

IS : 3255 - 1979
(Reaffirmed 2013)
(Reaffirmed 2019)

Indian Standard

**SPECIFICATION FOR
SCOURED OR DYED COTTON TAPES
FOR AEROSPACE PURPOSES**

(First Revision)

UDC 677.754 : 677.21 : 629.136.1



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INDIAN STANDARDS INSTITUTION
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002

Gr 3

June 1980

AMENDMENT NO. 1 DECEMBER 1998
TO
IS 3255 : 1979 SPECIFICATION FOR SCOURED OR
DYED COTTON TAPES FOR AEROSPACE PURPOSES
(First Revision)

[*Page 4, Table 1, col 2*] — For tolerance on width mentioned as '+ 1.5' and '+ 2.0' substitute '± 1.5' and '±2.0' respectively. ' 0
-0

(*Page 5, clause 3.2*) — Insert the following Note after the clause:

NOTE - Sulphur dyes shall not be used in production of dyed tapes.'

(T X 10)

Reprography Unit, BIS, New Delhi, India

AMENDMENT NO. 2 JULY 2014
TO
IS 3255 : 1979 SPECIFICATION FOR SCOURED OR DYED
COTTON TAPES FOR AEROSPACE PURPOSES

(First Revision)

(Page 4, clause 1.1) — Substitute the following for the existing clause:

‘1.1 This standard covers scoured and/or dyed cotton tapes used mainly in supply dropping parachutes.’

(TXD 13)

Publication Unit, BIS, New Delhi, India

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Indian Standard
 SPECIFICATION FOR
 SCOURED OR DYED COTTON TAPES
 FOR AEROSPACE PURPOSES
 (*First Revision*)

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Indian Standard
SPECIFICATION FOR
SCOURED OR DYED COTTON TAPES
FOR AEROSPACE PURPOSES
(First Revision)

0. FOREWORD

0.1 This Indian Standard (First Revision) was adopted by the Indian Standards Institution on 15 June 1979, after the draft finalized by the Textile Materials for Aerospace Purposes Sectional Committee had been approved by the Textile Division Council.

0.2 The cotton tapes covered in this standard are used in supply dropping parachutes and for reinforcement of the canopies.

0.3 In the present revision of the standard (formulated in 1965) tapes covered in IND/ADE/0069 issued by the Ministry of Defence have also been included at the instance of Chief Inspectorate of Textiles & Clothing, Kanpur.

0.3.1 Considerable assistance has been drawn from BS 3F 49 'Specification for cotton webbing', issued by the British Standards Institution, in formulation of this standard.

0.4 To familiarize the industry with International System of Units (SI units), the basic as well as the recommended SI units for use in the textile industry are given in Appendix A.

0.4.1 Standards of Weights and Measures Act, 1976 also stipulates use of SI units.

0.5 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 : 2-1960*. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

*Rules for rounding off numerical values (*revised*).

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1. SCOPE

1.1 This standard covers scoured and/or dyed cotton tapes of width 12.7, 19.0, 25.0, 28.5, 31.7, 38.0, 44.4, 50.0, 57.0, 63.5, 75.0, 89 and 102 mm, used mainly in supply dropping parachutes.

2. MATERIAL

2.1 Unsized 3-ply cotton yarn free from spinning defects given in IS : 171-1973* may be found suitable.

3. REQUIREMENTS

3.1 The tape shall meet the physical requirements given in Table 1.

TABLE 1 PHYSICAL REQUIREMENTS

LENGTH PER ROLL	WIDTH mm	MASS, ^{Max}		ENDS IN FULL WIDTH	PICKS/cm	WARPWAY BREAKING LOAD (20cm × FULL WIDTH), ^{Min}															
		g/m	kg/100-m Roll, Net			(see NOTE)															
						k N	kg f														
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)														
100 m unless otherwise specified	12.7	8	0.8	38	12 ⁺¹ ₋₀	0.54	55														
	19.0							12	1.2	56	0.84	86									
	25.0												16	1.6	74	1.22	125				
	28.5																	18	1.8	84	1.24
	31.7	+1.5	2.0	2.0		94	+ 4	1.38	141												
	38.0									- 0	2.4	2.4	112	- 0	1.81	185					
	44.4	28	2.8	130		1.96	200														
	50.0							31	3.1								148	2.45	250		
	57.0	+2.0	36	3.6		168	+ 6	2.50	255												
	63.5																40	4.0	186	2.78	284
	75.0																				
	89									55	5.5	258	3.90	398							
	102	- 0	63	6.3		294	- 0	4.46	455												

(Continued)

*Specification for grey cotton yarn (second revision).

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APPENDIX A

(Clause 0.4)

SI UNITS

TABLE 2 INTERNATIONAL SYSTEM UNITS

Base Units

QUANTITY	UNIT	SYMBOL
Length	metre	m
Mass	kilogram	kg
Time	second	s
Electric current	ampere	A
Thermodynamic temperature	kelvin	K
Luminous intensity	candela	cd
Amount of substance	mole	mol

Supplementary Units

QUANTITY	UNIT	SYMBOL
Plane angle	radian	rad
Solid angle	steradian	sr

Derived Units

QUANTITY	UNIT	SYMBOL	DEFINITION
Force	newton	N	1 N = 1 kg.m/s ²
Energy	joule	J	1 J = 1 N.m
Power	watt	W	1 W = 1 J/s
Flux	weber	Wb	1 Wb = 1 V.s
Flux density	tesla	T	1 T = 1 Wb/m ²
Frequency	hertz	Hz	1 Hz = 1 c/s (s ⁻¹)
Electric conductance	siemens	S	1 S = 1 A/V
Electromotive force	volt	V	1 V = 1 W/A
Pressure, stress	pascal	Pa	1 Pa = 1 N/m ²

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TABLE 3 RECOMMENDED SI UNITS FOR TEXTILES

SL No	CHARACTERISTIC	SI UNIT		APPLICATION
		Unit	Abbreviation	
(1)	(2)	(3)	(4)	(5)
1)	Length	Millimetre	mm	Fibres Samples, test specimens (as appropriate)
		Millimetre, centimetre	mm, cm	
		Metre	m	Yarns, ropes, cordages, fabrics
2)	Width	Millimetre	mm	Narrow fabrics Other fabrics Samples, test specimens (as appropriate)
		Centimetre Millimetre, centimetre	cm mm, cm	
		Centimetre, metre	cm, m	Carpets, druggets, durries (as appropriate)
3)	Thickness	Micrometre (micron)	µm	Delicate fabrics Other fabrics, carpets, felts
		Millimetre	mm	
4)	Linear density	Tex	tex	Yarns Fibres Filaments, filament yarns
		Millitex Decitex	mtex dtex	
		Kilotex	ktex	Slivers, ropes, cordages
5)	Diameter	Micrometre (micron)	µm	Fibres Yarns, ropes, cordages
		Millimetre	mm	
6)	Circumference	Millimetre	mm	Ropes, cordages
7)	Threads in fabric:			Woven fabrics (as appropriate)
a)	Lengthwise	Number per centimetre Number per decimetre	ends/cm ends/dm	
b)	Widthwise	Number per centimetre Number per decimetre	picks/cm picks/dm	
8)	Warp threads in loom	Number per centimetre	ends/cm	Reeds

(Continued)

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TABLE 3 RECOMMENDED SI UNITS FOR TEXTILES — *Contd*

SL No.	CHARACTERISTIC	SI UNIT		APPLICATION
		Unit	Abbreviation	
(1)	(2)	(3)	(4)	(5)
9)	Stitches in knitted fabric:			Knitted fabrics (as appropriate)
a)	Lengthwise	Courses per centimetre	courses/cm	
		Courses per decimetre	courses/dm	
b)	Widthwise	Wales per centimetre	wales/cm	
		Wales per decimetre	wales/dm	
10)	Stitch length	Millimetre	mm	Knitted fabrics, made-up items
11)	Mass per unit area	Grams per square metre	g/m ²	Fabrics
12)	Mass per unit length	Grams per metre	k/m	Fabrics
13)	Twist	Turns per centimetre Turns per metre	turns/cm turns/m	} Yarns, ropes (as appropriate)
14)	Test or gauge length	Millimetre, centimetre	mm, cm	
15)	Breaking load	Millinewton	mN	Fibres, delicate yarns (individual or skeins)
		Newton	N	Strong yarns (individual or skeins), ropes, cordages, fabrics
16)	Breaking length	Kilometre	km	Yarns
17)	Tenacity	Millinewton per tex	mN/tex	Fibres, yarns (individual or skeins)
18)	Twist factor or twist multiplier	Turns per centimetre × square root of tex Turns per metre × square root of tex	turns/cm × √tex turns/m × √tex	} Yarns (as appropriate)
19)	Bursting strength	Newton per square centimetre	N/cm ²	

(*Continued*)

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TABLE 3 RECOMMENDED SI UNITS FOR TEXTILES — Contd

SL No.	CHARACTERISTIC	SI UNIT		APPLICATION
		Unit	Abbreviation	
(1)	(2)	(3)	(4)	(5)
20)	Tear strength	Millinewton Newton	mN N } }	Fabrics (as appropriate)
21)	Pile height	Millimetre	mm	Carpets
22)	Pile density	Mass of pile yarn in grams per square metre per millimetre pile height	$\text{g/m}^2/\text{mm}$ pile height	Pile carpets
23)	Elastic modulus	Millinewton per tex per unit deformation	mN/tex/ unit deformation	Fibres, yarns, strands

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