

Narrow fabrics —

Part 2: Specification for cotton webbings for personal load carrying purposes

Confirmed
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Committees responsible for this British Standard

The preparation of this British Standard was entrusted by the Textiles and Clothing Standards Policy Committee (TCM/-) to Technical Committee TCM/7, upon which the following bodies were represented:

- British Narrow Fabrics Association
- British Polyolefin Textiles Association
- Consumer Policy Committee of BSI
- Home Laundering Consultative Council
- Man-made Fibres Producers' Committee
- Ministry of Defence
- SATRA Footwear Technology Centre
- Society of Dyers and Colourists
- Textile Institute

This British Standard, having been prepared under the direction of the Textiles and Clothing Standards Policy Committee, was published under the authority of the Board of BSI and comes into effect on 31 January 1991

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The following BSI references relate to the work on this standard:
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Foreword

This Part of BS 7141 has been prepared under the direction of the Textiles and Clothing Standards Policy Committee. It includes requirements for narrow fabrics specified in Defence Standard 83-58/1.

Cross-references are given in Appendix A, and information specifically requested by the Ministry of Defence and which was previously contained in Defence Standards is given in Appendix B.

Other Parts of BS 7141 are as follows:

- *Part 1: Specification for polyamide and polyolefin woven tapes and webbings;*
- *Part 3: Specification for wool tapes;*
- *Part 4: Specification for woven elastic webbings containing natural rubber;*
- *Part 5: Specification for elastic flat braids containing natural rubber;*
- *Part 6: Specification for laces for footwear and other purposes.*

Product certification. Users of this British Standard are advised to consider the desirability of third party certification of product conformity with this British Standard based on testing and continuing surveillance, which may be coupled with assessment of a supplier's quality systems against the appropriate Part of BS 5750.

Enquiries as to the availability of third party certification schemes will be forwarded by BSI to the Association of Certification Bodies. If a third party certification scheme does not already exist, users should consider approaching an appropriate body from the list of Association members.

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

Compliance with a British Standard does not itself confer immunity from legal obligations. In particular, attention is drawn to the Textile Products (Indications of Fibre Content) Regulations S.I. 1986 No. 26.

Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 to 16, an inside back cover and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

1 Scope

This Part of BS 7141 specifies requirements for cotton webbings used in the manufacture and maintenance of load carrying and other equipment for military and other personnel.

NOTE The titles of the publications referred to in this standard are listed on the inside back cover.

2 Definitions

For the purposes of this Part of BS 7141 the following definitions apply.

2.1

narrow fabric

any fabric made by interlacing fibres or yarns which (in the UK) does not exceed 450 mm in width. In the USA and for the purpose of the Combined Nomenclature of the European Community for tariff purposes, the upper limit of width is 300 mm. A characteristic of a narrow fabric is that its edges are an essential feature

NOTE Several items in Table 1 are theoretically too wide to be classified as narrow fabrics. They are included, however, as their end-use and other parameters group them with the other items.

2.2

needleloom

a shuttleless loom in which the weft is drawn from a stationary supply and introduced into the shed in the form of a double-pick by a weft insertion needle. The weft is retained at the opposite selvedge by the action of knitting, or by the introduction of a locking thread from a separate supply

2.3

needleloom selvedge (NL selvedge)

the selvedge opposite to that from which the weft is inserted in a narrow fabric needleloom

NOTE Usually, this selvedge is formed by knitting together successive double-pick weft loops, sometimes in combination with, or exclusively by means of, a locking thread from a stationary supply. Alternatively, the locking thread may be supplied from a small spool arranged to be passed through the extremities of the weft loops.

2.4

pick

a single operation of the weft insertion mechanism in weaving. Thus the "double-pick" inserted by a needleloom is defined as one pick

2.5

selvedge

when used without qualification, a longitudinal edge of a fabric formed during weaving, with the weft not only turning at the edges but also passing continuously across the width of the fabric from edge to edge

2.6

shuttleloom

a weaving machine that uses a shuttle to insert the weft

2.7

stitch finish

a finish acting as a lubricant which is applied to fabrics to facilitate the movement of sewing thread and/or penetration of a sewing needle through the fabric

2.8

tape

a woven narrow fabric, generally plain-weave, used in non-loadbearing applications and for the reinforcing of fabrics to resist wear and deformation

2.9

weave

the pattern of interlacing of warp yarns and weft yarns in a woven fabric

2.10

webbing

a woven narrow fabric, the prime function of which is loadbearing

NOTE Webbing is generally of a coarse weave and often has multiple plies.

3 Material

The webbing, except for the catch thread, shall be made wholly from cotton.

4 Manufacture

4.1 Webbings shall comply with the appropriate specification given in Table 1.

4.2 The yarns shall be three-fold, five-fold or nine-fold, as specified in Table 1. The number of turns per metre shall be as follows when determined in accordance with BS 2085:

- a) three-fold yarn, not less than 390;
- b) five-fold yarn, not less than 270;
- c) nine-fold yarn, not less than 200.

NOTE Singles yarns of 62 tex folded as specified above have been found suitable.

4.3 The minimum breaking force of the yarns before weaving shall be as follows when determined in accordance with BS 1932-1:

- a) three-fold yarn, 22 N;
- b) five-fold yarn, 35 N;
- c) nine-fold yarn, 58 N.

4.4 The finished webbings shall contain not more than 1 % by mass of grease, soap, filling or any admixture used to increase the mass per metre or to give substance or firmness.

NOTE In cases of dispute, the percentage should be determined in accordance with BS 3477.

Table 1 — Construction and performance

Reference number	MoD pattern number	Width (determined in accordance with BS 1930)	Width tolerance		Minimum ends in width (determined in accordance with BS 2862)		Minimum picks per 100 mm (determined in accordance with BS 2862)	Ply of warp yarn	Ply of weft yarn	Mass per 100 m ($\pm 3\%$) (determined in accordance with BS 2471)	Weave
			Plus	Minus	Main warp	Binder					
1	9005	12.0	0	mm	28	—	71	3 fold	3 fold	0.75	Single ply plain-weave
2		19.0	0	1	42	—	71			1.05	
3		25.0	0	1	56	—	71			1.55	
4		38.0	0	2	85	—	71			2.35	
5		51.0	0	2	112	—	71			3.10	
6		57.0	2	2	126	—	71			3.55	
7		64.0	2	2	140	—	71			3.90	
8		83.0	2	2	184	—	71			4.85	
9		89.0	2	2	196	—	71			5.45	
10		100.0	2	2	224	—	71			6.05	
11		114.0	2	2	252	—	71			7.00	
12		130.0	2	2	287	—	71			8.10	
13		146.0	2	2	322	—	71			8.65	
14		152.0	2	2	336	—	71			9.35	
15		165.0	2	2	368	—	71			9.80	
16		184.0	2	2	406	—	71			11.40	
17		203.0	2	2	456	—	71			12.35	
18		222.0	3	0	490	—	71			13.70	
19		254.0	3	0	564	—	71			15.55	
20		292.0	3	0	644	—	71			17.80	
21		355.0	3	0	784	—	71			22.00	
22		381.0	3	0	852	—	71			23.85	
23		457.0	6	0	1 008	—	71			28.35	
24	9012	12.0	0	1	20	—	59	5 fold	5 fold	0.90	Single ply plain-weave with two ends weaving as one ^a
25		19.0	0	1	34	—	59			1.45	
26		25.0	0	1	44	—	59			2.00	
27		31.0	0	2	55	—	59			2.45	
28		38.0	0	2	66	—	59			3.00	
29		41.0	0	2	72	—	59			3.30	
30		50.0	0	2	88	—	59			3.95	
31		57.0	2	2	98	—	59			4.45	

^a Except that the selvages shall each contain not less than three ends woven singly.

Table 1 — Construction and performance

Reference number	MoD pattern number	Width (determined in accordance with BS 1930)	Width tolerance		Minimum ends in width (determined in accordance with BS 2862)		Minimum picks per 100 mm (determined in accordance with BS 2862)	Ply of warp yarn	Ply of weft yarn	Mass per 100 m ($\pm 3\%$) (determined in accordance with BS 2471)	Weave
			Plus	Minus							
		mm	mm	mm	Main warp	Binder					
32	9012	64.0	2	2	110	—	59	5 fold	5 fold	4.95	Single ply plain-weave with two ends weaving as one ^a
33		76.0	2	2	136	—	59			6.20	
34		83.0	2	2	143	—	59			6.50	
35		89.0	2	2	154	—	59			7.10	
36		100.0	3	0	180	—	59			8.50	
37		114.0	3	0	202	—	59			9.45	
38		130.0	3	0	230	—	59			10.85	
39		152.0	3	0	268	—	59			12.40	
40		165.0	3	0	290	—	59			13.45	
41		184.0	3	0	323	—	59			14.85	
42		203.0	3	0	355	—	59			16.40	
43		253.0	3	0	411	—	59			19.20	
44		254.0	3	0	444	—	59			20.75	
45		292.0	6	0	510	—	59			23.85	
46		343.0	6	0	598	—	59			27.95	
47		381.0	6	0	664	—	59			31.30	
48		419.0	6	0	730	—	59			34.40	
49		445.0	6	0	774	—	59			36.25	
50		457.0	6	0	769	—	59			37.20	

Except that the selvages shall each contain not less than three ends woven singly.