BSI

BS 5833 : 1988

UDC 685.31 : 676.811

British Standard Scheme for

Labelling of footwear

Etiquetage des chaussures

Kennzeichnung von Schuhwerk

British Standards Institution

23 MAY 1988

Foreword

This revision of BS 5833 has been prepared under the direction of the Textiles and Clothing Standards Committee following requests from retailers and consumers. It is hoped that manufacturers and components suppliers will follow this standard so that consumers can be informed easily of the necessary facts to be considered when selecting footwear. Many of the requirements included in this standard are based on those in the 'Voluntary Code of Practice for Footwear' prepared by the Footwear Distributors' Federation in consultation with the Office of Fair Trading.

This revision supersedes BS 5833 : 1980, which is withdrawn. In 4.4 of BS 5833 : 1980, reference was made to 'leather' as defined in BS 2780. In 1983 a revision of BS 2780 was published which incorporated new terms which were relevant to the labelling of footwear, in particular the terms 'laminated leather' and 'coated leather'. This revision has been prepared taking account of the revision of BS 2780 and, in addition, noting the experiences gained in using BS 5833 : 1980 and the requests of consumers.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

Contents

Scheme

1 Scope

This British Standard specifies a scheme for the labelling of footwear, including size, brand name or other means of identification, and those parts of the footwear for which the material is to be stated, and the terms to be used. Details of a classification of footwear related to intended use are given in table 1.

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 British Standard the following definitions apply, the definitions given in **2.2**, **2.3** and **2.4** being identical to the definitions given in entries, 159, 56 and 156 of BS 2780 : 1983, respectively.

NOTE. In footwear, the polymers defined in **2.6**, **2.7** and **2.8** are used in a compounded form incorporating colouring materials, stabilizers, and frequently fillers and external plasticizers.

2.1 sole. That part of the forepart bottom of the shoe which is attached to the upper part of the shoe, as a separate component or composite, the bottom surface of which is subjected to abrasive wear.

2.2 leather. Hide or skin with its original fibrous structure more or less intact, tanned to be imputrescible. The hair or wool may or may not have been removed. It is also made from a hide or skin that has been split into layers or segmented either before or after tanning.

NOTE 1. If the leather has a surface coating, the mean thickness of this surface layer, however applied, has to be 0.15 mm or less.

NOTE 2. If the tanned hide or skin is disintegrated mechanically and/or chemically into fibrous particles, small pieces or powders and then, with or without the combination of a binding agent, is made into sheets or forms, such sheets or forms are not leather.

2.3 coated leather. A product where the surface coating applied to the leather substrate does not exceed one-third of the total thickness of the product, but is in excess of 0.15 mm.

NOTE. If the surface appearance is shiny, the term 'patent coated leather' is permissible.

2.4 laminated leather.

(a) A composite of two or more layers of leather.

(b) A composite of a layer of leather and one or more layers of another sheet or film of plastics or other material.

NOTE. The term is applied to products that are excluded from the definitions of leather (**2.2**) and coated leather (**2.3**). The components should be identified according to the proportion they form of the total thickness, e.g. leather/polyurethane laminate if the leather component exceeds 50 %.

2.5 man-made. A material which contains a substantial amount of synthetic or modified natural polymer.

2.6 ethylene-vinyl acetate (EVA). A copolymer of ethylene and vinyl acetate which contains between 5 % and 50 % by mass of structural units of vinyl acetate, i.e. $-CH_2-CH(OCOCH_3)-$, incorporated in a polyethylene chain.

2.7 polyurethane (PU). A polymer in which the recurring structural unit in the chain is of the urethane type, i.e. $-O-CO-NH-$.

2.8 polyvinyl chloride (PVC). A polymer of vinyl chloride having in the chain the recurring structural unit $-CH_2-CHCl-$.

2.9 resin rubber. A compounded material based on natural rubber and/or copolymer of styrene and butadiene, which is reinforced with a high styrene content copolymer of styrene and butadiene.

2.10 rubber. An elastic material derived from latex from living plants, and/or from synthetic polymers.

2.11 textile. Originally a woven fabric but the term is now applied to fibres, filaments, or yarns, natural or man-made, and products made from them.

NOTE 1. For example, threads, cords, ropes, braids, lace, embroidery, nets, and fabrics made by weaving, knitting, felting, bonding, and tufting are textiles.

NOTE 2. Where textile materials are concerned, attention is drawn to the relevant provision of the Trade Descriptions – The Textile Products (Indication of Fibre Content) Regulations, 1986 (S.I. 1986, No. 26).

3 Information to be made available at the time of sale

3.1 Size

The shoe size and, where available, the width fitting shall be clearly marked on the footwear by the methods specified in **4.1**, and if this size is not in the English system the English size shall be made available.

NOTE. If the Mondopoint system of shoe size labelling is adopted in accordance with BS 4981, this size should also be made available.

3.2 Brand name

The brand name, or other means of identification, shall be clearly marked on the footwear by the methods specified in **4.1**. The brand name shall be traceable to a UK source.

NOTE 1. Traceability may be achieved by, for example, a UK registered trademark.

NOTE 2. The attention of manufacturers is drawn to UK legislation on marking the country of origin on goods, current at the time of publication of this standard.

3.3 Materials of manufacture

3.3.1 *Materials of the upper.* The material of manufacture, or the two principal materials of the upper, shall be indicated using the terms in **3.3.3** by one of the methods specified in **4.2**.

Where the upper and the lining are made from materials of the same generic type, then the material shall be indicated without making a distinction between the outer upper and lining. The appropriate label shall take the form:

'leather upper'

where 'coated leather', or 'laminated leather', or 'man-made', or 'rubber', or 'textile' can be substituted for 'leather'.

If the upper and the lining are made from a variety of materials, the appropriate label shall indicate the two principal materials of each, in decreasing order of predominance, based on the surface area of the materials in question (e.g. 'leather/man-made upper, coated leather/leather lining').

If the upper and the lining are of different materials but each is made from one type of material exclusively, then the materials shall be labelled separately (e.g. 'leather upper, man-made lining; man-made upper, leather lining').

If the upper is of one generic type and the lining is of a variety of materials, then the label shall indicate the material of the upper and the two principal materials of the lining in decreasing order of predominance (e.g. 'coated leather upper, leather/man-made lining').

If the upper is of several materials and the lining is of one generic type then the label shall indicate the two principal materials of the upper in decreasing order of predominance and the material of the lining (e.g. 'man-made/leather upper, man-made lining').

The materials used for trimmings need not be indicated:

(a) where they are purely decorative, or

(b) where their total surface area is less than 15 % of the total area of the upper.

3.3.2 *Materials of the sole.* The material of manufacture, or the two principal materials of the sole, based on thickness, determined on samples in accordance with the method in appendix A, shall be indicated in decreasing order, using the terms in **3.3.3**, by one of the methods specified in **4.2**.

NOTE. The terms 'ethylene-vinyl acetate' or 'EVA' (see **2.6**), 'polyurethane' or 'PU' (see **2.7**), 'polyvinyl chloride' or 'PVC' (see **2.8**) and 'resin rubber' (see **2.9**) used in relation to soles may be used singly or in combination in place of the generic term 'man-made' (see **2.5**).

3.3.3 *Terms used for labelling.* The following generic terms for materials of manufacture shall be used in labelling of footwear, either singly or severally in accordance with **3.3.1** and **3.3.2**:

(a) leather, or

(b) coated leather, or

(c) laminated leather, or

(d) man-made, or

(e) rubber, or

(f) textile.

NOTE. Additional terms may be used in conjunction with these generic terms. Provision is made in **3.3.2** for certain soling materials to be included on the label in place of the generic term 'man-made'.

3.4 Suitable use

A guide to the classification of footwear according to its intended use is given in table 1. Retailers wishing to use this classification system shall display the information given in columns 1 and 2 of this table at the point of sale.

3.5 Cleaning and care

If footwear requires special cleaning or care, a leaflet giving advice on this shall be provided.

NOTE. It is recognized that it is not possible to include advice on cleaning and care on a label with each pair of shoes, but retailers are encouraged to make such information available.

4 Method of labelling

4.1 The brand name or other means of identification, size and, where appropriate, the width fitting, shall be labelled on each item of footwear by one or more of the following methods:

(a) engraving;

(b) stamped markings;

(c) adhesive label.

The information shall be clearly visible and legible.

NOTE. Within practical limitations, the information should be positioned so that the effects of wear on its legibility are minimized.

4.2 Information on the materials of manufacture and, where appropriate, end use recommendations shall be made available either by one of methods (a), (b) or (c) in **4.1** or by some other appropriate written method attached to the footwear, such as a swing ticket.

Table 1. Guide to the classification of footwear according to intended use

Category	Intended use	Examples of footwear in category
1. Waterproof	Use where full waterproofness is needed	Wellington boots Overshoes Waterproof shoes
2. Sports and specialist footwear	For one particular end use or to meet a specialist need	Climbing boots Football boots Golf shoes Running shoes Footwear complying with BS 1870 Footwear complying with BS 4972
3. Heavy use	Heavy work, country use	Industrial shoes and boots Agricultural shoes and boots Stout walking shoes
4. Medium use	Normal town outdoor conditions and general work, school and social use	Town shoes Leisure shoes, including trainers Showerproof boots Children's school shoes and sandals
5. Light use	Wear indoors and outdoors in favourable conditions	Strap sandals Children's sandals Open or perforated shoes
6. Indoor use	Indoor use only	Slippers Pram shoes Dancing shoes Children's party shoes

A.4.3 Bottoms with surface patterns of less than 1 mm depth

Proceed as in **A.4.2** but take the surface of the bottom to be half way between the peaks and troughs in the pattern, as judged by eye. If the peaks and troughs do not cover equal areas of the surface make allowance for this in estimating the position of the effective surface of the bottom (where the peaks occupy a greater area of the sole than the troughs consider the bottom to be near to the peaks; where the troughs occupy a greater area of the sole than the peaks consider the bottom to be near to the troughs).

A.4.4 Bottoms with surface patterns of greater than 1 mm depth

A.4.4.1 *Patterns with regular peaks and troughs of equal areas.* See figure 2. Proceed as in **A.4.2** for all layers except the bottom layer, which includes the surface pattern. This layer varies in thickness; consequently, determine its effective thickness in the following way.

Measure the thickness of this layer at five troughs as near as possible to points D, E, F, G and H, and repeat these measurements at five peaks as near as possible to points D, E, F, G and H.

Calculate the effective thickness of this layer, which is the sum of the five measurements of the thickness of this layer at five troughs plus the five measurements of the thickness of this layer at five peaks divided by 10.

A.4.4.2 *Patterns with regular peaks and troughs of unequal areas.* Proceed as in **A.4.2** for all layers except the bottom layer, which includes the surface pattern. This layer varies in thickness; consequently, determine its effective thickness in the following way.

Where the peaks have vertical sides as shown in figure 3, measure the width of the peaks (shown as dimension *a*) using the steel rule (**A.2.2**) at five different points, and calculate the average value of dimension *a*. Then measure the width of the gap between the peaks (shown as dimension *b*) using the steel rule at five different points and calculate the average value of dimension *b*.

Where the peaks have sloping sides as shown in figure 4, measure the values of *a* and *b*, each at five different points, and in each case measure the values half way up the side of each peak. To do this, mark the peaks half way up each side, and set the dividers (**A.2.4**) so that their tips coincide with the marked points and measure this tip separation using the steel rule. Calculate the average value of dimension *a*, and calculate the average value of dimension *b*.

Calculate the effective fraction *K* of the area covered by peaks,

$$\text{where } K = \frac{\text{average value of } a}{\text{average value of } a + \text{average value of } b}$$

Measure the thickness of this layer at five troughs as near as possible to points D, E, F, G and H, and repeat these measurements at five peaks as near as possible to points D, E, F, G and H.

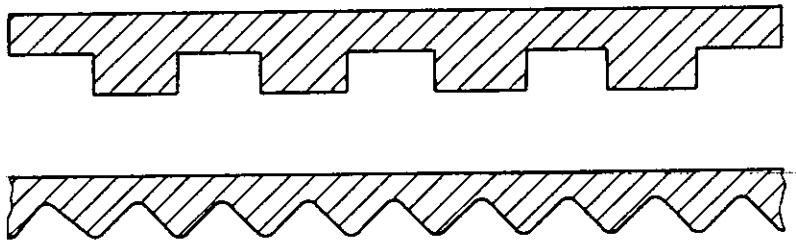


Figure 2. Examples of patterns with regular peaks and troughs of equal areas

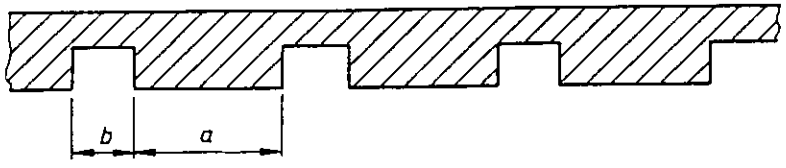


Figure 3. Example of pattern with regular peaks with vertical sides and troughs of unequal areas

Calculate the average value of the thickness of this layer at the troughs (i.e. the average value of t_1). Then calculate the average value of the thickness of this layer at the peaks (i.e. the average value of $(t_1 + t_2)$). Subtract the average value of t_1 from the average value of $(t_1 + t_2)$ to obtain the average value of t_2, and calculate the effective thickness of this layer, t_L, as given by the equation

$$t_L = \text{(average value of } t_1\text{)} + K\,\text{(average value of } t_2\text{)}$$

A.4.4.3 *Irregular patterns*

A.4.4.3.1 *General.* These are divided into two types. The first type is a small pattern with a great deal of complicated fine detail. The peaks may differ in height, or in spacing, or in area, or in shape, or in any combination of these. Such a pattern may be found on the bottoms of trainers and tennis shoes. Examples are given in figure 5. For this type, proceed as in **A.4.2** for all layers except the bottom layer, which includes the surface pattern. This layer varies in thickness; consequently, determine its effective thickness in accordance with **A.4.4.3.2.**

The second type is larger, and consists of a series of large peaks and troughs at different intervals. Such a pattern may be found on the bottoms of army boots, or heavy walking boots. An example is given in figure 6. For this type, proceed as in clause **A.4.2** for all layers except the bottom layer, which includes the surface pattern. This layer varies in thickness; consequently, determine its effective thickness in accordance with **A.4.4.3.3.**

A.4.4.3.2 *Procedure 1.* Measure the thickness of this layer at the marked points D, E, F, G and H and at the midpoints of ED, DF, GD and DH. Calculate the average of the nine measurements, which is the effective thickness of this layer.

A.4.4.3.3 *Procedure 2.* Estimate by eye the effective fraction, K, of the area covered by peaks within the square boundary defined by the points E, F, G and H.

Measure the thickness of this layer at a trough and a peak as near as possible to each of the four points E, F, G and H and within the square boundary defined by the points E, F, G and H.

Calculate the average value of the thickness of this layer at the troughs (that is, the average value of t_1). Then calculate the average value of the thickness of this layer at the peaks (that is, the average value of $(t_1 + t_2)$). Subtract the average value of t_1 from the average value of $(t_1 + t_2)$ to obtain the average value of t_2, and calculate the effective thickness of this layer, t_L, as given by the equation

$$t_L = \text{(average value of } t_1\text{)} + K\,\text{(average value of } t_2\text{)}$$

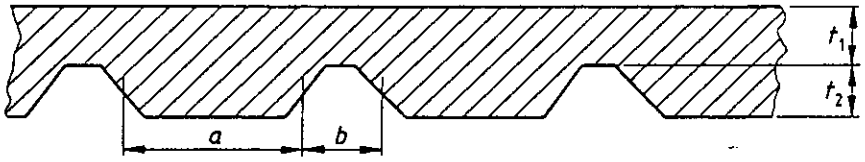


Figure 4. Example of pattern with regular peaks with sloping sides and troughs of unequal areas

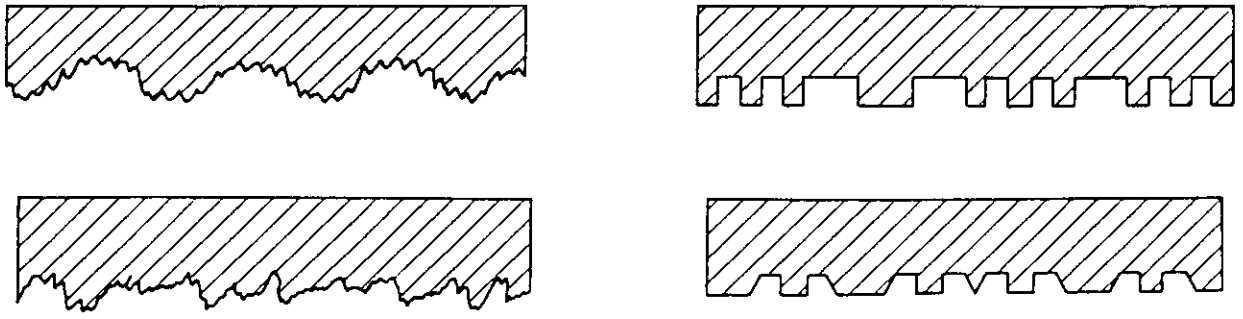


Figure 5. Examples of irregular patterns with a great deal of complicated fine detail

Appendix

Appendix A. Method for the determination of the two predominant materials of the sole

A.1 Principle

The thickness, or effective thickness, of the various layers comprising the forepart bottom of the shoe (excluding insole, bottom filler, and rand) is measured at several points within the tread region, by means of an optical magnifier containing a graduated scale. The thickness, or effective thickness, is the average of these measurements. From the thickness, or effective thickness, of these layers the two predominant materials are identified.

A.2 Apparatus

A.2.1 *An optical magnifier* of about 10 times magnification containing a 20 mm scale graduated in 0.1 mm divisions.

A.2.2 *A steel rule,* preferably flexible.

A.2.3 *A tee square.*

A.2.4 *Dividers* w th a locking/adjustment nut.

A.3. Preparation of the footwear for measurement

Cut the upper from the bottom just above the level of the bottom. If the construction includes a mudguard which goes part way up the upper, treat this as part of the upper and cut it away. Remove medium and high heels from women's footwear.

Place the inside edge and toe of the inverted shoe bottom against a tee square (A.2.3) so that it touches the square at points A, B and X as shown in figure 1. Mark points A and X on the shoe bottom. Reposition the bottom so that it touches the tee square along the inside edge and at the rear of the heel. Mark point Y either on the wearing surface of the heel, or, if the heel has been removed, on the lasted margin of the upper.

Draw a line on the shoe bottom joining points X and Y to obtain the centre line of the shoe. From point A, draw another line on the shoe bottom which is perpendicular to the centre line and meets it at point D. Extend this line to the outside edge of the bottom at point C. Measure the length of AC with the steel rule (A.2.2).

Mark two points E and F on the centre line such that ED = DF, and EF = ½AC. Similarly mark two points G and H on the line AC such that GD = DH and GH = ½AC. This is illustrated in figure 1.

Make clean vertical cuts through the sole along the lines XY and AC. The insole may be removed first if this does not damage or distort the bottom of the shoe.

A.4 Measuring procedures and thickness calculations

A.4.1 General

The procedures differ slightly according to the type of surface pattern on the sole. The procedure for a bottom with a smooth surface is given in A.4.2, and modifications to this procedure for various types of patterned soles are described in A.4.3 and A.4.4.

A.4.2 Bottoms with a smooth outer surface

Place the optical magnifier (A.2.1) at point D on the cut edge and measure the thickness of the layers of the bottom to the nearest 0.1 mm. In carrying out these measurements, exclude the insole (or runner in a veldtschoen construction), the upper under the foot in a moccasin, and any material added to fill a cavity on the underside of the insole produced by the lasted margin of the upper. However, do not exclude material added to fill any cavity moulded into the shoe bottom. If the bottom has ribs moulded on the insole side exclude these from the measurements.

Repeat this measurement at points E, F, G and H on the cut edges. For each layer, calculate the average of the five values to give the thickness of that layer.

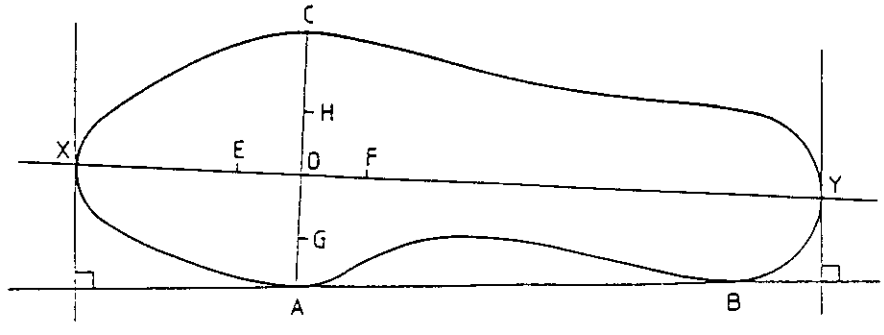
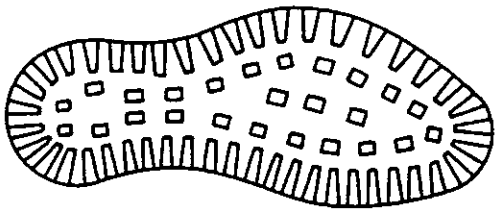


Figure 1. Marking the shoe bottom to determine the thickness measuring points



Plan view

Figure 6. Example of irregular pattern with large peaks and troughs at different intervals

A.5 Expression of results

Produce a table which lists each layer, the material of the layer, and its thickness or effective thickness.

Where there are two or more layers consisting of the same material, add together the thicknesses or effective thicknesses of any layers which consist of the same material.

Identify the material of greatest total thickness and the material of second greatest total thickness. The two materials so identified constitute the most predominant material of the sole and the second most predominant material of the sole respectively.

A.6 Test report

Include the following items in the test report.

(a) The most predominant material of the sole.

(b) The second most predominant material of the sole.

(c) Reference to the procedure adopted, e.g. BS 5833, procedure 2 (see **A.4.4.3.3**).