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**Footwear — Test methods for  
accessories: shoe laces — Abrasion  
resistance**

*Chaussures — Méthodes d'essai pour accessoires: lacets et œillets —  
Résistance à l'abrasion*



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## Foreword

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ISO 22774 was prepared by the European Committee for Standardization (CEN) in collaboration with Technical Committee ISO/TC 216, *Footwear*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

Throughout the text of this document, read “...this European Standard...” to mean “...this International Standard...”.

Annex ZA provides a list of corresponding International and European Standards for which equivalents are not given in the text.

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## Foreword

This document (EN ISO 22774:2004) has been prepared by CEN/TC 309, "Footwear", the secretariat of which is held by AENOR, in collaboration with Technical Committee ISO/TC 216 "Footwear".

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of an identical text or by endorsement, at the latest by June 2005, and conflicting national standards shall be withdrawn at the latest by June 2005.

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

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## 1 Scope

This document specifies three test methods for determining the abrasion resistance of a shoe lace to repeated rubbing:

- Method 1: lace to lace abrasion;
- Method 2: lace to standard eyelet abrasion;
- Method 3: lace to eyelet (from footwear) abrasion.

## 2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

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

## 3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

### 3.1

#### **abrasion resistance of shoe laces**

ability of the shoe lace to resist to repeated rubbing against either a similar shoe lace or a lace carrier

### 3.2

#### **number of cycles to failure**

arithmetic mean of the number of cycles to failure for the test specimens submitted to test

### 3.3

#### **type of failure**

expressed as failure of the shorter lace or failure of the longer lace, together with a description of the respective amount of wear in the covering and core of each lace

## 4 Principle

A shoe lace is threaded through a loop formed by:

- a piece of similar lace held open by a spacer (Method 1);
- a lace carrier (Methods 2 and 3).

The shoe lace is bent through a fixed acute angle at the point of contact with the loop. It is then held under a standard tension while it is repeatedly drawn back and forth through the loop until it fails.