

Wallcoverings — Specification for cork rolls

The European Standard EN 13085:2001 has the status of a
British Standard

ICS 79.100; 91.180

National foreword

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The UK participation in its preparation was entrusted to Technical Committee CW/35, Wallcoverings, which has the responsibility to:

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ICS 79.100; 91.180

English version

Wallcoverings - Specification for cork rolls

Revêtements muraux - Spécification pour les rouleaux en liège

Wandbekleidungen - Festlegung für Korkrollen

This European Standard was approved by CEN on 6 January 2001.

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Foreword

This European Standard has been prepared by Technical Committee CEN/TC 99 "Wallcoverings", 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of an identical text or by endorsement, at the latest by July 2001, and conflicting national standards shall be withdrawn at the latest by July 2001.

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 the requirements of cork wallcoverings in roll form to be used within buildings. The standard contains provisions for the evaluation of conformity of the product. It also includes requirements for marking, packaging and labelling.

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 publication 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 426	<i>Resilient floor coverings - Determination of width, length, straightness and flatness of sheet material</i>
EN 12105	<i>Resilient floor coverings - Determination of moisture content of agglomerated composition cork</i>
EN 12149	<i>Wallcoverings in roll form - Determination of migration of heavy metals and certain other elements, of vinyl chloride monomer and of formaldehyde release</i>
ISO 4708:2000	<i>Composition cork - Gasket material - Test methods</i>
ISO 7322:2000	<i>Composition cork - Test methods</i>
EN ISO 9001	<i>Quality systems - Model for quality assurance in design, development, production, installation and servicing (ISO 9001:1994)</i>
EN ISO 9002	<i>Quality systems - Model for quality assurance in production, installation and servicing (ISO 9002:1994)</i>

3 Terms and definitions

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

3.1

cork

protective layer of the cork oak tree (*Quercus suber L.*) which can be periodically removed from its trunk and branches to provide the raw material for cork products

3.2

granulated cork

fragments of cork obtained by grinding and/or milling raw or manufactured cork

3.3

agglomerated composition cork

product obtained from the agglutination of granulated cork with the addition of a binder not derived from cork cells

3.4

wallcovering

product, supplied either in panel or roll form, for hanging onto internal walls or ceilings in buildings by means of an adhesive covering the whole of the interface between the wallcovering and the support

3.5

cork wallcovering

product mainly made from cork or agglomerated composition cork, supplied either in panel or roll form, whose main intended use is for indoor application

3.6

batch

defined quantity of some commodity manufactured or produced under conditions which are presumed uniform

3.7

test specimen

part of a sample prepared for a test

4 Requirements

Cork rolls described in this standard shall conform to the appropriate requirements specified in Table 1, when tested in accordance with methods given therein.

NOTE Information on additional properties is given in annex B.

5 Test methods

5.1 Sampling

The sample for testing shall be taken from the available material, either during the process or from the final product. Test specimens shall be taken from the sample at a minimum distance of 100 mm from the edges. Each test specimen shall be squarely cut and have edges perpendicular to its surface and not show any cracks or folds.

The minimum number of test specimens required to get one test result on a product property is given in Table 1.

5.2 Conditioning

Test specimens shall be conditioned before testing for at least 12 h at $(23 \pm 5) ^\circ\text{C}$. In case of dispute, they shall be conditioned before testing at $(23 \pm 2) ^\circ\text{C}$ and $(50 \pm 5) \%$ relative humidity, for at least 24 h. Before the determination of the moisture content no conditioning shall be done.

5.3 Testing

Tests shall be carried out in accordance with the standards referred to in Table 1. The test result on a product property is the mean of the measured values on the number of test specimens given in Table 1.

Table 1 - Requirements

Property	Requirements	Dimension (or mass) of test specimens	Test method	Number of test specimens to get one result
Dimensions width length	maximum deviation from nominal value $\pm 1\%$ \geq nominal	200 mm x w^a full roll	EN 426	5 1
Straightness	tolerance allowed from nominal value: 1 % per each 5 m length	full roll		1
Overall thickness	maximum deviation from nominal value: $\pm 0,3$ mm	100 mm x 50 mm	ISO 7322:2000	5
Tensile strength^b	≥ 200 kPa	100 mm x 50 mm	ISO 7322:2000	3 + 3 ^c
Moisture content	$\leq 7\%$	100 mm x 100 mm	EN 12105	3
Flexibility	there shall be no cracks or failure	150 mm x 15 mm	ISO 4708:2000 method A	3
Formaldehyde released	≤ 95 mg/kg	50 mm x 25 mm (10 g to 15 g)	EN 12149 method C ^d	3
^a Where w is the nominal width of the roll ^b Applicable to thicknesses not less than 2 mm ^c Three test specimens shall be tested in the manufacturing direction and three in the perpendicular direction. ^d With the modifications given in annex A.				

6 Evaluation of conformity

The evaluation of conformity shall be based on factory production control and tests on samples taken at the factory, following the provisions given in annex C of this European Standard.

7 Marking, labelling and packaging

Products conforming to the requirements of this standard shall be clearly and indelibly marked by the manufacturer either on the packaging or on an adhesive label with the following information:

- a) the number and the year of this standard, i.e. EN 13085:2001;
- b) name or supplier's identification;
- c) the product name and batch number (possibly in code form);
- d) year of manufacture (last two digits);
- e) the nominal dimensions of rolls or sheets;
- f) the covered area in square metres;
- g) a warning that packages should be stored/shielded from direct sunlight and atmospheric humidity.

Annex A

(normative)

Modifications, for cork products, to general test method C given in EN 12149

For the purposes of this standard the test method C referred to in EN 12149, shall be modified for cork products, in accordance with the following, the rest of the standard remaining unchanged:

1 Scope

Test method C in EN 12149 also applies to cork wallcoverings in roll form.

6.5 Standard solutions

Use at least five solutions and a blank. The concentration of these standards shall be such that they will allow the interpolation of results and the reading of the values for the test specimens at the middle of the calibration curve.

Examples of standard solutions appropriate for cork products are given in Table 1:

Table 1 - Examples of standard solutions

Volume of standard B (ml)	Volume of water (ml)	Formaldehyde Content ($\mu\text{g/ml}$)
0	100	0
5	95	0,75
10	90	1,50
20	80	3,00
50	50	7,50
100	0	15,00

6.6 Apparatus

6.6.9 Balance, accurate to read 0,1 milligram

Annex B (informative)

Optional Properties

B.1 General

The manufacturer may choose to give additional information concerning other product properties than those given in Table 1 of this standard.

This information should be given as limit values obtained by carrying out tests in accordance with the test methods referred to below.

B.2 Apparent density

The apparent density of cork wallcoverings in rolls should be determined in accordance with EN 672 on five test specimens with dimensions 100 mm x 100 mm. The values should be given in the manufacturer's technical data sheet.

B.3 Acoustic properties

If products are required for airborne sound insulation, they should be tested in accordance with EN ISO 140-3. The weighted sound reduction index, R_w , should be derived according to EN ISO 717-1 and should be declared by the manufacturer in decibels.

B.4 Thermal properties

Due to their natural properties, cork wallcoverings contribute to reducing energy consumption. To evaluate its contribution to the thermal performance of the walls, the product should be tested for thermal resistance (R) or thermal conductivity (λ) in accordance with prEN 12667:2000 and the value declared by the manufacturer in $\text{m}^2\cdot\text{K}/\text{W}$ or $\text{W}/(\text{m}\cdot\text{K})$.

Annex C

(normative)

Factory production control and initial type testing

C.1 General

Factory Production Control (FPC) means the permanent internal control of production exercised by the manufacturer. Its implementation shall be achieved by controls on raw and constituent materials, on processes and manufacturing equipment and on finished products and by making use of the results thus obtained.

Factory production control shall be operated according to a documented system which shall be laid down in a quality manual. The manufacturer's documentation shall be relevant to the production and process control used.

FPC shall be based on:

- a) control of raw material,
- b) process control,
- c) testing of products,
- d) calibration plan,
- e) traceability.

Where the production unit has a quality management system according to EN ISO 9001 or EN ISO 9002 and made specific to the requirements of this standard, this is deemed to satisfy the general requirements of FPC.

C.2 Control of raw material

The manufacturer shall ensure that raw and other constituent materials conform to the requirements specified by him. In determining checks required, consideration shall be given to the control exercised by the supplier and the documented evidence of this conformity.

C.3 Process control

In order to manufacture products which conform to this European Standard, the manufacturer shall control his process and perform inspection and tests as described in his production control system documentation.

C.4 Testing of products

C.4.1 Direct Testing

When introducing a product which is to be manufactured against this standard, the manufacturer shall carry out initial type testing (ITT) for the product in order to ensure product conformity. ITT shall be repeated on changes or modifications of production if these are likely to affect conformity of the products with this standard.

The manufacturer shall regularly test the finished products. These tests shall be carried out according to the methods specified in clause 5 of this standard or, in case of indirect testing, according to C.4.2.

Samples shall be drawn periodically from each production line according to the manufacturer's test plan.

C.4.2 Indirect Testing

Indirect testing is a means by which a given property may be assessed through the testing of one or more other properties, if there is a known correlation between these properties and evidence of this correlation can be demonstrated.

For each indirect testing procedure applied at a place of production, the sampling plan and the compliance criteria for the indirect property shall be specified, taking into account the relevant correlation between the corresponding properties.

The use of indirect testing shall result in the same confidence level on the property concerned as when using the direct testing. In case of dispute, the normative method shall be used.

C.5 Inspection and testing status

The inspection and testing status of the products shall be identified by means which clearly indicate the conformity or non-conformity of the product with regard to the inspections and tests performed.

C.6 Inspection and tests records

The results of inspection and testing on finished products shall be recorded in the manufacturer's documentation and shall contain, at least, the following indications:

- a) product identification,
- b) date of manufacture,
- c) test methods,
- d) test results,
- e) identification of the person carrying out the inspection.

Where products do not satisfy the requirements of the standard, the manufacturer shall immediately take the steps necessary to rectify the deficiency. Non-conforming products or batches shall be isolated and marked accordingly.

When the deficiency has been identified and rectified, the test or inspection shall be repeated, according to the procedures laid down in the manufacturer's manual.

In the event that products are dispatched before the result of the inspection is available, notification shall be made to customers to prevent any consequential damage.

C.7 Calibration plan

Test equipment shall be calibrated and/or checked against equipment or samples traceable to relevant international or national reference samples (standards) according to a calibration plan. When no such reference samples exist, the basis used for internal checks or calibrations shall be documented. The minimum frequencies of checks or calibrations shall conform to the manufacturer's manual.

The calibration of all test equipment shall be repeated if any repair or failure which could upset the calibration occurs.

C.8 Traceability of products

Delivered individual products or product batches shall be identifiable and traceable to their production origin.

Annex D

(informative)

Supplementary information

Manufacturers should prepare and provide information on the maintenance cycle of their products and instructions on their laying, the implementation of which is beyond their control.

Bibliography

- EN 672 Resilient floor coverings - Determination of apparent density of agglomerated cork
- EN ISO 140-3 Acoustics - Measurement of sound insulation in buildings and of building elements - Part 3: Laboratory measurements of airborne sound insulation of building elements (ISO 140-3:1995)
- EN ISO 717-1 Acoustics - Rating of sound insulation in buildings and of building elements - Part 1: Airborne sound insulation (ISO 717-1:1996)
- prEN 12667:2000 Thermal performance of building materials and products - Determination of thermal resistance by means of guarded hot plate and heat flow meter methods - Products of high and medium thermal resistance

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