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Cork decorative panels — Specification

Panneaux décoratifs à base de liège — Spécifications

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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.

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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 8724 was prepared by Technical Committee ISO/TC 87, *Cork*. It is based on EN 12781:2001.

This second edition cancels and replaces the first edition (ISO 8724:1989), which has been technically revised.

Cork decorative panels — Specification

1 Scope

This International Standard specifies the characteristics of cork decorative panels for covering internal walls.

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.

ISO 633, *Cork — Vocabulary*

ISO 2066, *Resilient floor coverings — Determination of moisture content of agglomerated composition cork*

ISO 7322, *Composition cork — Test methods*

ISO 9366, *Agglomerated cork floor tiles — Determination of dimensions and deviation from squareness and from straightness of edges*

ISO 9001, *Quality management systems — Requirements*

ISO 29466, *Thermal insulating products for building applications — Determination of thickness*

EN 434, *Resilient floor coverings — Determination of dimensional stability and curling after exposure to heat*

EN 12089:1997, *Thermal insulating products for building applications — Determination of bending behaviour*

EN 12149:1997, *Wallcoverings in roll form — Determination of migration of heavy metals and certain other elements, of vinyl chloride monomer and of formaldehyde release*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 633 apply.

4 Classification

Cork decorative panels may be grouped into four classes according to their constitution (see ISO 633) as shown in Table 1.

Table 1 — Classification

Class	Constitution
I	Expanded pure agglomerated cork
II	Composition cork
III	Composition by gluing two or three of the preceding classes
IV	Composition by gluing any other material with one of the preceding classes

5 Requirements

Cork panels shall conform with the requirements specified in Table 2, when tested in accordance with the methods specified therein.

NOTE Information on additional properties is given in Annex B.

6 Test methods

6.1 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, one per panel, at a minimum distance of 50 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 obtain one test result on a product property is given in Table 2.

6.2 Conditionning

Test specimens shall be conditioned before testing for at least 12 h at (23 ± 5) °C. In case of dispute, they shall be conditioned before testing at (23 ± 2) °C and (50 ± 5) % relative humidity, for at least 24 h. Before the determination of the moisture content, no conditioning shall be done.

6.3 Testing

Tests shall be carried out in accordance with the standards specified in Table 2. The test result on a product property is the mean of the measured values on the number of test specimens specified in Table 2.

Table 2 — Requirements and test methods

Property	Requirements	Dimension (or mass) of test specimens	Test method	Number of test specimens to obtain one result
Side length	maximum deviation from nominal dimensions ± 0,5%	full panel	ISO 9366	**5**
Squareness and straightness	maximum deviation:	full panel	ISO 9366	**5**
Side ⩽ 400 mm	⩽ 0,5 mm			
Side > 400 mm	⩽ 1,0 mm			
Overal thickness				
Type I:	maximum deviation from nominal value: ± 0,8 mm	full panel	ISO 29466	5
Types II, III and IV:	maximum deviation from nominal value: ± 0,3 mm	full panel	ISO 7322	5
Bending strength				
Type I	⩾ 130 kPa	300 mm × 150 mm	EN 12089:1997 method B	5
Tensile strength				
Types II, III and IV	⩾ 200 kPa	100 mm × 50 mm	ISO 7322	3
Dimensional stability	⩽ 0,4 %	full panel	EN 434	3
Curling	⩽ 6 mm	full panel	EN 434	3
Moisture content	⩽ 7 %	100 mm × 100 mm	ISO 2066	3
Resistance of gluing	shall not unglue	100 mm × 100 mm	see Annex A	3
Resistance to boiling water				
Types I and II	shall not disintegrate	100 mm × 100 mm	ISO 7322	3
Formaldehyde released	⩽ 9 mg/kg	50 mm × 25 mm (10 g to 15 g)	EN 12149:1997 method C[a]	3

[a] With modifications specified in Annex B.

7 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.

8 Marking, labeling and packaging

Products conforming to the requirements of this International 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 International Standard, i.e. ISO 8724:2009;

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 the panels;

f) the number of panels in each package;

g) a warning that packages should be stored/shielded from direct sunlight and atmospheric humidity.

Annex A
(normative)

Determination of the resistance of a glued joint

A.1 Procedure

Place three test pieces of 100 cm^2 in the oven at a temperature of (20 ± 5) °C and (85 ± 5) % relative humidity for (24 ± 1) h.

Remove the test pieces and let them dry for 3 h at (60 ± 2) °C.

A.2 Expression of results

Express the result of the test by reporting the presence or the absence of ungluing between surfaces.

Annex B
(normative)

Modifications, for cork products, to general test method C given in EN 12149:1997

B.1 Introduction

For the purposes of this International Standard, the scope of EN 12149:1997 has been extended so that test method C now applies also to cork wallcoverings in panel form. As a consequence, test method C referred to in EN 12149:1997 shall be modified for cork products as follows, the rest of the standard remaining unchanged.

B.2 List of changes to be made

B.2.1 Standard solutions

In 6.5 of EN 12149:1997: use at least five solutions and a blank. The concentration of these standard solutions 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 dilutions of standard solutions appropriate for cork products are given in Table B.1:

Table B.1 — Examples of standard solutions

Volume of standard B ml	Volume of water ml	Formaldehyde content µg/ml
0	100	0
5	95	0,75
10	90	1,50
20	80	3,00
50	50	7,50
100	0	15,00

B.2.2 Apparatus

In 6.6.9 of EN 12149:1997: use a **balance**, accurate to read 0,1 mg.

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 specified 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, and

e) traceability.

Where the production unit has a quality management system in accordance with ISO 9001 and made specific to the requirements of this International 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 the 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 International 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 manufactured in accordance with this International 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 International Standard.

The manufacturer shall regularly test the finished products. These tests shall be carried out according to the methods specified in Clause 5 or, in the 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 method 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 test 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 this International 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.

Bibliography

[1] EN 672, *Resilient floor coverings — Determination of apparent density of agglomerated cork*

[2] EN 1602, *Thermal insulating products for building applications — Determination of apparent density*

[3] ISO 140-3, *Acoustics — Measurements of sound insulation in buildings and of building elements — Part 3: Laboratory measurements of airborne sound insulation of building elements*

[4] ISO 717-1, *Acoustics — Rating of sound insulation in buildings and of building elements — Part 1: Airborne sound insulation*

[5] EN 12667:2001, *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*

[6] EN 12781:2001, *Wallcoverings — Specification for cork panels*

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