

Door leaves — Determination of the behaviour under humidity variations in successive uniform climates

The European Standard EN 1294:2000 has the status of a
British Standard

ICS 91.060.50

National foreword

This British Standard is the official English language version of EN 1294:2000, which is included in a package of new European Standards being prepared by CEN/TC 33 relating to doors. Other standards included in the package are EN 1121, and EN 12219. Although the English language versions of these European Standards will be adopted as British Standards as they become available, the existing British Standards for doors will be retained, but only until such time that the complete package of European Standards becomes available. The original group of British Standards will then be withdrawn and this will be notified in BSI *Standards Update*. This British Standard will supersede BS 5369:1987.

The UK participation in its preparation was entrusted by Technical Committee B/538, Doors, windows, shutters, hardware and curtain walling, to Subcommittee B/538/2, Doors, which has the responsibility to:

- aid enquirers to understand the text;
- present to the responsible European committee any enquiries on the interpretation, or proposals for change, and keep the UK interests informed;
- monitor related international and European developments and promulgate them in the UK.

A list of organizations represented on this subcommittee can be obtained on request to its secretary.

Cross-references

The British Standards which implement international or European publications referred to in this document may be found in the BSI Standards Catalogue under the section entitled “International Standards Correspondence Index”, or by using the “Find” facility of the BSI Standards Electronic Catalogue.

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Summary of pages

This document comprises a front cover, an inside front cover, the EN title page, pages 2 to 4, an inside back cover and a back cover.

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English version

Door leaves - Determination of the behaviour under humidity variations in successive uniform climates

Vantaux de portes - Détermination du comportement aux variations d'humidité entre des climats successifs uniformes

Türblätter - Ermittlung des Verhalten bei Feuchtigkeitsänderungen in aufeinanderfolgenden beidseitig gleichen Klimaten

This European Standard was approved by CEN on 12 December 1999.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
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FOREWORD

This European Standard has been prepared by Technical Committee CEN/TC 33, Doors, windows, shutters, building hardware and curtain walling, the Secretariat of which is held by AFNOR.

This European Standard replaces EN 43:1985, Methods of testing doors - Behaviour under humidity variations of door leaves placed in successive uniform climates.

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 August 2000, and conflicting national standards shall be withdrawn at the latest by August 2000.

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.

This European Standard has been prepared taking into account ISO 6444 and EN 43.

This draft is one of a series of standards for doors.

1 SCOPE

This European Standard describes the method which is to be used to test the behaviour under humidity variations of door leaves placed in successive uniform climates.

This standard can be applied to all door leaves, (e.g. solid doors, hollow core doors, panelled doors and glazed doors), which are nominally flat and rigid, and which contain hygroscopic materials can might influence their behaviour during this test.

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 951	Door leaves - Method for measurement of height, width, thickness and squareness
EN 952	Door leaves - General and local flatness - Measurement method
prEN 12519:1996	Doors and windows - Terminology

3 DEFINITIONS

For the purposes of this Standard the definitions given in prEN 12519:1996 apply.

4 PRELIMINARY CONDITIONING

Prior to the test, condition the door leaf for at least 7 days in one of these two standard climates:

Temperature (20 ± 2) °C; Relative Humidity (65 ± 5) %;
Temperature (23 ± 2) °C; Relative Humidity (50 ± 5) %.

5 APPARATUS

Climate chambers capable of maintaining controlled temperature and humidity.

Suitable supporting device for holding the door leaf in a vertical position without imposing any restraint that might affect the development of deformation.

Apparatus for measuring general and local flatness in accordance with EN 952.

Apparatus for measuring height and width in accordance with EN 951.

Apparatus for weighing the specimen in accordance with 6.1, 6.2, 6.3, 6.4 and 6.5.

6 TEST PROCEDURE

6.1 Initial measurement

After conditioning the door leaf in accordance with clause 4, measure its height and width in accordance with EN 951, its general flatness in accordance with EN 952, and its mass. Also measure local flatness in accordance with EN 952 if required.

6.2 Exposure to high humidity

Place the door leaf in a climate defined by:

Temperature (23 ± 2) °C;
Relative Humidity (85 ± 5) %.

The mean values of temperature and relative humidity shall be maintained as close as practicable to the nominal values: the tolerances are permitted only for purposes of regulation.

The duration of exposure to this climate shall be 7 days for doors without applied finish, and 21 days for all other doors.

The test may be stopped before the end of the period specified above, if two successive measurements of general flatness taken at 2 day intervals do not differ by more than 1 % or if the specimen has reached hygroscopic equilibrium (difference in mass between two successive weighings at 2 day intervals less than 0,1 % of the initial mass).

If the test house stops the test before the full duration of exposure, it shall give reasons for its decision.

6.3 Measurement after exposure to high humidity

Remeasure the height and width, the general flatness and the mass of the door leaf. Also remeasure local flatness if required.

6.4 Exposure to low humidity

Place the door leaf in a climate defined by:

Temperature (23 ± 2) °C;

Relative Humidity (30 ± 5) %.

The mean values of temperature and relative humidity shall be maintained as close as practicable to the nominal values; the tolerances are permitted only for purposes of regulation.

The duration of exposure to this climate shall be 7 days for doors without applied finish, and 21 days for all other doors.

The test may be stopped before the end of the period specified above, if two successive measurements of general flatness taken at 2 day intervals do not differ by more than 1 % or if the specimen has reached hygroscopic equilibrium (difference in mass between two successive weighings at 2 day intervals less than 0,1 %).

If the test house stops the test before the full duration of exposure, it shall give reasons for its decision.

6.5 Measurement after exposure to low humidity

Remeasure the height and width, the general flatness and the mass of the door leaf. Also remeasure local flatness if required.

7 EXPRESSION OF RESULTS

The results shall be expressed in terms of absolute value and variations in the measurements of the height, width, general flatness, local flatness and mass. The accuracy of the measurements shall be as prescribed in EN 951 and EN 952.

8 TEST REPORT

The test report shall include the following information:

- a) all necessary details to identify the door leaf;
- b) all relevant details concerning the type, dimensions, shape and constructional details of the door leaf, the initial mass, any machining to receive the hardware, and any applied finish;
- c) description of the device supporting the door leaf during the test;
- d) duration and characteristics of the conditioning climate if it did not conform to 4;
- e) reasons for the duration of exposure to the two climates, if shorter than prescribed;
- f) the successive measurements of height and width;
- g) the successive measurements of general flatness, and of local flatness if measured;
- h) the successive measurements of mass;
- i) any damage occurring during the test;
- j) name of the testing laboratory;
- k) the dates between which the test was performed;
- l) reference to this European Standard.

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