

भारतीय मानक

वस्त्रादि – वैगन सीलिंग के लिए टेप – विशिष्टि
(पहला पुनरीक्षण)

Indian Standard

TEXTILES — TAPES FOR WAGON SEALING — SPECIFICATION
(*First Revision*)

ICS 91.100.50

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भारतीय मानक ब्यूरो

BUREAU OF INDIAN STANDARDS

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FOREWORD

This standard covers cotton tapes in two varieties, one ordinary and other of heavy duty for wagon sealing used in the Indian Railways and to secure and seal the doors of freight wagons, ensuring the integrity and safety of the cargo during transit. These tapes are durable and provide a simple yet effective solution for maintaining security and preventing unauthorized access.

This Indian Standard (First Revision) was adopted by the Bureau of Indian Standards after the draft finalized by the Technical Textiles for Clothtech Applications including Narrow Fabrics and Braids Sectional Committee had been approved by the Textile Division Council.

This standard was first published in 1982. This revision has been made in the light of experience gained since its publication and to incorporate the following major changes:

- a) Title of the standard has been modified.
- b) BIS certification marking clause has been modified; and
- c) References to Indian Standard given in Annex A has been updated.

The composition of the Committee responsible for the formulation of this standard is given in Annex B.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated expressing the result of a test or analysis, shall be rounded off in accordance with IS 2 : 2022 'Rules for rounding off numerical values (*second revision*)'.

The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

*Indian Standard***TEXTILES — TAPES FOR WAGON SEALING — SPECIFICATION**
(*First Revision*)**1. SCOPE**

1.1 This standard covers ordinary and heavy duty woven cotton tapes used by railways for sealing of wagons.

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. REQUIREMENTS**3.1 Count of Yarn**

The following count of warp and weft yarns may be used for the manufacture of ordinary and heavy duty types of cotton tapes for wagon sealing:

Sl No.	Characteristic(s)	Ordinary Type	Heavy Duty Type
(1)	(2)	(3)	(4)
i)	Warp	30 Tex × 2 (20 _s /2)	60 Tex × 2 (10 _s /2)
ii)	Weft	60 Tex × 2 (10 _s /2)	60 Tex × 2 (10 _s /2)
NOTE — The count of the yarn is given for the guidance of manufacturers only.			

3.2 Length of Roll

The length of the roll in meters shall be not less than the length specified in the contract. Test shall be carried out in accordance with IS 1954.

3.3 The cotton tapes for wagon sealing shall also comply with the requirements given in Table 1.

Table 1 Requirements for Cotton Tapes for Wagon Sealing

Sl No.	Type	Width mm	Tolerance on Width mm	Mass g/m <i>Max</i>	Ends in Full Width <i>Min</i>	Picks/cm <i>Min</i>	Breaking Strength Kgf (N) <i>Min</i>
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
i)	Ordinary	5	+ 1 - 0	1.85	20	12	9 (88)
ii)	Heavy Duty	5	+ 1 - 0	2.80	16	10	14 (137)
iii)	Ordinary	10	+ 1 - 1	2.80	30	12	16 (157)
iv)	Heavy Duty	10	+ 1 - 1	4.20	22	10	18 (176)
v)	Ordinary	15	+ 2 - 1	3.70	40	12	20 (196)
vi)	Heavy Duty	15	+ 2 - 1	6.80	36	10	29 (284)
Method of Test		IS 1954		IS 1964	IS 1963		IS 1969 (Part 1)

4 FINISH

Grey, scoured or bleached as specified in the contract or order.

4.1 The scouring loss for bleached, scoured and grey tapes shall not exceed 1, 2 and 5 percent, respectively when tested by mild method given in IS 1383.

5 PACKING

Unless otherwise agreed to between the buyer and the seller, each roll shall be wrapped in 40 cm thick polyethylene film (*see* IS 2508) or waterproof packing paper (*see* IS 1398).

6 MARKING

6.1 Each roll shall bear a label providing information about name/trademark of the manufacturer, length (m), width (mm), thickness (mm), and whether ordinary or heavy duty type.

6.2 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.

7 SAMPLING

7.1 As follows unless otherwise specified:

SI No.	For Length, Width, Ends and Picks			Sub-sample Size of Mass, Scouring Loss, Breaking Strength	
	Lot Size (Rolls)	Sample Size (Rolls)	Permissible Number of Defective (Rolls)		
(1)	(2)	(3)	(4)	(5)	
i)	Up to 50	3	0	3	‘Mean ± 0.6 range’ to be within the specified limit
ii)	51 to 150	5	0	3	
iii)	151 to 300	8	1	4	
iv)	301 to 500	13	1	5	
v)	501 and above	20	2	7	

ANNEX A
(*Clause 2*)

LIST OF REFERRED INDIAN STANDARDS

<i>IS No.</i>	<i>Title</i>
IS 1383 : 2023	Methods for determination of scouring loss in grey and finished cotton textile materials (<i>Second Revision</i>)
IS 1398 : 1982	Specification for packing paper water proof, bitumen-laminated (<i>Second Revision</i>)
IS 1954 : 2024	Textiles — Fabrics - Determination of width and length (<i>Third Revision</i>)
IS 1963 : 1981	Methods for determination of threads per unit length in woven fabrics (<i>Second Revision</i>)
IS 1964 : 2001	Textiles – Methods for determination of mass per unit length and mass per unit area of fabrics (<i>Second Revision</i>)
IS 2508 : 2016	Polyethylene films and sheets - Specification (<i>Third Revision</i>)
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 (<i>Fourth Revision</i>)

ANNEX B

(Foreword)

COMMITTEE COMPOSITION

Technical Textiles for Clothtech Applications including Narrow Fabrics and Braids Sectional
Committee, TXD 39

Organization

Additional Controller CQA (General Stores), DGQA, Ministry of Defence
ICAR - Central Institute for Research on Cotton Technology, Mumbai
Federation of Indian Chambers of Commerce and Industry
Indian Technical Textile Association, Mumbai
M K U Limited, Kanpur
Motilal Dulichand Pvt Ltd, Kanpur
National Textile Corporation, New Delhi
Ordnance Parachute Factory, Kanpur
Office of Textiles Commissioner, Mumbai
SGS Limited, Gurugram
S L Banthia Textiles Industries Pvt Ltd
Shipra International, Kanpur
Sky Industries Ltd, Navi Mumbai
Synthetic and Art Silk Mills Research Association, Mumbai
Thanawala & Co., Mumbai
The Bombay Textile Research, Association, Mumbai
U P Textile Technological Institute, Kanpur
Universal Yarn & Tex Pvt Ltd, Kanpur
BIS Directorate General

Representative(s)

SHRI A CHOWDHURY (*Chairperson*)
DR P JAGAJANANTHA
DR T SENTHILKUMAR (*Alternate*)
SHRI ANU HANDA
DR ANUP RAKSHIT
SHRI VIKRAM JAIN (*Alternate*)
SHRI SUMIT KHANDELWAL
SHRI RAJIB PAL (*Alternate*)
SHRI SHAILENDRA NATH MISRA
SHRI SUDHIR SHIVHARE (*Alternate*)
SHRI R K YADAV
SHRI V M BAGADE,
SHRI S KONDAIAH (*Alternate*)
SHRI V K KOHLI
SHRI HUMAYUN K (*Alternate*)
MS ANITHA JEYARAJ
SHRI GAURAV SARASWAT (*Alternate*)
SHRI SANTOSH KUMAR BANTHIA
SHRI ABHISHEK KUMAR AGRAWAL
SHRI KAPIL MEHROTRA
SHRI MICHAEL (*Alternate*)
SHRI SANJAY SAINI
SHRI PREMNATH SURWASE (*Alternate*)
SHRI HEMAL THANAWALA
SHRI VIVAN THANAWALA (*Alternate*)
SHRI SHAIKH RIYAZ AHMED
DR PRASANTA KUMAR PANDA (*Alternate*)
DR PRASHANT VISHNOI
SHRI RAJIV K BHARTIYA
SHRI J. K. GUPTA, SCIENTIST 'E'/DIRECTOR and Head (Textiles)
[Representing Director General (*Ex-officio*)]

Member Secretary

SHRI TANISHQ AWASTHI
SCIENTIST 'B'/ASISTANT DIRECTOR
(Textiles), BIS