BS 7041: Part 5 : 1990
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British Standard

Narrow fabrics

Part 5. Specification for elastic flat braids containing natural rubber

Tissus étroits
Partie 5. Galons plats élastiques contenant du caoutchouc naturel — Spécifications

Schmalgewebe
Teil 5. Elastische flache Tressen mit Naturkautschukanteil

British Standards Institution

Contents

Foreword

This Part of BS 7141 has been prepared under the direction of the Textiles and Clothing Standards Policy Committee and supersedes BS 1850 : 1970 which is withdrawn. The principal change from BS 1850 : 1970 is that the range of fabrics specified has been revised.

The specifications are based mainly on construction since, at the present levels of test technology and information, it is not yet possible to specify elastic braids in objective, performance-based terms.

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

Other Parts of this British Standard in preparation are:

Part 1 Specification for polyamide and polyolefin woven tapes and webbings

Part 2 Specification for cotton webbings for personal load carrying purposes

Part 3 Specification for wool tapes

Part 4 Specification for woven elastic webbings containing natural rubber

Part 6 Specification for laces for boots, shoes and other purposes

Compliance with a British Standard does not of 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.

Specification

1 Scope

This Part of BS 7141 specifies requirements for elastic flat braids containing natural rubber.

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 **braid.** A type of narrow fabric produced by interlacing three or more threads in such a way that they cross one another in diagonal formation.

2.2 **mass per unit area (narrow fabric).** A characteristic of a narrow fabric which may be calculated according to the following formula:

$$\text{Mass per unit area (in g/m}^2\text{)} = \frac{\text{Mass (in g per 100 m)} \times 10}{\text{Width (in mm)}}$$

2.3 **modulus.** The force required to extend an elastic narrow fabric by a given extension.

2.4 **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 width limit is 300 mm. A characteristic of a narrow fabric is that its edges are an essential feature.

2.5 **rubber count.** The number of threads of a round (cross section) rubber thread which, when placed side by side, measure 25.4 mm, e.g. a round rubber thread of 0.6 mm diameter is termed round count 40.

NOTE. In practice, the count is often expressed as 40/46 meaning a round count of 40, the figure 46 being the count of square (cross section) rubber thread of equivalent cross-sectional area. In this standard the rubber threads used are all round in cross section and the counts quoted are the round rubber counts.

2.6 **runback.** Describes the phenomenon in an elastic fabric in which, when cut, the elastic threads retract from the cut end, into the body of the material.

2.7 **stretch.** The extension under a given force of an elastic fabric expressed as a percentage of the original dimension of the fabric.

3 Materials

3.1 Rubber thread

Rubber thread shall be made from vulcanized natural rubber, and shall have a maximum relative density of 1.05. Its round count shall be not less than 40 nor greater than 30 when measured in accordance with BS 5421.

The minimum elongation of the rubber shall be at least 30 % greater than the stretch of the braid into which it is to be incorporated (see BS 4952).

3.2 Textile braiding yarn

The textile braiding yarn shall be made from one of the following fibres:

(a) cotton;
(b) continuous filament viscose;
(c) continuous filament polyamide;
(d) continuous filament polyester;
(e) continuous filament polypropylene.

4 Construction

4.1 The constructions for each braid shall be as given in table 1.

4.2 The maximum width of braid shall be 25.5 mm.

5 Performance

The performance of the braid shall be as given in table 1.

Table 1. Construction and performance of elastic flat braids

Reference number	Minimum number rubber threads per millimetre width (measured in accordance with appendix C)	Minimum number textile braiding threads per millimetre width (measured in accordance with appendix C)	Minimum mass per unit area rubber (measured in accordance with BS 2471)	Minimum total mass per unit area (measured in accordance with BS 2471)	Minimum stretch (measured in accordance with BS 4952 method 6)
			g/m^2	g/m^2	%
1	1.0	2.0	150	480	125
2	1.0	2.0	150	480	150
3	1.0	2.0	300	480	150

6 Sampling

Samples shall not be taken from the first three metres of braid manufactured. Sampling shall be as follows.

The number of samples (S) taken from each machine shall be as given by:

$$S = 0.25\sqrt{N}$$

where

S is the number of samples (to the nearest integer);

N is the number of 250 m lengths from a machine.

A minimum of one sample shall be taken from each machine.

In the event of dispute samples shall be preconditioned for 4 h at a relative humidity not exceeding 10 % r.h., at a temperature not greater than 50 °C and subsequently exposed to the standard temperate atmosphere for testing textiles as defined in BS 1051 for not less than 24 h and tested without removal from that atmosphere.

7 Marking

The braids shall be provided with a ticket or other means of marking attached to each container carrying the following information:

(a) the number and date of this Part of BS 7141*, i.e. BS 7141 : Part 5 : 1990;

(b) the reference number of the product in accordance with table 1;

(c) the name, trademark or other means of identification of the manufacturer.

NOTE. For MoD contracts additional information will be required, e.g. the contract number, the pattern number, the item name and description (see also appendix B).

* Marking BS 7141 : Part 5 : 1990 on or in relation to a product represents a manufacturer's declaration of conformity, i.e. a claim by or on behalf of the manufacturer that the product meets the requirements of the standard. The accuracy of the claim is therefore solely the responsibility of the person making the claim. Such a declaration is not to be confused with third party certification of conformity, which may also be desirable.

Appendices

Appendix A. Cross-references

ross-references between the reference numbers specified this Part of BS 7141 and reference numbers in BS 1850 : 970 are given in table 2, which also gives qualitative haracteristics of the fabrics.

Table 2. Cross-references

Reference number	Previous reference numbers from BS 1850	Stretch	Modulus
1	1.1, 1.2, 1.3, 1.4, 2.1, 2.2	Medium	Medium
2	1.5, 1.6	High	Medium
3	3.1, 3.2, 3.3	High	High

Appendix B. Supplementary information or MoD contracts

B.1 Standard patterns

A standard pattern obtainable from the authority named n the tender or contract provides criteria for any properties ot specified in this standard.

B.2 Non-compliance

In the event of non-compliance with the specified requirements, any resampling is at the discretion of the Quality Assurance Directorate of the MoD.

B.3 Delivery format

Rolls should be rolled straight and free from creases. The rolls should be approximately 33 m in length when measured in accordance with BS 1931 after not less than 24 h relaxation. Rolls of not more than 2 lengths may be accepted provided that the shorter length is not less than 11 m.

Appendix C. Method for counting the number of threads in the braid

Determine the number of ends in the braid by dissecting a short length of the braid and counting the threads. Record separately the number of braiding ends.