

Footwear - Test methods for uppers, lining and insoles -  
Thermal insulation (ISO 17705:2003)

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ICS 61.060

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EUROPEAN STANDARD

**EN ISO 17705**

NORME EUROPÉENNE

EUROPÄISCHE NORM

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English Version

## Footwear - Test methods for uppers, lining and insoles - Thermal insulation (ISO 17705:2003)

Chaussures - Méthodes d'essai des tiges, de la doublure  
et des premières de propreté - Isolation thermique  
(ISO 17705:2003)

Schuhe - Prüfverfahren für Obermaterialien, Futter und  
Decksohlen - Wärmedämmung (ISO 17705:2003)

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**CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels**

## European foreword

The text of ISO 17705:2003 has been prepared by Technical Committee ISO/TC 216 "Footwear" of the International Organization for Standardization (ISO) and has been taken over as EN ISO 17705:2018 by Technical Committee CEN/TC 309 "Footwear" the secretariat of which is held by UNE.

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of an identical text or by endorsement, at the latest by April 2019, and conflicting national standards shall be withdrawn at the latest by April 2019.

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## Endorsement notice

The text of ISO 17705:2003 has been approved by CEN as EN ISO 17705:2018 without any modification.

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## 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of an identical text or by endorsement, at the latest by May 2002, and conflicting national standards shall be withdrawn at the latest by May 2002.

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.

## 1 Scope

This European Standard specifies a test method for determining the thermal conductivity of uppers, lining and insoles irrespective of the material, in order to assess the suitability for the end use.

## 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 (including amendments).

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

## 3 Terms and definitions

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

### 3.1

#### **thermal insulation**

thermal conductivity of a material under static conditions

### 3.2

#### **upper**

materials forming the outer surface of the footwear which is attached to the sole assembly and covers the upper dorsal surface of the foot. In the case of boots this also includes the outer face of the material covering the leg. Only the materials that are visible are included, no account should be taken of underlying materials

### 3.3

#### **complete upper assembly**

finished upper, fully seamed, joined or laminated as appropriate, comprising the centre material and any lining(s) together with all components such as interlinings, adhesives, membranes, foams or reinforcements, but excluding toe puffs and stiffeners

NOTE The complete upper assembly can be flat, 2-dimensional or comprise lasted upper in the final footwear.

## 4 Apparatus and material

The following apparatus and material shall be used:

4.1 “Lees’ disc” apparatus, see Figure 1, including the following:

4.1.1 Cylindrical brass block, which will subsequently be referred to as block B1, with:

4.1.1.1 Diameter of approximately 75 mm which is known with an accuracy of 0,2 mm.

4.1.1.2 Height of approximately 25 mm which is known with an accuracy of 0,2 mm.

4.1.1.3 Hole of diameter 2 mm  $\pm$  0,1 mm drilled radially to its centre.

4.1.1.4 Type K thermocouple inserted into the hole until its junction is at the bottom of the hole.