeing Eg- Saraguard AP
   Imidacloprid SC (Premise) chemical after finishing.
2. Any anti static chemicals used
   No antistatic chemicals are used.

3. Any antibacterial chemical used, it's name and application stage
   No antibacterial chemicals used
4. Any anti stain chemical used, name and stage of application
   Scotchgard spray after finishing as per customer requirements.
5. Any fire retardant used, name and stage of chemical application
   Spraying Shield Flame Retardant spray after finishing of carpet.
6. Any other finishing agents used.
   Silicon based Softener / shiners are used.

i) Raw materials for pile yarn, warp yarn, weft yarn;

Pile yarn	Warp yarn	Weft yarn
Wool, Wool/viscose, Wool/nettle, Wool/hemp Wool/nylon Jute Viscose	Cotton (6/6,8/6,12/20)	Waste cotton Cotton

ii) Varieties;
   Hand knotted (Persian &Tibetan)
   Hand tufted
   Handloom (loop and cut)
   Dhurry (punja dhurry and pit loom)

Newer/innovative materials used in packaging of carpets; **Materials employed in carpet packaging:**

a.	Packing polythene (LDPE bags) Width in inches=7,8,9,10,11,12,13,14,15,16,17,18,20,22,24,36,48 Thickness in Micron=50.8, 76.2,125
b	Packing fabric (HDPE Woven fabric Width in inches= 10,15,17,19,22,24, 27,30,36,48 Thickness= 1 to 2 mm GSM available=3, 4, 5(strongest)
c	Packing Tape Width in inches= 2, 3 Micron= 38
d	Stretch film or stretch wrap (kacha tape)

	Width in inches= 2 , 3, 4
e	End cap Size in inches = 5, 6,7,8,9,10,11,12
f	Pipe or paper tube Length in feet= 5,6,7 to 30 Width in inches= 2.5, 5
g	Plastic loop Lock pin Length in inches= 6, 8
h	use no hooks tape (printed) width= 2 inches

iii) Details of pre-packaging practices/ cleaning/ brooming - sprinkling of insecticides
Only cleaning and brooming followed by spreading silica gel packets.

iv) Marking and labelling of the product

Care label, fibre composition label, SKU label(design No, size, buyer name), Warning label, Barcode label, Shipping address label, Metal pass label, Photo label on end with photo of carpet, size design

v) Packaging practices for internal trade and exports (packing procedure for handmade or tufted, form of rolls or bales, packing material, number of layers and sequence for internal trade and exports) etc.

For different buyers, different packing procedures are followed.

Buyer 1 /domestic trade	Buyer 2	Buyer 3	Buyer 4
• Spread the carpet. • Broom and clean • Spread silica gel sachets • Fix SKU label on back • Roll the carpet • Put stretch wrap on 3	Fix care label on the back of rug. Lay the carpet Put the tube for flat weave.(cardboard core pipe) Roll with silica scahets. Stretch wrapping plastic three places. Roll in such a way that care label fixed	Lay the carpet Fix the labels- care label (wash care) Roll the carpet without paper tube Put stretch tape 4 places	Clean the carpet. Turn the carpet On the right top fix the following Care label with barcode, PO # Size, Metal passed stamp Turn the carpet. Lay tube on carpet.

places(two end and middle) • Put in the polybag 500 guage • Tie both ends of carpet. • Fix the label with roll number.	on step 1 is visible on the back of the carpet. Put polybag. Fix warning label on polybag. Put fibre bag. Fix barcode label on right side of the packaged good. Fix one label in the middle of the roll (Side marking label) with PL#, PO#, style, size, colour, Qty, Bale No., Origin, Gross wt, Net weight Bale dimensions Volume in Cubic metre. Opposite to side marking label, shipping bill is fixed. Ship to Buyer address, Shipper address. Both ends of the carpet package to be covered with red cellotape .	Put the rolled rug in 500 guage polybag Cover it with white PP fabric layer. Fix it with cellotape. Put shipping mark label on the middle of the packet. Put barcode label on the circular side.	Cover the mouth of paper tube with cellotape. Roll the rug with paper tube and silica gel. Tie the carpet with 1 inch cotton newar on 4 places(depending on size) On the centre of carpet keep label with design and size and put stretch plastic on the label. Put it in polybag Cover with cellotape on both edges Fix two labels 1)SKU label with size/design no/qty/SKU no. 2) warning label On both ends of the package on the circular side fix carpet photo with size and design. Put it in polybag and fix label with bale no, metal pass stamp, address of port

4. Methodology

6 types of wool blend yarn are selected and purchased from the market.

Wool/nylon (80/20)

Wool/polyester (80/20)

Wool/viscose (50/50)

Wool/viscose (80/20)

Wool/Hemp (80/20)

Wool/Nettle (80/20)

A small portion of yarn was dyed and sent for following laboratory tests

Color fastness to light

Color fastness to Water

Color fastness to organic solvent

Color fastness to dry rubbing

Color fastness to wet rubbing

Color fastness to staining

Hand knotted carpets of quality 5/40 is in the process of manufacture. After the manufacture all tests will be conducted .

5. Conclusion

Based on the field visits conducted, the following conclusions were drawn:

a) Wool blend hand-knotted carpets are gaining popularity in the market.

b) The most commonly used blends, as per the survey, are:

- Wool/Viscose 50/50
- Wool/Nylon 80/20,70/30
- Wool/Polyester 80/20,70/30
- Wool/Nettle 80/20
- Wool/Hemp 80/20
- Wool/Viscose 80/20,70/30

Wool/nylon is the most prominently used blend.

c) The blend ratio of wool in all cases was above 50%. This ratio was maintained for two reasons: the high resilience of wool and the usage of the HSN code applicable to wool.

d) Packaging practices vary from buyer to buyer.

e) The packaging procedure for domestic market and international market do not differ much.

The outcome of the R&D project will serve as the basis for revision of IS 5756:1970 'Code for packaging of carpets' to incorporate the newer packaging methods used in carpet industries and align the standard as per the latest packaging practices followed by industries for internal and export trades.

References

1. IS: 5641. 1993. *Indian standards specifications*. Bureau of Indian Standards, New Delhi.
2. IS: 7877 (Part 2): 2023. *Indian standards specifications*. Bureau of Indian Standards, New Delhi.
3. ISO: 2550. 1972 (E). ISO International Standards. International Organization for Standardization, Geneva, Switzerland.
4. Goswami K. K, Advances in Carpet Manufacture, Woodhead Publishing in Textiles, No. 87, 201-202 (2009).
5. IS 5756:1970 (Reaffirmed 2020). *Indian standards specifications*. Bureau of Indian Standards, New Delhi.
6. Chaturvedi S., Carpet Packaging: as a Tool For Branding and Enhancing Durability, Case Study: Jaipur Rugs Private limited, Jaipur, Journal of Management Engineering and Information Technology (JMEIT), Volume -5, Issue- 3, June. 2018, ISSN: 2394 – 8124

*All the data collected from industry will be sealed, signed by the company representatives and will be included in the final report.

भारतीय कालीन प्रौद्योगिकी संस्थान

विकास आयुक्त हस्तशिल्प/वस्त्र मंत्रालय, भारत सरकार के अधीन
डा0 एपीजे अब्दुल कलाम प्राविधिक विश्वविद्यालय से संबद्ध एवं अखिल भारतीय तकनीकी शिक्षा परिषद, भारत सरकार द्वारा अनुमोदित

INDIAN INSTITUTE OF CARPET TECHNOLOGY

Under the aegis of the Development Commissioner (Handicrafts), Ministry of Textiles, Govt. of India
Affiliated to Dr. APJ Abdul Kalam Technical University, Approved by AICTE, Govt.of India.

पत्रांक / Ref :

दिनांक /Date 29-10-2024

Utilization Certificate

This is to Certified that an amount of Rs.234000/- (Two lakh thirty four thousand only) received from "Bureau of Indian Standard" (BIS) vide letter No. SCMD/R&D guidelines/20240522, dated 18th july 2024. on account of study of constructional and performance requirements for handmade wool blended carpet used in floor covering applications and packaging practices of carpets during the year in favour of IICT-Bhadohi. A sum of Rs.130745/- (one lakh thirty thousand seven hundred forty five only) has been utilized which it was Sanctioned(details as per annexure-1) and unspened amount of Rs. 103255/-(One lakh three thousand two hundred fifty five only) lying with Institute's a/c -39601010009016.

(Durgesh Kumar Tripathi)
Account officer, IICT
लेखाधिकारी
Accountant
भारतीय कालीन प्रौद्योगिकी संस्थान
INDIAN INSTITUTE OF CARPET TECHNOLOGY
चौरी रोड, भदोही - २२१४०१
Chauri Road, Bhadohi - 221401

29/10/2024
(Dr. Rajeev Kumar Varshney)
Director, IICT
निदेशक
DIRECTOR
भारतीय कालीन प्रौद्योगिकी संस्थान
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भारतीय कालीन प्रौद्योगिकी संस्थान
विकास आयुक्त (हस्तशिल्प) वस्त्र मंत्रालय, भारत सरकार के अधीन
डा० ए०पी०जे० अब्दुल कलाम प्राविधिक विश्वविद्यालय से संबद्ध एवं अखिल भारतीय तकनीकी शिक्षा परिषद, भारत सरकार द्वारा अनुमोदित
INDIAN INSTITUTE OF CARPET TECHNOLOGY
Under the aegis of the Development Commissioner (Handicrafts), Ministry of Textiles, Govt. of India
Affiliated to Dr. APJ Abdul Kalam Technical University, Approved by AICTE, Govt.of India.

पत्रांक / Ref :

दिनांक /Date 29-10-2024

Bureau of Indian Standard (BIS)
Monthly Financial Progress Report

(Amount in Rs.)

S N	Component	Sanctioned Amount	Grant released	Grant utilized in Oct-2024	Balance Avaiable
1	Cosumables- Chemicals, Raw Materials, Samples, Sample making, testing charges in IICT laboratory and other laboratory, glassware, stationery, book etc.	300000	90000	88331	1669
2	Equipment:- Computer and printer	150000	45000	0	45000
3	Travel	200000	60000	42414	17586
4	Any other/Overhead expenses	130000	39000	0	39000
	Total	**780000**	**234000**	**130745**	**103255**

लेखाधिकारी
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चौरी रो[illegible]ही - २२१४०१
Chauri R[illegible]adohi - 221401

29/10/24
निदेशक
DIRECTOR
भारतीय कालीन प्रौद्योगिकी संस्थान
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Chauri Road, Bhadohi - 221401

ANNEX 7

(*Item* **6.1**)

COMMENTS ON REVIEW OF STANDARDS

Commentator: *National Woollen & Finishers, Panipat*
Comment:

Subject: Ref: Review of Standards on Woollen Products - TXD 04 dated: 03/07/2024.

Dear Sir,

With reference to your **mail Ref: Review of Standards on Woollen Products - TXD 04 dated: 03/07/2024**, we have reviewed the current standards and observed that the use of Kraft paper, hessian cloth, heavy jute cloth, and metal strips for packing is outdated. Therefore, we propose the following suggestions for the packaging condition of Blankets/Fabric:

1. IS 12812: 1989 Worsted shawls:

Packing Instructions: Each worsted shawl should be individually folded and placed in poly bags. These should then be stacked and wrapped in a layer of polythene film. The final package should be packed in HDPE waterproof woven fabric, stitched in bale form, with high-quality plastic strips or hoops to secure it. The maximum weight per bale should be 40 kg.

2. IS 14292: 1995 Shoddy woollen barrack Blankets:

Packing Instruction: Shoddy woollen barrack blankets should be folded individually and packed in poly bags. These poly bags should be stacked and wrapped in polythene film. The entire package should then be packed in HDPE waterproof woven fabric and secured with high-quality plastic strips or hoops, ensuring the maximum weight per bale does not exceed 40 kg.

3. IS 14291: 1995 Woollen shoddy yarns:

Packing Instructions: Woollen shoddy yarn should be bundled and placed in poly bags. These bundles should be wrapped in a layer of polythene film and then packed in HDPE waterproof woven fabric. Secure the package with high-quality plastic strips or hoops, and ensure the maximum weight per bale is 40 kg.

4. IS 12838: 1989 Blazer cloths:

Packing Instructions: Blazer cloth should be rolled and placed in poly bags. These rolls should be wrapped in polythene film and packed in HDPE waterproof woven fabric. Secure the package with high-quality plastic strips or hoops, with a maximum bale weight of 40 kg.

5. IS 12811: 1989 Worsted lohis:

Packing Instructions: Worsted lohis should be individually folded and packed in poly bags. These should then be wrapped in polythene film. The entire package should be packed in HDPE waterproof woven fabric and secured with high-quality plastic strips or hoops. Ensure the maximum weight per bale is 40 kg.

6. IS 1530: 1981 Baize cloths:

Packing Instructions: Baize cloth should be rolled and packed in poly bags. The rolls should be wrapped in a layer of polythene film and packed in HDPE waterproof woven fabric. Secure the package with high-quality plastic strips or hoops, with the bale weight not exceeding 40 kg.

7. IS 677: 1974 Drab cloth mixture, woollen, water-resistant:

Packing Instructions: Drab cloth should be rolled and placed in poly bags. These rolls should be wrapped in polythene film and packed in HDPE waterproof woven fabric. Secure with high-quality plastic strips or hoops, ensuring a maximum bale weight of 40 kg.

8. IS 675: 1973 Bunting, worsted

Packing Instructions: Worsted bunting should be rolled and packed in poly bags. These rolls should be wrapped in polythene film and packed in HDPE waterproof woven fabric. Secure the package with high-quality plastic strips or hoops, with a maximum weight per bale of 40 kg.

9. IS 11206: 1984 Glossary of textile terms :

Packing Instructions: Glossary of textile terms should be rolled and packed in poly bags. These rolls should be wrapped in polythene film and packed in HDPE waterproof woven fabric. Secure the package with high-quality plastic strips or hoops, with a maximum weight per bale of 40 kg.

10. IS 741: 1971 Code for inland packaging of woollen and worsted yarn and cloth

Packing Instructions: Woollen and worsted yarn and cloth should be bundled and packed in poly bags. These should be wrapped in polythene film and packed in HDPE waterproof woven fabric. Secure with high-quality plastic strips or hoops, with the maximum weight per bale set at 40 kg.

Thank you for the opportunity to review the standards. We hope you find our suggestions valuable and will consider them.

Note: For IS 675 : 1973 Bunting, worsted, we recommend that the fineness grade of wool tops should be 48s for both Point No. 2 of Sr. No. 8 to ensure consistency in quality.

With reference to your mail **Ref: Review of Standards on Woollen Products - TXD 04 dated: 03/07/2024,** we have reviewed the current standards and observed that the use of Kraft paper, hessian cloth, heavy jute cloth, and metal strips for packing is outdated. Therefore, we propose the following suggestions for the packaging condition of **Blankets/Fabric:**

Packing instructions: Maximum weight per bale is 40 kg, **Blankets/Fabric** of the same variety should be individually folded and packed in poly bags, then placed one over the other. These folded items should be wrapped in a layer of polythene film. The entire package should be packed in HDPE waterproof woven fabric, stitched in bale form, and secured with high-quality plastic strips or hoops suitable for transit and storage

Thank you for the opportunity to review the standards. We hope you like our suggestions and will consider them.