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Fire resistance tests for non-loadbearing elements - Part 6: Open-state cavity barriers

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

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English Version

Fire resistance tests for non-loadbearing elements - Part 6: Open-state cavity barriers

Essais de résistance au feu des éléments non porteurs -
Partie 6 : Dispositifs de recouplement de lame d'air
ouverts en situation normale

Feuerwiderstandsprüfungen für nichttragende
Bauteile - Teil 6: Hohlraum-Brandsperrren

This European Standard was approved by CEN on 1 December 2024.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
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CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

EN 1364-6:2025 (E)

Contents	Page
European foreword	4
Introduction	5
1 Scope	6
2 Normative references	6
3 Terms and definitions	6
4 Test equipment	8
5 Test conditions	8
5.1 Heating conditions	8
5.2 Pressure conditions	9
5.2.1 General	9
5.2.2 Open-state cavity barriers	9
6 Test specimen	9
6.1 General	9
6.2 Size	9
6.3 Number	9
6.4 Design	9
6.4.1 General	9
6.4.2 Test configuration	10
6.4.3 Boundary/restraint conditions	10
6.5 Construction	10
6.6 Verification	10
7 Installation of test specimen	10
7.1 General	10
7.2 Standard supporting construction	10
7.2.1 General	10
7.2.2 Test specimens mounted in wall constructions	10
7.2.3 Test specimens mounted in floor constructions	10
7.3 Splice locations for open-state cavity barriers	11
8 Conditioning	11
9 Application of instrumentation	11
9.1 Thermocouples	11
9.1.1 Furnace thermocouples (plate thermometers)	11
9.1.2 Unexposed surface thermocouples	11
9.2 Pressure	12
10 Test procedure	12
10.1 General	12
10.2 Furnace control	12
10.3 Evaluation of integrity	12
10.4 Observations during the test	12
10.5 Termination of test	12
11 Performance criteria	13

11.1	General	13
11.2	Open-state cavity barriers	13
11.2.1	Insulation	13
11.2.2	Integrity	13
11.3	Expression of results	13
12	Test report	13
12.1	General	13
12.2	Reports of tests undertaken on open-state cavity barriers	13
13	Field of direct application of the test results	14
13.1	Open-state cavity barriers	14
13.1.1	Supporting constructions	14
Annex A (informative) Background and testing philosophy of cavity barriers		16
Bibliography		18

EN 1364-6:2025 (E)**European foreword**

This document (EN 1364-6:2025) has been prepared by Technical Committee CEN/TC 127 “Fire safety in buildings”, 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 August 2025 and conflicting national standards shall be withdrawn at the latest by August 2025.

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

This document has been prepared under a standardization request addressed to CEN by the European Commission. The Standing Committee of the EFTA States subsequently approves these requests for its Member States.

The test method is needed in support of ETAG 026-5 for cavity barriers.

Any feedback and questions on this document should be directed to the users' national standards body. A complete listing of these bodies can be found on the CEN website.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.

Introduction

Cavity barriers are provided within buildings to restrict the spread of smoke and fire in concealed spaces. Cavity barriers can be 'closed' e.g. in roof voids, under raised or hollow floors, between the inner and outer layers of walls such as in timber framed construction; or they can be 'open' e.g. as used in ventilated facade systems, roof eaves, rain screen cladding systems.

This document describes tests to measure the ability of a representative specimen of an open-state cavity barrier to resist the spread of fire from one side to another. A representative sample of a cavity barrier is exposed to a specified regime of heating and pressure. The performance of the test specimen is monitored on the basis of criteria in EN 1363-1. The fire resistance of the tested construction is expressed as the time for which the appropriate criteria have been satisfied.

The principles embodied in this method follow those embodied in EOTA TR31 the fire resistance test for closed cavity barriers published in 2008. However, TR31 is not applicable to open-state cavity barriers and consequently this method has had to be adapted to include these.

Testing of closed cavity barriers is not in the scope of this document. Test methods for closed cavity barriers are covered by EN 1366-4. Testing of large-scale closed cavity barriers are covered by EN 1364-1.

Reference scenario and limitations:

Closed cavity barriers whose function is to close a gap between fire resistant elements of building structure fall within the scope of the small room fire scenario where ISO 834-1 has been recognized as the reference fire resistance test.

For open-state cavity barriers e.g. those used in ventilated facades, rain screens and roof eaves; a European reference scenario has not yet been established. Work is on-going to develop a full-scale façade test and it is expected that this method will be correlated to that full-scale test. Consequently, for the time being results of tests to this document cannot be used to imply performance of an external facade system in which the open-state cavity barrier is included. The test results can be used as supplementary evidence of cavity barrier performance in façade systems already accepted by current local regulations. Further information is given in Annex A.

Caution:

The attention of all persons concerned with managing and carrying out this fire resistance test, is drawn to the fact that fire testing can be hazardous and that there is a possibility that toxic and/or harmful smoke and gases may be evolved during the test. Mechanical and operation hazards can also arise during the construction of the test elements or structures, their testing and disposal of test residues.

An assessment of all potential hazards and risks to health should be made and safety precautions should be identified and provided. Written safety instructions should be issued. Appropriate training should be given to relevant personnel. Laboratory personnel should ensure that they always follow written safety instructions.

EN 1364-6:2025 (E)**1 Scope**

This test method specifies methods for determining the fire resistance of open-state cavity barriers and is intended to be used in conjunction with EN 1363-1.

This document is applicable to non-loadbearing vertically or horizontally oriented open-state cavity barriers, which are designed to close and provide fire separation in the event of fire.

Open-state cavity barriers in facades, where the fire exposure comes as a result of a breaking window and allowing a developed fire to come into contact with the façade, can be tested to the optional “flame” criteria.

This document is not applicable to cavity barriers containing penetration seals, which are covered by EN 1366-3.

This document is not applicable to closed cavity barriers, which are covered by EN 1366-4.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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.

EN 1363-1, *Fire resistance tests — Part 1: General requirements*

EN 13501-2, *Fire classification of construction products and building elements - Part 2: Classification using data from fire resistance and/or smoke control tests, excluding ventilation services*

EN ISO 13943, *Fire safety — Vocabulary (ISO 13943)*

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