BRITISH STANDARD

BS EN 12826:2000

Incorporating Corrigendum No. 1

Footwear — Test methods for lining and insocks — Static friction

The European Standard EN 12826:2000 has the status of a British Standard

ICS 61.060

NO COPYING WITHOUT BSI PERMISSION EXCEPT AS PERMITTED BY COPYRIGHT LAW

BSI Document Sharing Hub British Standards

Full document details: BS EN 12826:2000

National foreword

This British Standard is the official English language version of EN 12826:2000, including Corrigendum July 2002.

The UK participation in its preparation was entrusted to Technical Committee TCI/69, Footwear and leather, which has the responsibility to:

— aid enquirers to understand the text;

— present to the responsible European committee any enquiries on the interpretation, or proposals for change, and keep the UK interests informed;

— monitor related international and European developments and promulgate them in the UK.

A list of organizations represented on this committee can be obtained on request to its secretary.

Cross-references

The British Standards which implement international or European publications referred to in this document may be found in the *BSI Catalogue* under the section entitled "International Standards Correspondence Index", or by using the "Search" facility of the *BSI Electronic Catalogue* or of British Standards Online.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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

Summary of pages

This document comprises a front cover, an inside front cover, the EN title page, pages 2 to 19 and a back cover.

The BSI copyright notice displayed in this document indicates when the document was last issued.

This British Standard, having been prepared under the direction of the Sector Committee of Materials and Chemicals, was published under the authority of the Standards Committee and comes into effect on 15 October 2000

© BSI 20 April 2004

Amendments issued since publication

Amd. No.	Date	Comments
15132 Corrigendum No. 1	20 April 2004	Correction to **7.1.1** and **7.1.2**

ISBN 0 580 34333 2

Documents
Document Sharing Hub

Full document details: BS EN 12826:2000

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 12826

March 2000

ICS 61.060

Incorporating corrigendum July 2002

English version

Footwear - Test methods for lining and insocks - Static friction

Chaussures - Méthodes d'essai pour la doublure et pour la première de propreté - Frottement statique

Schuhe - Prüfverfahren für Schuhfutter und Decksohlen - Haftreibung

This European Standard was approved by CEN on 20 January 2000.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

© 2000 CEN All rights of exploitation in any form and by any means reserved worldwide for CEN national Members.

Ref. No. EN 12826:2000 E

Documents
Document Sharing Hub

Full document details: BS EN 12826:2000

Contents

Page

Foreword 3

1 Scope 4

2 Normative references 4

3 Definitions 4

4 Apparatus and material 4

5 Sampling and conditioning 8

6 Test method 9

7 Expression of results 11

8 Test report 17

Annex A (informative) Examples of autographic traces of friction tests on coated fabrics and determination of the variability of kinetic friction 18

Documents
Document Sharing Hub

Full document details: BS EN 12826:2000

Foreword

This European Standard has been prepared by Technical Committee CEN/TC 309 "Footwear", the secretariat of which is held by AENOR.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by September 2000, and conflicting national standards shall be withdrawn at the latest by September 2000.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

Documents
Document Sharing Hub

Full document details: BS EN 12826:2000

1 Scope

This European standard specifies two methods of assessing the frictional properties of lining and insocks, irrespective of the material.

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

EN 12222, *Footwear – Standard atmospheres for conditioning and testing of footwear and components for footwear.*

3 Definitions

For the purposes of this standard the following definitions apply:

3.1
coefficient of static friction (μ_s)
the ratio of the force necessary to cause the tangential separation of two stationary surfaces to the perpendicular force acting upon the two surfaces

3.2
coefficient of kinetic friction (μ_k)
the ratio of the force necessary to maintain a constant velocity between two surfaces in contact to the perpendicular force acting upon the two surfaces

3.3
kinetic angle of surface drag *(D_k)*
the angle of the inclined plane at which the test sled will slide down the inclined plane when sliding is initiated by a standard impulse

3.4
static angle of surface drag *(D_s)*
the angle of the inclined plane at which the test sled will slide down the inclined plane under its own mass and momentum

4 Apparatus and material

The following apparatus and material shall be used:

4.1 Method A

4.1.1 A sled, (150 mm ± 1 mm) long x (100 mm ± 1 mm) wide having a mass of 700 g ± 15 g to which a lining or insock test specimen is attached (see 5.1.1) and a test specimen support of cellular rubber, or plastics material, 3 mm thick and of medium apparent density. The surface of the sled is flat and smooth or polished. The edges of the sled do not contain any burrs or roughness.

AVA Documents
Document Sharing Hub

Full document details: BS EN 12826:2000

When laid upon the horizontal bed of the test instrument the sliding surface of the sled is parallel with the horizontal bed, in full planar contact and without distortion.

4.1.2 A driving mechanism, to move the sled or horizontal bed in such a manner that the relative movement of one with the other can be maintained at a constant velocity of 800 mm/min ± 80 mm/min.

The drive mechanism is automatically disengaged or de-energized at the end of the test run (see 4.1.3).

4.1.3 A flat bed of rigid construction, having a smooth or polished surface to which the comparator material (see 5.1.2) is fixed in such a manner that the comparator material is not stretched more than a necessary minimum to remove wrinkles or other non-permanent distortions.

The flat bed is of a length to permit a relative surface travel during the test of approximately 400 mm and of a width to permit approximately 50 mm of clearance between the edge of the sled and any edge obstructions.

4.1.4 A measuring device, in the form of a strain gauge, with an associated autographic recording instrument to determine accurately the force necessary to initiate movement and the force necessary to maintain a constant velocity thereafter. The response time of the recording instrument is less than 0,25 s.

4.2 Method B

4.2.1 Instrument for the determination of static angle of surface drag *(D_s)*

4.2.1.1 Rigid platform, not less than 300 mm long and not less than 100 mm wide and hinged at one end to a baseboard provided with levelling screws. The rigid platform shall be provided with a spirit level and means for measuring the angle of inclination with an accuracy of ± 0,5°.

4.2.1.2 A piece of woollen melton cloth[1]), measuring approximately 250 mm long and 100 mm wide with its length in the cross direction and fixed under slight tension to the platform (see 4.2.1.1)

NOTE The melton cloth should be covered when the apparatus is not in use. It should be replaced at intervals, or if contaminated.

4.2.1.3 Specimen carrier, made of metal, with dimensions as illustrated in figure 1. The total mass of the carrier including the clamping screw shall be adjusted to 300 g by balanced boring out of the upper section of the carrier.

---

[1]) Recommended physical characteristics of woven fabrics:

Fibre content:	90 % Wool, 10 % Cotton
Weave:	3/1 broken
Finish and other details:	woollen spun
Mass per unit area:	min. 650 g/m^2
Threads per unit length:	warp: min. 14,6 per cm, weft: min. 11,0 per cm
Breaking strength:	warp: min. 355 N per 50 mm, weft: min. 325 N per 50 mm
Dimensional change:	max. 2,0

Documents
Document Sharing Hub
Full document details: BS EN 12826:2000