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**Resilient floor coverings —  
Determination of apparent density of  
composition cork**

*Revêtements de sol résilients — Détermination de la masse volumique  
de l'aggloméré de liège*

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## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 3850 was prepared by the European Committee for Standardization as EN 672 and was adopted, under a special "fast-track procedure", by Technical Committee ISO/TC 87, *Cork*, in parallel with its approval by the ISO member bodies.

For the purposes of international standardization, a list of corresponding International and European Standards for which equivalents are not given in EN 672 has been added as Annex ZZ.

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## **Foreword**

This European Standard has been prepared by Technical Committee CEN/TC 134 “Resilient and textile floor coverings”, the secretariat of which is held by BSI.

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of an identical text or by endorsement, at the latest by June 1997, and conflicting national standards shall be withdrawn at the latest by June 1997.

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

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## 1. Scope

This European Standard describes a method for determining the apparent density of agglomerated cork. The method is based on ISO 3810 : 1987.

## 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 427 Resilient floor coverings - Determination of side length, squareness and straightness of tiles

EN 428 Resilient floor coverings - Determination of overall thickness

## 3. Principle

A test piece of known dimensions is weighed and its apparent density calculated from the quotient of mass and volume.

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## 4. Apparatus

- 4.1 The apparatus described in EN 427 for measuring side length and width of tiles.
- 4.2 The apparatus described in EN 428 for measuring thickness of tiles.
- 4.3 Balance, with an error limit of 0,5 g.

## 5. Sampling and preparation of test pieces

Take a representative sample from the available material and from that take at least five tiles as test pieces. When the sample is comprised of a pack of tiles, ensure that the first and the last tiles are not used as test pieces.

## 6. Conditioning

Condition the test pieces at a temperature of  $(23 \pm 2)^\circ\text{C}$  and relative humidity of  $(50 \pm 5)\%$  for a minimum of 24 h. Maintain these conditions when carrying out the test.

## 7. Procedure

Determine the dimensions of each test piece using the apparatus described in 4.1 and 4.2. Record the dimensions in millimetres to the nearest 0,1 mm.

Determine the mass of each test piece in grams using the balance (see 4.3) and round off to the nearest gram.

## 8. Calculation and expression of results

From the recorded dimensions calculate the volume of each test piece and then calculate the apparent density  $\rho$  using the following expression.

$$\rho = 10^6 \times M/V$$

Where  $M$  is the mass of each test piece in grams rounded off to the nearest gram.

$V$  is the volume of each test piece in cubic millimetres.

Calculate the apparent density result as the mean value of the five determinations and express the result in kilograms per cubic metre rounded off to the nearest kilogram per cubic metre.

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## 9. Test report

ISO 3850:2004

The test report shall contain the following information:

- a) a reference to this standard i.e. EN 672;
- b) a complete identification of the product tested, including type, source, manufacturer's reference number;
- c) previous history of the sample;
- d) the mean value for the apparent density;
- e) any deviation from this standard which may have affected the results.

## Annex ZZ (informative)

### List of International Standards equivalent to the European Standards referenced in Clause 2

European Standard	International Standard
EN 427	ISO 3810 <sup>a</sup>
EN 428	ISO 3810 <sup>a</sup>
<sup>a</sup> Partially equivalent.	

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